

Part 573 Safety Recall Report**14V-006**

Manufacturer Name : Tesla Motors, Inc.
Submission Date : MAR 23,2015
NHTSA Recall No. : 14V-006
Manufacturer Recall No. : SB-14-50-002

**Manufacturer Information :**

Manufacturer Name : Tesla Motors, Inc.
 Address : 3500 Deer Creek Road
 Palo Alto CA 94304
 Company phone : 650-413-4000

Population :

Number of potentially involved : 21,081
 Estimated percentage with defect : 3

Vehicle Information :

Vehicle : 2013-2013 TESLA MODEL S

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : NR

Descriptive Information : 2013 Tesla Model S electric vehicles and NEMA 14-50 Universal Mobile Connector (UMC) adapters

Production Dates : SEP 15, 2012 - JAN 10, 2014

VIN (Vehicle Identification Number) Range

Begin : NR

End : NR

Not sequential VINs

Description of Defect :

Description of the Defect : Tesla Motors, Inc. (Tesla) is recalling certain model year 2013 Model S vehicles equipped for, and delivered with, certain NEMA 14-50 (240 volt) Universal Mobile Connector (UMC) adapters. During charging, the adapter, cord, or wall outlet could overheat.

Description of the Safety Risk : An overheated adapter, cord, or wall outlet increases the risk of burn injury and/or fire.

Description of the Cause : The NEMA 14-50 adapter plug designed for use with the UMC utilizes a series of blades connected to four pins to conduct electrical energy from a wall socket through to wires in the UMC cable to Tesla vehicles to allow recharging of the vehicle. The pins allow the NEMA 14-50 adapter to plug directly into the UMC through an interchangeable design in the UMC head unit. In the NEMA 14-50 adapter units, higher than normal electrical resistance connections to external energy sources may cause excessive heating of the adapter. In these situations, it is possible that electrical resistance heating in the NEMA 14-50 adapter or at the interface to the wall socket may lead to deformation of the adapter, cord or wall receptacle, and possible electrical arcing that could lead to fire.

Identification of Any Warning that can Occur : NR

Supplier Identification :**Component Manufacturer**

Name : ISC Engineering

Address : 4351 Schaeffer Avenue

Chino CALIFORNIA 91710

Country : United States

Chronology :

Since Model S deliveries began in earnest in late 2012, Tesla has received a very small percentage (2.7%) of returned UMCs that showed signs of internal damage only and that stopped vehicle charging. This was not a safety matter since damage was contained wholly within the UMC and resulted in cessation of power flow when the damage occurred – specifically, at the interface between the UMC and NEMA 14-50 adapter. In late 2013, Tesla became aware of several events that resulted in thermal damage external to the UMC. Based on this new information, the Company initiated an internal review of the UMC design, as well as the several external damage incidents, including a highly publicized event that took place in Irvine, California. Initial analysis demonstrated that defective or improperly installed wall receptacles that the NEMA 14-50 adapter plugged into could cause problems including melted adapters and, in a worst case scenario, fire. While the number of incidents remains small, and Tesla’s review to date points to the building receptacle or wiring as the primary cause of failed NEMA 14-50 adapters, the Company has determined that a voluntary recall is appropriate as a precautionary measure.

Description of Remedy :

Description of Remedy Program : First, Tesla Motors has developed a software update that allows the Model S onboard charging system to detect any unexpected fluctuations in the input power or higher resistance connections to the vehicle. If detected, the onboard charging system automatically reduces the charging current by 25%. For example, this reduces a 40 amp charge rate to 30 amps. This dramatically reduces the heat generated in any high resistance connections outside of the vehicle.

Second, Tesla is replacing the NEMA 14-50 adapters with ones of an improved design.

How Remedy Component Differs from Recalled Component : The software update can be confirmed by simply touching the Tesla symbol at the top of the 17” touchscreen and verifying that the Model S is running software version 5.8.4 or later. The improved NEMA 14-50 adapter can be identified by a grey face on the charge cable side of the adapter.

Identify How/When Recall Condition was Corrected in Production : All new vehicles are delivered with the latest firmware installed. Since January

10, 2014 new vehicles have been delivered with improved NEMA 14-50 adapters.

Recall Schedule :

Description of Recall Schedule : Customer notification letter were mailed between March 14, 2014 and March 17, 2014. Shipments of replacement adapters began on or about March 17, 2014.

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : NR - NR

* NR - Not Reported