Toyota Motor Engineering & Manufacturing North America, Inc.

Vehicle Safety & Compliance Liaison Office 19001 South Western Avenue Torrance, CA 90501

# January 27, 2015 DEFECT INFORMATION REPORT

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

New United Motor Manufacturing, Inc. ["NUMMI"] 45500 Fremont Boulevard, Fremont, CA 94538-6368

Toyota Motor Manufacturing Canada Inc. ["TMMC"] 1055 Fountain Street North, Cambridge, Ontario, Canada N3H 5K2

Toyota Motor Corporation ["TMC"] 1, Toyota-cho, Toyota-city, Aichi-pref., 471-8571, Japan

Toyota Motor Manufacturing, Kentucky, Inc. ["TMMK"] 1001 Cherry Blossom Way, Georgetown, KY, 40324

Affiliated U.S. Sales Company

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

General Motors Corporation Global Headquarters ["GM"] 100 Renaissance Center Drive, PO. Box 100 Detroit, MI 48265

Manufacturer of Airbag Control Module:

TRW Automotive 12001 Tech Center Drive, Livonia, MI 48150 Phone: 734-855-2600

Country of Origin: U.S.

## 2. <u>Identification of Affected Vehicles</u>:

| Based on production records, v | we have determined | the affected vehi | cle population | as in the |
|--------------------------------|--------------------|-------------------|----------------|-----------|
| table below.                   |                    |                   |                |           |

| Make/                 | Model          | Manufac- | VIN               |  | Production                                   |  |
|-----------------------|----------------|----------|-------------------|--|--|--|
| Car Line              | Year           | turer    | VDS               | VIS                                    | Period                                       |  |
| Toyota<br>Corolla     | 2003           | NUMMI    | BR3*E             | 3Z000001-3Z190446                      | December 28, 2001                            |  |
|                       | 2004           |          | BR3*E             | 4Z190447-4Z342398                      | April 26, 2004                               |  |
|                       | 2003           | - TMMC   | BR3*E             | 3C000082-3C165643                      | January 6, 2002                              |  |
|                       | 2004           |          | BR3*E             | 4C165645-4C318812                      | May 2, 2004                                  |  |
|                       | 2003           | TMC      | BR3*E             | 30002007-30051596<br>32000000-32016855 | April 2, 2002                                |  |
|                       | 2004           |          | BR3*E             | 40051487-40053026<br>42016856-42048916 | April 2, 2004                                |  |
| Toyota2003Corolla2004 |                | **3*E    | 3C000083-3C165642 | January 6, 2002                        |  |  |
|                       | 2004           | TIVIIVIC | **3*E             | 4C163607-4C318778                      | April 29, 2004                               |  |
| Pontiac<br>Vibe       | 2003           |          | S****             | 3Z400081- 3Z999055                     | January 18, 2002                             |  |
|                       | 2004           | NUMMI    | S****<br>2M***    | 4Z400003-4Z467400<br>4Z440840          | Through<br>April 27, 2004                    |  |
| Toyota<br>Avalon      | 2003 -<br>2004 | TMMK     | BF28B             | 3U265810-3U339097<br>4U333766-4U391317 | June 5, 2002<br>through<br>December 20, 2004 |  |

Note: Although the involved vehicles are within the above VIN ranges, not all vehicles within these ranges were sold in the U.S.

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

| Toyota Corolla        | : 603,936, |
|-----------------------|------------|
| Toyota Corolla Matrix | : 148,024  |
| Toyota Avalon         | : 119,140  |
| Pontiac Vibe          | : 135,749  |

Note: For completion reporting purposes, Toyota will remove from this population any vehicle that has previously had both the Transient Noise Filter and Airbag Control Module replaced under Safety Recalls 13V-029 and 14V-147 when the remedy is released and owner notification of the remedy commences.

## 4. <u>Percentage of Vehicles Estimated to Actually Experience Malfunction</u>:

#### Unknown

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

This is a remedy change only (see revised corrective repair action section below). Toyota previously submitted reports for this issue (recalls 13V-029 and 14V-147). The following problem description has not changed:

The airbag control module for the supplemental restraint system (SRS) in the subject vehicles could have been manufactured with application-specific integrated circuits (ASICs) that are susceptible to internal shorting. When exposed to high inductive electrical noise from various vehicle electrical components, these ASICs could experience an internal short that creates abnormal current flow and increased heat. If this occurs, there is a possibility that the ASIC could become damaged. In some instances, the front airbag(s) and/or seat belt pretensioners could inadvertently deploy. An airbag that deploys inadvertently can, under some circumstances, increase the risk of minor injury and the possibility of a crash.

