

Part 573 Safety Recall Report

17V-260

Manufacturer Name : Tesla Motors, Inc.

Submission Date : APR 19, 2017

NHTSA Recall No. : 17V-260

Manufacturer Recall No. : SB-17-33-002



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 : 31,472

Estimated percentage with defect : 2 %

Vehicle Information :

Vehicle 1 : 2016-2016 Tesla Model S

Vehicle Type : LIGHT VEHICLES

Body Style :

Power Train : NR

Descriptive Information : Select model year 2016 Tesla Model S electric vehicles

Production Dates : FEB 23, 2016 - OCT 10, 2016

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Vehicle 2 : 2016-2016 Tesla Model X

Vehicle Type : LIGHT VEHICLES

Body Style :

Power Train : NR

Descriptive Information : Select model year 2016 Tesla Model X electric vehicles

Production Dates : FEB 23, 2016 - OCT 10, 2016

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Description of Defect :

Description of the Defect : The Brembo electric parking brake calipers on some Tesla vehicles may contain an internal gear that was improperly manufactured by our supplier and could fracture under loads that occur during parking brake application. This gear transmits motion of an electric motor into motion of the brake pads. If this gear fractures, the electric motor will be unable to move the brake pad and the affected parking brake caliper will be unable to be released. The parking brake system on the affected vehicles includes electric parking brake calipers on each rear wheel, which are separate and independent from the vehicle's service brakes. There have been no reports of the parking brake system failing to hold a parked vehicle or failing to stop a vehicle in an emergency as a result of this condition. The condition has not resulted in any injuries or crashes.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : A parking brake that cannot be released can result in an inability to move a parked vehicle. Should the gear fracture prior to full parking brake engagement, the affected parking brake caliper may have less than the intended holding force, but Tesla is unaware of any instances where a vehicle was able to move as a result of this condition.

Description of the Cause : A small percentage (1-2%) of the subject gears may have been setup pieces rather than regular production pieces. The gear is a sintered part, and setup pieces may have been subject to a non-standard pressing operation, which could result in cracks in the powdered pieces prior to sintering.

Identification of Any Warning that can Occur : When attempting to release the parking brake, an alert will appear that reads "Parking Brake Did Not Release - Contact Tesla Service." When applying the parking brake, an alert will appear that reads "Parking Brake Needs Service - Car May Be Free Rolling."

Supplier Identification :

Component Manufacturer

Name : Brembo North America

Address : 47765 Halyard Drive
Plymouth MICHIGAN 48170

Country : United States

Chronology :

- July 2016 – Tesla’s first knowledge of field occurrence. Field returns sent to 3rd party labs for failure analysis investigation.
- August 2016 – October 2016. Tesla, working in coordination with Brembo, identified the root cause of brake calipers that had failed in the field. Remaining stock of suspect calipers were quarantined, and a clean point for installation of parking brake calipers on new production vehicles was established on October 7, 2016. Preliminary data suggested this condition resulted primarily in early life failures.
- September 2016 to April 2017. Tesla continued to monitor field data to refine reliability models of the failure mode.
- April 12, 2017. Despite not receiving any reports of this condition resulting in insufficient brake force or other safety concerns, Tesla decided to initiate a recall campaign in order to proactively replace potentially affected brake calipers.

Description of Remedy :

Description of Remedy Program :	Tesla will replace all potentially affected electric park brake calipers.
How Remedy Component Differs from Recalled Component :	Remedy electric park brake calipers contain gears manufactured with enhanced quality controls to prevent the inclusion of setup parts.
Identify How/When Recall Condition was Corrected in Production :	The gear manufacturer implemented a physical separation to isolate setup pieces and enhanced testing to verify the strength of production gears.

Recall Schedule :

Description of Recall Schedule :	All Tesla stores and service centers will be notified on or about April 20, 2017. Customers will be sent a courtesy email alerting them to the recall on or about April 20, 2017. Owner notification letters will be mailed out following NHTSA approval.
Planned Dealer Notification Date :	APR 20, 2017 - APR 20, 2017
Planned Owner Notification Date :	APR 20, 2017 - MAY 18, 2017

* NR - Not Reported