

12V-542 (6 pages)

Toyota Motor Engineering & Manufacturing North America, Inc.

Vehicle Safety & Compliance Liaison Office Mail Code: S-104 19001 South Western Avenue Torrance, CA 90501

November 21, 2012

Ms. Nancy Lummen Lewis Associate Administrator for Enforcement National Highway Traffic Safety Administration Attn: Recall Management Division (NVS-215) 1200 New Jersey Ave, SE Washington, D.C. 20590

Re: Certain Toyota Tacoma Spare Tire Carrier Part 573, <u>Defect Information Report</u>

Dear Ms. Lewis:

In accordance with the requirements of the National Traffic and Motor Vehicle Safety Act of 1966 and 49 CFR Part 573, on behalf of Toyota Motor Corporation ["TMC"], we hereby submit the attached Defect Information Report concerning a voluntary safety recall of certain Toyota Tacoma vehicles to address an issue with the spare tire carrier.

Should you have any questions about this report, please contact me at (310) 468-1964.

Sincerely,

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Vinnie Venugopal General Manager Toyota Motor Engineering & Manufacturing North America, Inc.

Enclosures Part 573, Defect Information Report

DEFECT INFORMATION REPORT

1. <u>Vehicle Manufacturer Name</u>:

Toyota Motor Manufacturing California, Inc. ["TMMCA"] 45500 Fremont Blvd., Fremont, CA 94538

Fabricating Manufacturer

New United Motor Manufacturing, Inc. ["NUMMI"] 45500 Fremont Blvd., Fremont, CA 94538

Affiliated U.S. Sales Company

Toyota Motor Sales, USA, Inc. ["TMS"] 19001 South Western Avenue, Torrance, CA 90501

Manufacturer of Spare Tire Carrier Assembly:

Deuer Manufacturing Co. 2985 Springboro Dr., Dayton, OH 45439 Phone: Not Available

Note: The company is no longer in business.

Country of Origin: U.S.

2. Identification of Affected Vehicles:

Based on production records, we have determined the affected vehicle population as in the table below.

Make/	Model	Manufac-		VIN	Production
Car Line	Year	turer	VDS	VIS	Period
Tacoma	2001- 2004	NUMMI	#L#2N #M#2N #N#2N	Z000006-Z899984 Z000001-Z899998 Z000002-Z899997	August 28, 2000 through August 27, 2004

Note:

- (1) Only vehicles originally sold or currently registered in the following cold climate states with high road salt usage are affected: Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, Wisconsin and the District of Columbia. Only portions of the listed states may exhibit the cold climate and high road salt usage which can cause this condition. To simplify the administration of this campaign and avoid confusion, Toyota has elected to include the entire states listed above rather than a portion. Therefore, contiguous states not identified above are not involved.
- (2) Although the involved vehicles are within the above VIN ranges, not all vehicles within these ranges were sold in the U.S.
- (3) 1995-2000 MY Tacoma vehicles are subject to a Toyota Limited Service Campaign and a majority are no longer in operation in cold climate states as described further in Section 6. 2005-2013 MY Tacoma vehicles are equipped with a spare tire carrier manufactured with a different process. Due to differences in vehicle frame structure, no other Toyota and Lexus models use a spare tire carrier that is subjected to the same environmental factors while driving.

3. <u>Total Number of Vehicles Potentially Affected:</u>

Approximately 150,000 (vehicles originally sold or currently registered in cold climate states with high road salt usage)

4. <u>Percentage of Vehicles Estimated to Actually Contain the Defect:</u>

Unknown

5. <u>Description of Problem</u>:

The spare tire in the subject vehicles is located underneath the rear of the vehicle and held by a spare tire carrier. A lift plate on the carrier is used to help raise and lower the tire. During the manufacture of the lift plate, the plate may not have been sufficiently coated with phosphate. If the plate is insufficiently coated with phosphate and the vehicle is operated in cold climate regions where road salts are frequently used, water with high salt concentration can reach the carrier assembly and corrode the lift plate. In limited cases, corrosion of the plate over time could cause it to break, which could result in detachment of the spare tire from the vehicle. Detachment of the spare tire could result in a vehicle crash.

6. <u>Chronology of Principal Events</u>:

October 2009 - August 2010

Toyota received a field technical report for a 2003 MY Tacoma vehicle brought to a dealership for a frame replacement. The spare tire carrier was found to be corroded when it was removed during the frame replacement procedure.

Toyota received an additional 2 field reports for spare tire carrier corrosion through April 2010. In June and July 2010, Toyota received 3 field reports with allegations that the spare tire detached from the vehicle while driving.

