



Replace Aeroshield Support Tab, HV Battery 1.0/1.5

Classification	Repair Bulletin	Section/Group	16 - Battery System	Country/Region	All
Year	2012-2015	Model	Model S	Version	HV Battery 1.0/1.5

Bulletin Classification: This repair bulletin provides instructions and guidelines for a noted condition or a customer concern. The information provided can address a broad range of known or perceived issues with the operation of Tesla vehicles. This bulletin might not be VIN-specific. 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 repairs attempted by unqualified individuals.

This Service Bulletin supersedes SB-15-16-002, dated 6-Nov-15. Each content change is marked by a vertical line in the left margin. Discard the previous version and replace it with this one.

Condition

It is possible to accidentally break off the aeroshield support tab from the HV Battery. If the tab breaks, the mid aeroshield is not fully supported, reducing the aerodynamic efficiency of the vehicle. The operation of the HV Battery is not affected.

Correction

Replace the aeroshield support tab.

NOTE: This procedure applies only to HV Battery 1.0 and 1.5 (Figure 1). Refer to SB-15-16-003 for HV Battery 2.0 (Figure 2).

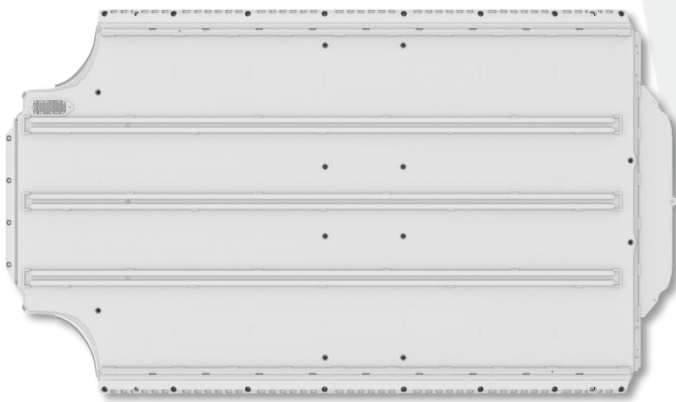


Figure 1 (Underside of HV Battery 1.0/1.5; no fuse cover or discharge port)

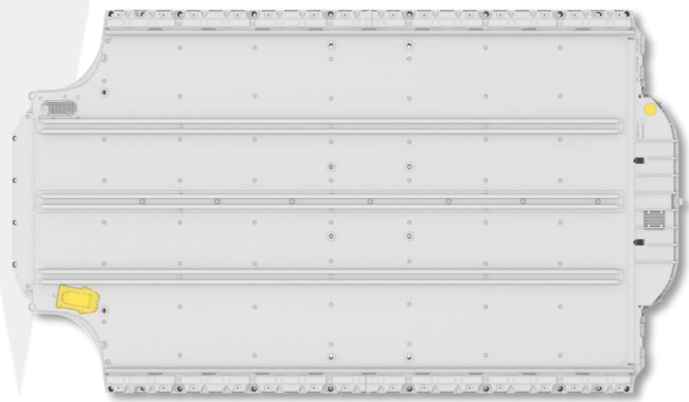


Figure 2 (Underside of HV Battery 2.0; fuse cover and discharge port highlighted)

Correction Description	Correction	Time
SB-15-16-002 Not Applicable	S011516002	0.00
Replace Aeroshield Support Tab, HV Battery 1.0/1.5	S021516002	1.55

Required Part(s):	Part Number	Description	Quantity
	1045662-00-A	AEROSHIELD SUPPORT TAB - 1.5 ENCLOSURE - SERVICE	1
	1010058-00-A	SCR,M5X6.PH.TRX25.SST.W/PATCH	2
	1075779-00-A	80 GRADE SANDING DISK 76MM (3")	As required
	508107582*	RUSTOLEUM GREY PRIMER	As required
	508107592*	RUSTOLEUM WHITE ENAMEL	As required
	508139693*	SEM SELF ETCHING PRIMER	As required

*Available on the Tesla Chemicals website.

Shop supplies:

Loctite Red 271 High Strength Threadlocker or equivalent
 3M P95 Particulate Respiratory Mask or equivalent
 Alcohol wipes
 Protective tape
 Paint pen
 Punch
 5/32 in (4 mm) drill bit
 7/32 in (5.5 mm) drill bit
 Blanket, tarp, or other material to cover the HV Battery
 Cordless drill

These part numbers were current at the time of publication. Use the revisions listed or later, unless otherwise specified in the Parts Manual.

