

# Transaxle Assembly and ECM (PCM) Software Confirmation

**Service Category** Engine/Hybrid System

**Section** Engine Control

**Market** USA

Toyota Supports  
 ASE Certification 

## Applicability

| YEAR(S)     | MODEL(S)   | ADDITIONAL INFORMATION |
|-------------|------------|------------------------|
| 2017 - 2018 | Highlander |                        |
| 2017        | Sienna     |                        |

## Introduction

When completing a transaxle assembly replacement, Engine Control Module (ECM) (SAE term: Powertrain Control Module [PCM]) replacement, or ECM (PCM) reprogram, ensure the correct ECM (PCM) software is matched with the transaxle assembly hardware. Some 2017 – 2018 model year Highlander and 2017 model year Sienna vehicles require different ECM (PCM) software based on the transaxle assembly hardware installed in the vehicle.

### NOTICE

**Mismatched transaxle assembly hardware and ECM (PCM) software combinations may result in a harsh shift or shift flare. If this occurs, ECM (PCM) replacement and reprogramming will be required. If ECM (PCM) replacement/reprogramming is needed, it will not be covered under warranty.**

Use the information in this Service Bulletin to confirm that the correct ECM (PCM) hardware and software are used based on the transaxle assembly part number and serial number.

## Transaxle Assembly and ECM (PCM) Software Confirmation

### Warranty Information

| OP CODE | DESCRIPTION                                    | TIME | OFF   | T1   | T2   |
|---------|--|------|-------|------|------|
| 369011# | Z Time Add-on to Transaxle Replacement OP Code | 0.3  | 30500 | TBD* | TBD* |

\* Based on replacement phenomenon.

#### NOTE

- For transaxle replacement: Claim should be submitted as a normal replacement of the transaxle. If the ECM (PCM) software needs to be updated when replacing the transaxle, add 0.3 hours of "Z time" to the transaxle replacement OP code.
- For ECM (PCM) reprogramming or replacement: This Service Bulletin is used for ECM (PCM) and software selection; however, this does NOT incur additional warranty cost.

### Parts Information

| PART NUMBER |                 | PART NAME                       | QTY |
|-------------|-----------------|---------------------------------|-----|
| PREVIOUS    | NEW             |                                 |     |
|             | 00451-00001-LBL | Authorized Modifications Labels | 1   |

#### NOTE

Authorized Modifications Labels may be ordered in packages of 25 from the Materials Distribution Center (MDC) through *Dealer Daily – Parts – Dealer Support Materials Orders*.

### Required Tools & Equipment

| REQUIRED EQUIPMENT            | SUPPLIER | PART NUMBER  | QTY |
|-------------------------------|----------|--------------|-----|
| Techstream 2.0*               | ADE      | TS2UNIT      | 1   |
| Techstream Lite               |          | TSLITEPDLR01 |     |
| Techstream Lite (Green Cable) |          | TSLP2DLR01   |     |

\* Essential SST.

#### NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 12.20.024 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
- Use Techstream or an approved J2534 interface to perform flash reprogramming updates. Visit [techinfo.toyota.com](http://techinfo.toyota.com) for more information regarding J2534 reprogramming.

## Transaxle Assembly and ECM (PCM) Software Confirmation

### Required Tools & Equipment (Continued)

| SPECIAL SERVICE TOOLS (SST)     | PART NUMBER                 | QTY |
|---------------------------------|-----------------------------|-----|
| GR8 Battery Diagnostic Station* | <a href="#">00002-MCGR8</a> | 1   |

\* Essential SST.

**NOTE**

Additional SSTs may be ordered by calling 1-800-933-8335.

### Production Change Confirmation Procedure

For transaxle assembly replacement, use Option 1 below to confirm the transaxle assembly part number and determine the appropriate ECM (PCM) software.

For ECM (PCM) replacement or reprogramming, go to Option 2 to determine the appropriate ECM (PCM) software by transaxle assembly serial number if the transaxle assembly part number cannot be determined.

#### Option 1: Confirmation by Part Number

- Determine if the vehicle has a transaxle assembly produced BEFORE or AFTER the production change using the table below.