## 6. <u>Chronology of Remedy Change</u>:

## January - March 2013

Toyota submitted a Part 573 report to the National Highway Safety Traffic Administration (NHTSA) relating to the airbag control module and the potential for inadvertent airbag and/or pretensioner deployments on certain Toyota and Pontiac vehicles. To correct this potential for inadvertent deployment, Toyota initiated a safety recall (13V-029). The remedy involved the installation of a transient noise filter; in addition, in cases where an airbag control module diagnostic trouble code (DTC) was present, the airbag control module was also replaced. Vehicle remedies for Corolla, Corolla Matrix, and Vibe started in March 2013.

## March 2014

Toyota submitted a Part 573 report to NHTSA relating to the airbag control module and the potential for inadvertent airbag and/or pretensioner deployments on certain Toyota Avalon vehicles. Recall 14V-147 was initiated, and the same remedy as described above in 13V-029 was implemented in September 2014.

#### June 2014 – December 2014

Toyota received field reports concerning inadvertent airbag deployment in vehicles after the transient noise filter remedy had been installed. The airbag control module had not been replaced in these vehicles. Toyota started to investigate the root cause of the inadvertent deployment. In addition, Toyota analyzed the effectiveness of the transient noise filter.

Toyota has theorized that some damage to the ASIC may be possible before a DTC has been set by the vehicle diagnostic systems. Without a DTC present, only a transient noise filter has been installed as part of the remedy procedure for these recalls. Possible undetected damage could explain post-remedy incidents. Replaced control modules will be collected for verification.

Nevertheless, the effectiveness of the transient noise filter was confirmed to provide

significant reduction in inadvertent deployments. The occurrence rate pre-transient noise filter installation was 20/100K vehicles. The occurrence rate for post-transient noise filter installation is 3/100k vehicles, resulting in an 85% reduction. Toyota has not received any reports of inadvertent deployment after a transient noise filter and a new airbag control module have been installed as the remedy.

Toyota believes that the installation of the transient noise filter alone has made a significant improvement in reducing the potential for inadvertent deployments as evidenced by the above-described occurrence rate reduction. Toyota also knows of no occurrences of inadvertent deployment where the transient noise filter was installed and the airbag control module was replaced. Toyota believes that a new airbag control module, which would have no ASIC damage, along with the noise filter, would further enhance the remedy for these recalls.

On December 10, 2014, Toyota submitted amendment letters informing NHTSA of the intent to change the remedy for recalls 13V-029 and 14V-147. In addition to the transient noise filter, a new airbag control module will be installed in those vehicles which have not had a control unit replacement.

#### January 15, 2015

NHTSA asked Toyota to provide additional detail about the remedy change and indicated that it would assign a new recall number to this change.

Due to the effectiveness of the transient noise filter, Toyota will continue to provide the filter as the initial step in remedying the vehicles. New airbag control modules will be installed when they become available.

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

All known owners of the subject vehicles will be notified by first class mail to return their vehicles to a Toyota or General Motors dealer, as applicable, for installation of a new airbag control module and installation of a noise filter between the airbag control module and its wire harness.

#### Reimbursement Plan for pre-notification remedies for Toyota Vehicles

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.

<u>Reimbursement Plan for pre-notification remedies for General Motors Vehicles (Pontiac Vibe)</u> Pursuant to 577.11(e), General Motors will provide reimbursement to owners for repairs completed on or before ten days after GM mails owner letters, pursuant to the plan submitted on May 12, 2011.

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

Toyota will provide a separate schedule of the owner notification mailing. A copy of the draft owner notification will be submitted as soon as it is available.

General Motors will notify NHTSA separately of its owner mailing schedule and supply a copy of the owner letter at that time.

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

Toyota will provide a separate schedule of the dealer notification schedule.

General Motors will notify NHTSA separately of its dealer mailing schedule and supply a copy of the dealer bulletin at that time.