

Part 573 Safety Recall Report

21V-912

Manufacturer Name : Tesla, Inc.
Submission Date : NOV 21, 2021
NHTSA Recall No. : 21V-912
Manufacturer Recall No. : SB-21-31-004

**Manufacturer Information :**

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

Population :

Number of potentially involved : 826
Estimated percentage with defect : 1 %

Vehicle Information :

Vehicle 1 : 2020-2022 Tesla Model Y
Vehicle Type :
Body Style :
Power Train : NR

Descriptive Information : The recall population includes select Model Y vehicles and was determined based upon a review of manufacturing and service records from Tesla and the supplier.

Production Dates : JUN 16, 2020 - NOV 10, 2021

VIN Range 1 : Begin : NR **End :** NR Not sequential

Description of Defect :

Description of the Defect : The front and rear suspension links on Model Y vehicles are attached to the knuckles. The knuckles may not have been manufactured to the correct strength specification, which may cause the knuckle to deform or fracture and may lead the suspension links to separate from the knuckle.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : If a knuckle deforms or fractures such that the suspension links separate from the knuckle, the wheel alignment could shift and cause instability, which may adversely impact vehicle controllability and increase the risk of a collision.

Description of the Cause : During the supplier's manufacture of the knuckles, the quench tank fluid level may not have been sufficient to fully quench the knuckles during the heat treatment process.

Identification of Any Warning that can Occur : If the knuckle deforms or fractures such that the suspension links separate from the knuckle, abnormal noise or handling may occur, which may be detectable by the customer.

Involved Components :

Component Name 1 : FR KNUCKLE, LH

Component Description : FR KNUCKLE, LH

Component Part Number : 1188311-00-E

Component Name 2 : FR KNUCKLE, RH

Component Description : FR KNUCKLE, RH

Component Part Number : 1188316-00-E

Component Name 3 : RR KNUCKLE ASSY, LH

Component Description : RR KNUCKLE ASSY, LH

Component Part Number : 1188411-00-F

Component Name 4 : RR KNUCKLE ASSY, RH

Component Description : RR KNUCKLE ASSY, RH

Component Part Number : 1188416-00-F

Supplier Identification :**Component Manufacturer**

Name : Ningbo Tuopu Imp and Exp Corp

Address : No.598, Binhai Six Road
Hangzhou Bay, Ningbo Foreign States

Country : China

Chronology :

- On September 16, 2021, several deformed knuckles were discovered in production at Tesla's Shanghai Gigafactory.
- Tesla and the supplier immediately began performing hardness checks on all other knuckles in their inventory and rejected those with low hardness. Analysis of the deformed knuckles confirmed that their

strength did not meet the correct specifications, and a root cause hypothesis was developed for further investigation.

- Between mid-September and early October, Tesla and the supplier reviewed production data, containment inspections, and additional component analysis to further evaluate the possible causes of the deformation.
- On October 22, 2021, the supplier concluded its component-level testing to determine the effect that the resulting knuckle strength may have on knuckle performance.
- From October 13, 2021, to October 28, 2021, Tesla conducted vehicle-level testing to evaluate the potential impact of the lower-strength knuckles. Tesla also began identifying the scope of a potentially affected vehicle population based upon the suspect production range provided by the supplier.
- On November 11, 2021, Tesla and the supplier completed their investigation of records, related testing and analysis, and confirmed the root cause, risk assessment and affected population.
- On November 18, 2021, a recall determination was made. Tesla is not aware of any injury, warranty claims or customer complaints related to the condition.

Description of Remedy :

- Description of Remedy Program : Tesla Service will inspect the knuckles on affected vehicles. If necessary, Tesla Service will replace the knuckle.
- How Remedy Component Differs from Recalled Component : Manufacture of the knuckle to the correct specifications.
- Identify How/When Recall Condition was Corrected in Production : Tesla implemented a hardness check on all knuckles in its inventory for Model Y production, and the supplier implemented new production controls to ensure sufficient quench tank fluid levels as well as a hardness check of each knuckle.

Recall Schedule :

- Description of Recall Schedule : All Tesla stores and service centers will be notified on or shortly after November 23, 2021. Owner notification letters will be mailed in accordance with 49 C.F.R. § 577.7.
- Planned Dealer Notification Date : NOV 23, 2021 - NOV 23, 2021
- Planned Owner Notification Date : JAN 18, 2022 - JAN 18, 2022

* NR - Not Reported