**Table 1.**

| JUDGEMENT | PART NUMBER    | PART NAME       |
|-----------|----------------|-----------------|
| Before    | 30510-####0-84 | Reman ATM       |
|           | 30500-####0    | Transaxle, Assy |
| After     | 30510-####1-84 | Reman ATM       |
|           | 30500-####1    | Transaxle, Assy |

- Using the judgement from Table 1, refer to the Engine Control Computer (ECM/PCM) Replacement Information and Calibration Information sections.

**NOTE**

If unable to determine the part number, continue to Option 2: Confirmation by Production Change Effective Serial Number.

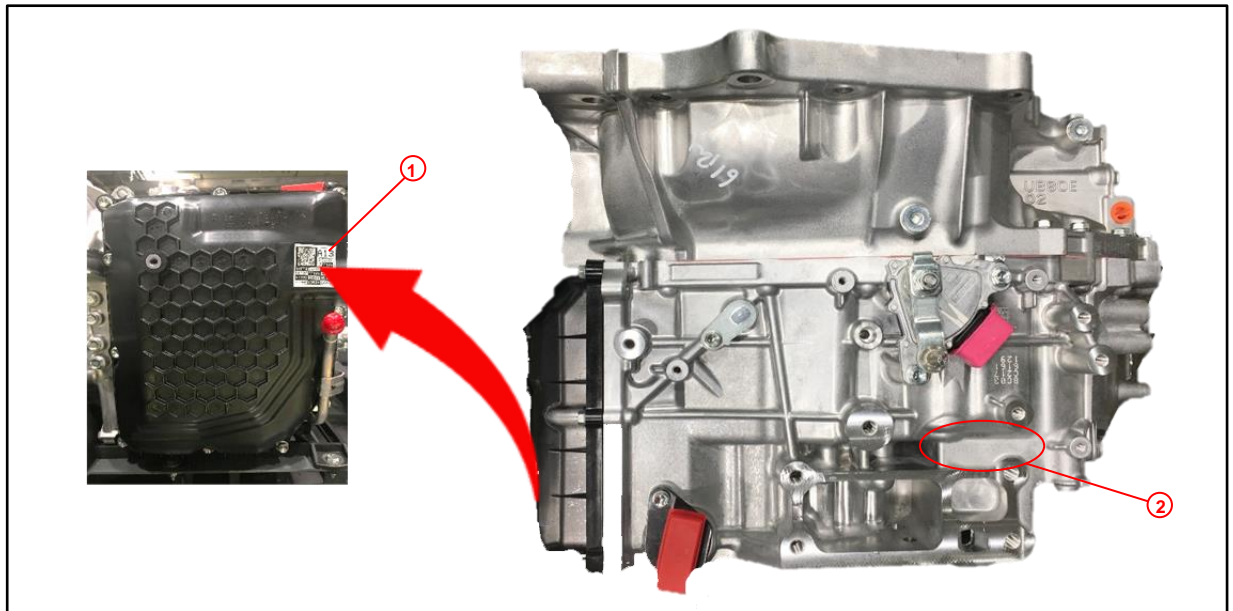
# Transaxle Assembly and ECM (PCM) Software Confirmation

## Production Change Confirmation Procedure (Continued)

### Option 2: Confirmation by Production Change Effective Serial Number

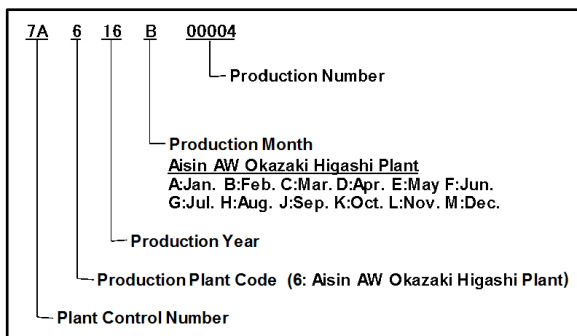
1. Locate the transaxle serial number, found on the sticker located on the transaxle assembly side cover or on the engraved location as shown. Serial number decoders are also provided below.

