

## Body Repair Tech Note: High Voltage Battery Damage

Body Repair Tech Notes provide information about Tesla-approved methods and practices for body repair. These instructions assume knowledge of motor vehicle and high voltage electrical component repairs, and should only be executed by trained professionals. Tesla Motors assumes no liability for injury or property damage due to a failure to properly follow these instructions or for repairs attempted by unqualified individuals.

This Body Repair Tech Note supersedes BR-15-16-001, dated 14-Jan-2015. Each content change is marked by a vertical line in the left margin. Discard the previous version and replace it with this one.

If the High Voltage (HV) Battery of a Tesla vehicle has sustained any type of damage, contact your affiliated Tesla Service Center to arrange for them to inspect and potentially repair or replace the HV Battery. Only Tesla Service Centers are authorized to inspect and repair HV Batteries in Tesla vehicles.

### Examples of HV Battery Damage

- Dents or tears
- Corrosion or moisture accumulation
- Evidence of a previous thermal event, such as smoke residue, discoloration, deformation, melted seals, metallic splatter, or abnormal odor
- Rupture or disassembly
- Coolant or electrolyte leakage

**⚠ WARNING:** Failure to follow all high voltage (HV) safety precautions, including the use of personal protective equipment, when working on or around HV components may result in serious injury or property damage. Only technicians who have completed Tesla's Mechanical, Electrical, and Trim training course should diagnose, repair, or replace HV components. In addition, all repair and operating instructions should be reviewed and understood before working on Tesla vehicles or associated repair equipment.

**⚠ WARNING:** An HV battery poses a significant high voltage and electrocution risk if the outer enclosure or safety circuits have been compromised or have been significantly damaged. Proper personal protective equipment (PPE) and insulating HV gloves with a minimum rating of class 00 (500V) must be worn any time a high voltage cable is handled. Refer to Tech Note TN-15-92-003, "High Voltage Awareness Care Points" for additional safety information.

**⚠ WARNING:** If the battery or vehicle displays signs of escaping gases, smoke, flames, excessive heat, sparks or arcing, contact the local emergency department and refer to the Model S First Responder Guide, available at <http://www.teslamotors.com/firstresponders> and/or TN-13-16-007, "Lithium-Ion Battery Emergency Response Guide, Model S & X". Gases or smoke exiting a lithium-ion HV battery are likely flammable and could ignite at any time.

**⚠ WARNING:** Avoid contact with gases escaping from the battery. Vented gases might irritate the eyes, skin, and throat. Vent gas temperatures can exceed 600°C (1,110°F). Contact with hot gases can cause burns.

**⚠ WARNING:**

- Inspect or repair a vehicle that has an unstable battery outdoors or within easy access to the outdoors.
- If a battery has been determined to have a coolant leak, do not pressurize its cooling system.
- Store damaged HV batteries at least 15 m (50 ft) away from flammable materials, structures, other vehicles, and other HV batteries.

- Do not store standalone HV batteries below -20°C (-4°F).
- Do not store standalone HV batteries for over 10 days above 35°C (95°F).
- Do not charge or discharge a standalone HV battery below 0°C (32°F).
- Do not store standalone HV batteries for over 30 days at full state of charge (SOC) or completely discharged.
- Do not charge a damaged or potentially unstable HV battery.
- Do not weld near HV batteries.
- Call Tesla at the phone number listed at the end of this document if the HV battery shows signs of instability or appears to be compromised.

## Tesla Emergency Contact Information

For emergency contact information for any countries not listed, see <http://www.teslamotors.com/contact>.

Country	Telephone Number
United States of America	Toll Free: 1-877-79TESLA (1-877-798-3752)
Andorra	Toll Free: 0800 914 590   Toll: +31 (0)13 799 9501
Australia	Toll Free: 1800 686 148
Austria	Toll Free: 0800 88 0992   Toll: +31 (0)13 799 9502
Belgium	Toll Free: 0800 29 027   Toll: +31 (0)13 799 9503
Bulgaria	Toll: +31 (0)13 799 9504
Canada	Toll Free: 1-877-79TESLA (1-877-798-3752)
China	Toll: +86 400-9100707
Croatia	Toll: +31 (0)13 799 9505
Cyprus	Toll: +31 (0)13 799 9506
Czech Republic	Toll: +31 (0)13 799 9507
Denmark	Toll Free: 80 71 1024   Toll: +31 (0)13 799 9508
Estonia	Toll: +31 (0)13 799 9509
Finland	Toll: +31 (0)13 799 9510
France (+Corsica)	Toll Free: 0800 94 1029   Toll: +31 (0)13 799 9511
Germany	Toll Free: 0800 5893542   Toll: +31 (0)13 799 9512
Gibraltar	Toll: +31 (0)13 799 9513
Greece	Toll Free: 0800 1809 205 0645   Toll: +31 (0)13 799 9514
Hong Kong	Toll: +86 400-9100707
Hungary	Toll: +31 (0)13 799 9515
Iceland	Toll: +31 (0)13 799 9516
Ireland	Toll: +31 (0)13 799 9517
Italy (+Sicily/Sardegna/Vat. City)	Toll Free: 800 122 709   Toll: +31 (0)13 799 9518
Japan	Toll: +81 12 097 5214
Latvia	Toll: +31 (0)13 799 9519
Lithuania	Toll: +31 (0)13 799 9521
Liechtenstein	Toll Free: 0800 558 847   Toll: +31 (0)13 799 9520

<b>Country</b>	<b>Telephone Number</b>
Luxembourg	Toll Free: 0800 8002 2538   Toll: +31 (0)13 799 9522
Malta	Toll: +31 (0)13 799 9523
Monaco	Toll Free: 0800 94 1029   Toll: +31 (0)13 799 9524
Netherlands	Toll Free: 0800 0200160   Toll: +31 (0)13 799 9525
Norway	Toll Free: 800 11 093   Toll: +31 (0)13 799 9527
Poland	Toll Free: 800 141 01492   Toll: +31 (0)13 799 9528
Portugal	Toll: +31 (0)13 799 9529
Romania	Toll: +31 (0)13 799 9530
San Marino	Toll: +31 (0)13 799 9531
Slovakia	Toll: +31 (0)13 799 9532
Slovenia	Toll: +31 (0)13 799 9533
Spain	Toll: +31 (0)13 799 9534
Sweden	Toll: +31 (0)13 799 9535
Switzerland	Toll Free: 0800 83 7521   Toll: +31 (0)13 799 9536
United Kingdom	Toll Free: 0800 358 5774   Toll: +31 (0)13 799 9537

For feedback on the accuracy of this document, email [collision-techinfo@teslamotors.com](mailto:collision-techinfo@teslamotors.com).