



10V-458
(3 Pages)

October 1, 2010

Daniel C. Smith, Associate Administrator for Enforcement
National Highway Transportation Safety Administration
1200 New Jersey Avenue, SE
West Building, Fourth Floor
Washington, DC 20590

Re: Part 573 Defect Information Report

Dear Mr. Smith:

Pursuant to the requirements of 49 C.F.R. Part 573, and on behalf of Tesla Motors, Inc. ("Tesla" or "the Company"), this letter advises you of a possible defect related to safety in certain Tesla Roadster vehicles. Specifically, and as set forth below, Tesla submits this report regarding possible defects related to the wiring for the auxiliary 12 volt low power system in the vehicle. We wish to emphasize this only impacts the auxiliary 12 volt low power system, which is isolated from the electric drive main power system both physically and electrically. The main power system and the main battery pack are not affected by this defect.

573.6(c)(1): Manufacturer's Name

Tesla Motors, Inc.
3500 Deer Creek Road
Palo Alto, CA 94304

573.6(c)(2): Identification of the Vehicle Impacted

Make	Model	Model Year	Inclusive Dates of Manufacture
Tesla	Roadster 2.0	2010	July 2009 – June 2010
Tesla	Roadster 2.5	2010	June 2010 – September 2010

Only the Roadster 2.0 and 2.5 vehicles equipped with a 12V auxiliary cable are affected. As the issue is isolated to the auxiliary 12V low power system, earlier Roadster versions not having this system are not affected.

573.6(c)(3): Total Number of Vehicles Potentially Containing the Defect

439

573.6(c)(4): Percentage of Vehicles Estimated to Contain the Defect

Tesla believes that the defect identified below involves less than 10% of the total affected vehicle population.

573.6(c)(5): Description of Possible Safety-Related Defect

The auxiliary 12V low power system utilizes a small lead acid battery as a backup power source to the vehicle's main electrical system. The auxiliary power system provides power to various systems, including the headlamps, taillights, stop lamps, turn signals (including hazard lights), airbags and the ECU in the unlikely event that primary 12V power from the lithium ion battery pack fails or drops below a minimum threshold value. Unless there is a failure of the primary 12V system, the auxiliary power system is not used other than for a very short test period during the vehicle lock/unlock sequence. Moreover, the auxiliary system components is isolated physically from the main battery pack and electrically in the event of a short circuit.

The affected 12V auxiliary cable is located in the front right portion of the vehicle under the passenger-side headlamp near the front right wheel well. The 12V auxiliary cable is routed from the positive terminal past a carbon fiber armature and towards the interior of the vehicle. In certain circumstances, the 12V auxiliary cable may be improperly routed. If the wire is improperly routed and it is also pinched by the wheel well cover, the wire may abrade against the edge of the carbon fiber armature and, over time, expose the wire. Contact between the bare wire and carbon fiber may cause a short-circuit leading to possible electrical arcing. If not addressed, the short circuit and electrical arcing could lead to a fire.

573.6(c)(6): Chronology of Principal Events

On August 29, 2010, Tesla Roadside Assistance received a report from a customer involving smoke and possible fire behind the right front corner of his vehicle. The customer was driving by a local fire station, where the fire was extinguished. The report from Tesla Roadside Assistance was escalated to Tesla management the evening of that same day and an internal investigation opened the next morning. Arrangements were made to ship the vehicle to Tesla's laboratory in California.

After inspection by engineering and quality teams, Tesla confirmed the source of the fire as shorting of the 12V auxiliary cable to the carbon fiber armature edge just below the rear edge of the headlamp housing. There was evidence of arcing and copper deposits on the armature edge. Tesla believes that due to the lack of significant flammable material around the affected 12V auxiliary cable, the fire likely would have been self-extinguishing.

Although Tesla has received only a single complaint, and the area around the 12V auxiliary cable does not contain material sufficient to sustain a fire, Tesla determined that a voluntary recall was appropriate as a precautionary measure.

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573.6(c)(8): Proposed Remedy

Tesla plans to recall all potentially affected vehicles and inspect the routing of the 12V auxiliary cable. Tesla will also install a protective corrugated sleeve over the positive lead to both shield the wire from the armature and increase the wire diameter thus rendering improper routing nearly impossible. Tesla plans to notify Tesla Stores and customers as soon as possible regarding this recall. Tesla dealers will be able to implement the remedy upon notification to customers. A copy of the proposed customer notification letter and recall bulletin are attached.

If you or your staff has any questions, please feel free contact me at (202) 549-9819.

Sincerely,



James C. Chen, Director of Public Policy &
Associate General Counsel for Regulatory Affairs

cc: Richard Boyd, Acting Director, Office of Defects Investigation
Jennifer Timian, Acting Director, Recall Management Division