**Figure 1. Serial Number Sticker and Engraved Serial Number Location**

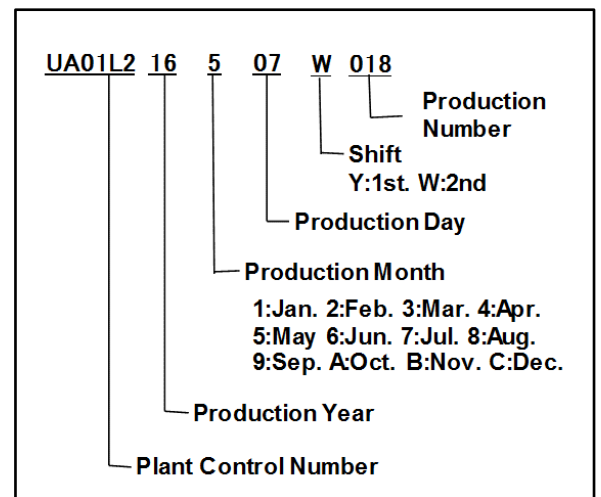


|   |                                 |
|---|---------------------------------|
| 1 | Serial Number Sticker           |
| 2 | Engraved Serial Number Location |

**Figure 2. AW Plant Serial Number Decoder**



**Figure 3. Kinnura Plant Serial Number Decoder**



## Transaxle Assembly and ECM (PCM) Software Confirmation

### Production Change Confirmation Procedure (Continued)

#### Option 2: Confirmation by Production Change Effective Serial Number (Continued)

- Use the table below to determine if the vehicle has a transaxle assembly produced BEFORE or AFTER the production change.

**Table 2.**

| PLANT   | PRODUCTION CHANGE EFFECTIVE SERIAL NUMBER |
|---------|---|
| AW      | TBD                                       |
| Kinuura | TBD                                       |

- Using the information from Table 2, refer to the Engine Control Computer (ECM/PCM) Replacement Information and Calibration Information sections.

### Engine Control Computer (ECM/PCM) Replacement Information

Based on the judgement of the transaxle serial number, use the table below to ensure that the correct ECM (PCM) is ordered for ANY replacements being performed.

| JUDGEMENT | YEAR        | MODEL      | DRIVETRAIN | START & STOP                                | PART NUMBER                  |   |
|-----------|-------------|------------|------------|---|------------------------------|---|
|           |             |            |            |   | PREVIOUS                     | NEW   |
| Before    | 2017 – 2018 | Highlander | 2WD        | Y   | 89661-0E851<br>89661-0E850-B | 89661-0E852                                 |
|           |             |            |            | N   | 89661-0E861<br>89661-0E860-B | 89661-0E862                                 |
|           |             |            | 4WD        | Y   | 89661-0E831<br>89661-0E830-B | 89661-0E832                                 |
|           |             |            |            | N   | 89661-0E841<br>89661-0E840-B | 89661-0E842                                 |
|           | 2017        | Sienna     | 2WD        |   | N                            | 89661-08164<br>89661-08163<br>89661-08160-B |
|           |             |            | 4WD        | 89661-08444<br>89661-08443<br>89661-08440-B |                              | 89661-08445                                 |

## Transaxle Assembly and ECM (PCM) Software Confirmation

### Engine Control Computer (ECM/PCM) Replacement Information (Continued)

| JUDGEMENT | YEAR        | MODEL      | DRIVETRAIN | START & STOP   | PART NUMBER                                 |  |
|-----------|-------------|------------|------------|--|---|--|
|           |             |            |            |  | PREVIOUS                                    | NEW  |
| After     | 2017 – 2018 | Highlander | 2WD        | Y  | 89661-0E852<br>89661-0E851<br>89661-0E850-B | 89661-0ED80  |
|           |             |            |            | N  | 89661-0E842<br>89661-0E841<br>89661-0E840-B | 89661-0ED70  |
|           | 2017        | Sienna     | 4WD        |  | N   | 89661-08165<br>89661-08164<br>89661-08163<br>89661-08160-B |
|           |             |            |            | 89661-08445<br>89661-08444<br>89661-08443<br>89661-08440-B |   | 89661-08540  |

## Transaxle Assembly and ECM (PCM) Software Confirmation

### Calibration Information

Based on the judgement of the transaxle serial number, use the table below to ensure the correct calibration file is used for ANY ECM (PCM) reprogramming procedures being performed.