September 2010 - November 2011

Toyota initiated a random parts recovery for spare tire carriers from various model year in-use Tacoma vehicles for investigation. A plan was developed to measure phosphate primer coating, E-coat thickness, and material thickness on the recovered parts to confirm whether the parts met design specifications. Toyota began to inspect the parts as they were recovered from the field.

Toyota intended to evaluate the manufacturing process for spare tire carriers in the subject vehicles, but could not do so, because the supplier was no longer in business. However, Toyota reviewed the current supplier's manufacturing process to identify any sources of process variation that could influence corrosion resistance properties of the spare tire carrier.

Toyota continued to investigate returned parts from the field. By August 2011, analysis of 135 recovered spare tire carriers was completed. Analysis indicated that the phosphate coating, which acts as a primer and provides resistance to corrosion, on some of these parts was inconsistent. In addition, parts recovered from cold climate regions where road salts are frequently used had a larger reduction in material thickness due to corrosion compared to parts recovered from other regions.

Toyota also analyzed the recovered parts by vehicle model year. Analysis of the lift plate thickness in cold climate regions indicated that the 2001-2004 MY Tacoma parts were more corroded compared to 2005-2013 MY Tacoma vehicles. The spare tire carrier assembly for 2005-2013 MY Tacoma is produced by a different supplier with different process controls for phosphate coating application. Analysis of recovered parts from these model years indicated the spare tire carrier lift plates have sufficient phosphate coating. In addition, Toyota has not received any reports of detachment of the spare tire due to lift plate corrosion on 2005-2013 MY Tacoma.

(For 1995-2000 MY, a majority of these vehicles in cold climate regions were bought back from the owners under Toyota's Limited Service Campaign (LSC) for frame corrosion and are no longer in operation. For those which were inspected and repaired, any lift plates replaced were from more current production. Additionally, parts recovered from these model years did not have significant lift plate corrosion, and Toyota has not received any reports of detachment of the spare tire due to lift plate corrosion in these model year vehicles.)

Toyota decided that additional testing was necessary to understand the static and dynamic conditions under which the lift plate could break due to corrosion.

December 2011 – November 2012

Toyota conducted testing to measure the stress on the lift plate under various driving conditions, such as a high speed turn, and when raising and lowering the spare tire with the vehicle stationary. The test results indicated that the lift plate was subjected to a greater amount of stress during certain driving conditions compared to when the tire was raised and lowered with the vehicle stationary.

Toyota also investigated the amount of salt water that could reach the spare tire carrier lift plate. Toyota confirmed test results from a previous evaluation that compared various Toyota models also equipped with a spare tire carrier located underneath the vehicle. The test results indicated that a greater amount of salt water reached the lift plate of the Tacoma due to its frame structure compared to the other models with a spare tire carrier underneath the vehicle.

Additional parts were recovered to investigate the amount of time necessary to corrode the lift plate to a level that could result in lift plate breakage and detachment of the spare tire. Based on comprehensive testing and analysis, Toyota concluded that a combination of factors could affect the lift plate's resistance to corrosion, including the lift plate manufacturing process, environmental conditions in cold climate regions where road salts are frequently used in high concentrations, and the design of the Tacoma's frame structure. If the vehicle is frequently operated in cold climate regions where road salts are regularly used, the lift plate on the spare tire carrier could corrode to a level potentially leading to lift plate breakage, possibly resulting in detachment of the spare tire while driving under certain conditions. Toyota has not received any field technical reports for excessive corrosion or detachment of the spare tire on vehicles due to corrosion of the lift plate other than those from cold climate regions where road salts are frequently used.

November 19, 2012

Toyota decided to conduct a voluntary safety recall campaign on the subject vehicles.

7. <u>Description of Corrective Repair Action</u>:

Toyota is developing a remedy and will notify the agency when it becomes available.

Reimbursement Plan for pre-notification remedies

The owner letter will instruct vehicle owners who have paid to have this condition remedied prior to this campaign to seek reimbursement pursuant to Toyota's General Reimbursement Plan.

8. <u>Recall Schedule</u>:

Toyota anticipates the owner notification will begin in mid-December, 2012 and be completed by mid-January, 2013. Copies of the owner notification letters will be submitted for NHTSA's review shortly.

9. <u>Distributor/Dealer Notification Schedule</u>:

Toyota dealers in the cold climate states will receive a preliminary notification in late November, 2012. A communication with detailed remedy instructions will be mailed in mid-December, 2012, approximately one week prior to the start of the owner notification. Copies of dealer communications will be submitted as they are issued.