Special Tool(s):	Part Number	Description
	1072865-00-A	MARKING TEMPLATE, AEROTAB
	1038478-00-A	ASY,COVER,HV RAPID,HVBAT,MDLS
	1028325-00-A	ASY,COVER,LV RAPID,HVBAT,MDLS
	1005706-00-C	COVER,PORTS,BATT,COOLANT CX
	1075777-00-A	PNEUMATIC ROD GRINDER
	1075778-00-A	MOUNTING ADAPTER

Procedure

⚠ WARNING: Only technicians who have been trained in High Voltage Awareness are permitted to perform this procedure. 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 service bulletin TN-15-92-003, "High Voltage Awareness Care Points" for additional safety information.

1. Remove the HV Battery (refer to Service Manual procedure 16010101).

⚠ CAUTION: To avoid damage from paint overspray, ensure that the affected HV Battery is located away from vehicles and other objects before performing this procedure.

2. Cover the HV Battery connectors:

- HV connector with an HV Rapid Mate cover, Tesla P/N 1038478-00-A.
- Low voltage (LV) connector with a LV Rapid Mate cover, Tesla P/N 1028325-00-A.
- Coolant connector with a Coolant Rapid Mate cover, Tesla P/N 1005706-00-C.

NOTE: If any of these covers are not available, cover the connector with masking tape.

3. Cover the HV Battery with a blanket or tarp to avoid paint overspray.

4. Place protective tape around the damaged aeroshield support tab area (Figure 3).

NOTE: Ensure that the HV Battery warning label is covered with protective tape.



Figure 3

5. Sand the broken tab and weld so that the affected area is flat (Figures 4 and 5).

⚠ WARNING: Wear protective eyewear and hearing protection when using a pneumatic grinder.

⚠ CAUTION: Ensure that no metal shavings get into the HV Battery. The HV and LV ports must be sealed to prevent metal shavings from entering the HV Battery.

⚠ CAUTION: Use only sanding disks that are 80 grit or finer to avoid damaging the HV Battery.



Figure 4

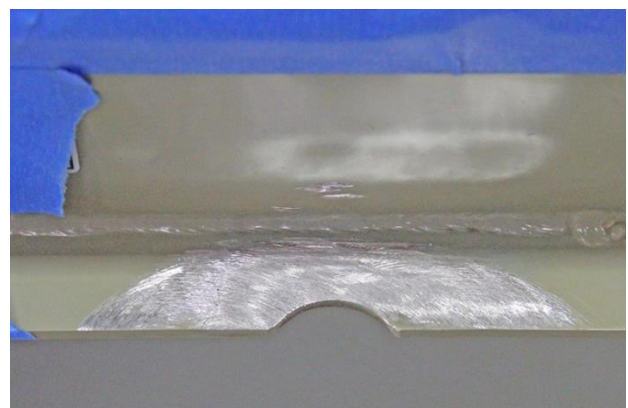


Figure 5

6. Clean the affected area with alcohol wipes. Allow the alcohol to dry before continuing this procedure.

⚠ CAUTION: Do not use anything other than isopropyl alcohol (IPA) to clean the HV battery enclosure. Using other chemicals, such as brake cleaner, might corrode the coating on the HV battery enclosure.

7. Place the marking template on the HV Battery and mark both drill locations with a marker (Figures 6 and 7).

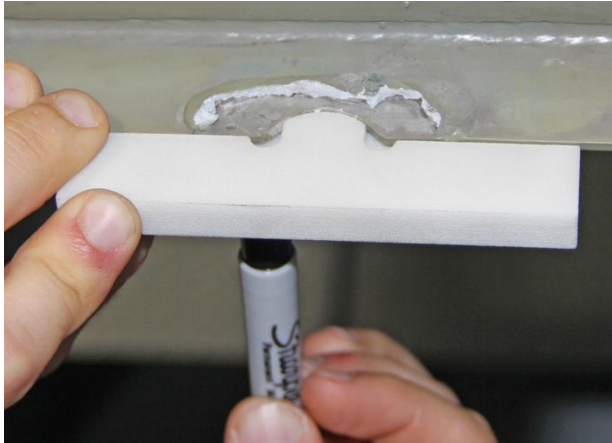


Figure 6



Figure 7

8. Working from the bottom of the HV Battery, use a punch to indent the HV Battery enclosure in the marked locations.

⚠ WARNING: Wear protective eyewear and hearing protection when drilling.

⚠ WARNING: Only drill in the areas marked in the previous step. Do not drill into the bottom of the HV Battery.

9. Working from the bottom of the HV Battery, use a 5/32 in (4 mm) bit to drill a hole in both marked locations (Figure 8).

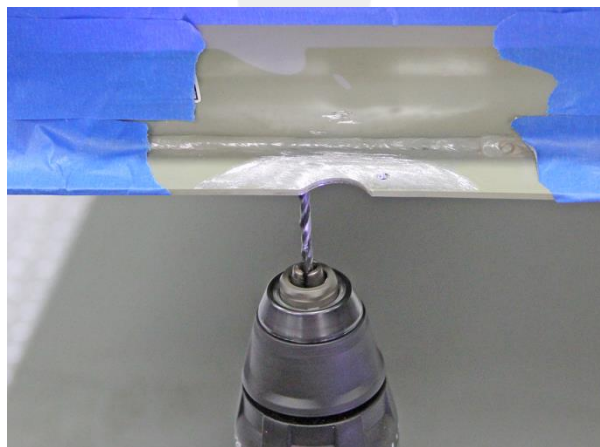


Figure 8

10. Use a 7/32 in (5.5 mm) bit to expand each of the 2 holes.

11. Clean the affected area with alcohol wipes. Allow the alcohol to dry before continuing this procedure.

⚠ CAUTION: Do not use anything other than isopropyl alcohol (IPA) to clean the HV battery enclosure. Using other chemicals, such as brake cleaner, might corrode the coating on the HV battery enclosure.

12. Test fit the new aeroshield support tab to ensure that it fits properly (Figure 9). Remove the aeroshield support tab.

NOTE: The screws are installed from the underside of the HV battery.

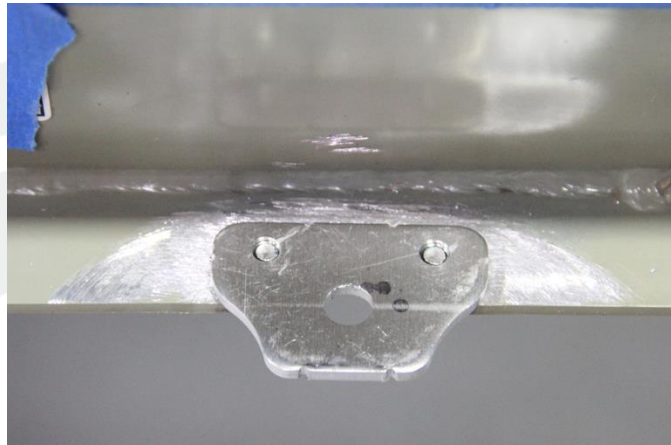


Figure 9

⚠ WARNING: The remainder of this procedure must be performed in a well-ventilated area while wearing a 3M P95 Particulate Respiratory Mask or equivalent. If necessary, move the HV Battery outside of the Service Center. Refer to all product instructions and warnings for proper application method and safety precautions.

13. Spray the area around the aeroshield support tab with a thin coat of grey Rust-Oleum Primer.

⚠ CAUTION: Exposed metal is susceptible to corrosion; ensure that the entire affected area, including the bottom, is coated with the Rust-Oleum Primer.

TIP: Use a piece of cardboard to minimize overspray (Figures 10 and 11).



Figure 10



Figure 11

14. Allow the primer to dry for approximately 5 minutes before continuing with this procedure.

15. Repeat steps 13 and 14 for a total of 3 coats.
16. Apply Loctite Red 271 High Strength Threadlocker or equivalent to the threads of the new screws.
17. Place the new aeroshield support tab in place. From the bottom of the HV Battery, install the 2 screws that secure it to the HV Battery (torque 6 Nm).
18. Spray the entire affected area with a thin coat of white Rust-Oleum Enamel.

NOTE: Ensure that the sides of the aeroshield support tab are coated as well.

19. Allow the coating to dry for approximately 5 minutes before continuing with this procedure.

20. Spray the entire affected area with a thin coat of SEM Self Etching Primer (Figure 12).

NOTE: Ensure that the sides of the aeroshield support tab and all crevices are coated.

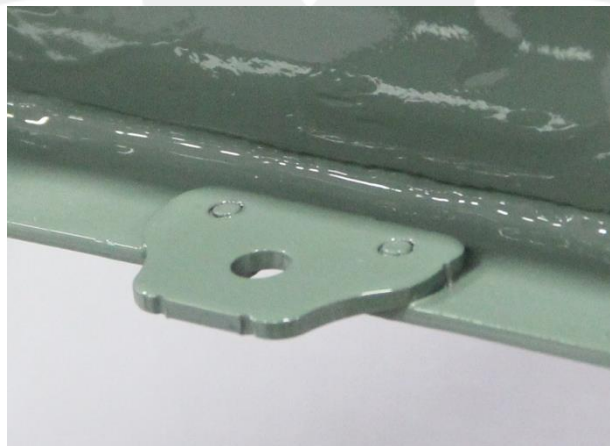


Figure 12

21. Allow the SEM Self Etching Primer to dry for approximately 5 minutes before continuing with this procedure.
22. Remove the protective tape and blanket/tarp from the HV Battery.
23. Reinstall the HV Battery (refer to Service Manual procedure 16010101).

Affected VIN(s) All affected Model S vehicles with HV Battery 1.0/1.5.

NOTE: This is a simplified summary 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.

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