| JUDGEMENT | YEAR        | MODEL      | DRIVETRAIN | START & STOP | ECU TYPE | CALIBRATION ID                               |  |                              |
|-----------|-------------|------------|------------|--------------|----------|--|--|------------------------------|
|           |             |            |            |              |          | PREVIOUS                                     | NEW  |                              |
| Before    | 2017 – 2018 | Highlander | 2WD        | Y            | Main     | 896630E45100<br>896630E45000                 | <a href="#">896630E45200</a>                 |                              |
|           |             |            |            |              | Sub      | 896650E11000                                 | <a href="#">896650E11100</a>                 |                              |
|           |             |            |            | N            | Main     | 896630E46100<br>896630E46000                 | <a href="#">896630E46200</a>                 |                              |
|           |             |            |            |              | Sub      | 896650E12000                                 | <a href="#">896650E12100</a>                 |                              |
|           |             |            | 4WD        | Y            | Main     | 896630E43100<br>896630E43000                 | <a href="#">896630E43200</a>                 |                              |
|           |             |            |            |              | Sub      | 896650E09000                                 | <a href="#">896650E09100</a>                 |                              |
|           | 2017        | Sienna     | 2WD        | N            | Main     | 896630E44100<br>896630E44000                 | <a href="#">896630E44200</a>                 |                              |
|           |             |            |            |              | Sub      | 896650E10000                                 | <a href="#">896650E10100</a>                 |                              |
|           |             |            |            | 4WD          | N        | Main   | 896630828400<br>896630828300<br>896630828000 | <a href="#">896630828500</a> |
|           |             |            |            |              |          | Sub  | 896650807100<br>896650807000                 | <a href="#">896650807200</a> |
|           |             |            | 4WD        | N            | Main     | 896630836400<br>896630836300<br>896630836000 | <a href="#">896630836500</a>                 |                              |
|           |             |            |            |              | Sub      | 896650808100<br>896650808000                 | <a href="#">896650808200</a>                 |                              |

## Transaxle Assembly and ECM (PCM) Software Confirmation

### Calibration Information (Continued)

| JUDGEMENT | YEAR        | MODEL      | DRIVETRAIN | START & STOP | ECU TYPE | CALIBRATION ID   |  |                              |
|-----------|-------------|------------|------------|--------------|----------|--|--|------------------------------|
|           |             |            |            |              |          | PREVIOUS   | NEW  |                              |
| After     | 2017 – 2018 | Highlander | 2WD        | Y            | Main     | 896630E45200<br>896630E45100<br>896630E45000                 | <a href="#">896630E85000</a>                                 |                              |
|           |             |            |            |              | Sub      | 896650E11100<br>896650E11000                                 | <a href="#">896650E43000</a>                                 |                              |
|           |             |            |            | N            | Main     | 896630E46200<br>896630E46100<br>896630E46000                 | <a href="#">896630E86000</a>                                 |                              |
|           |             |            |            |              | Sub      | 896650E12100<br>896650E12000                                 | <a href="#">896650E44000</a>                                 |                              |
|           |             |            | 4WD        | Y            | Main     | 896630E43200<br>896630E43100<br>896630E43000                 | <a href="#">896630E83000</a>                                 |                              |
|           |             |            |            |              | Sub      | 896650E09100<br>896650E09000                                 | <a href="#">896650E41000</a>                                 |                              |
|           | 2017        | Sienna     | 2WD        | N            | Main     | 896630E44200<br>896630E44100<br>896630E44000                 | <a href="#">896630E84000</a>                                 |                              |
|           |             |            |            |              | Sub      | 896650E10100<br>896650E10000                                 | <a href="#">896650E42000</a>                                 |                              |
|           |             |            |            | 4WD          | N        | Main   | 896630828500<br>896630828400<br>896630828300<br>896630828000 | <a href="#">896630846000</a> |
|           |             |            |            |              |          | Sub  | 896650807200<br>896650807100<br>896650807000                 | <a href="#">896650819000</a> |
|           |             |            | 4WD        | N            | Main     | 896630836500<br>896630836400<br>896630836300<br>896630836000 | <a href="#">896630847000</a>                                 |                              |
|           |             |            |            |              | Sub      | 896650808200<br>896650808100<br>896650808000                 | <a href="#">896650820000</a>                                 |                              |



## Transaxle Assembly and ECM (PCM) Software Confirmation

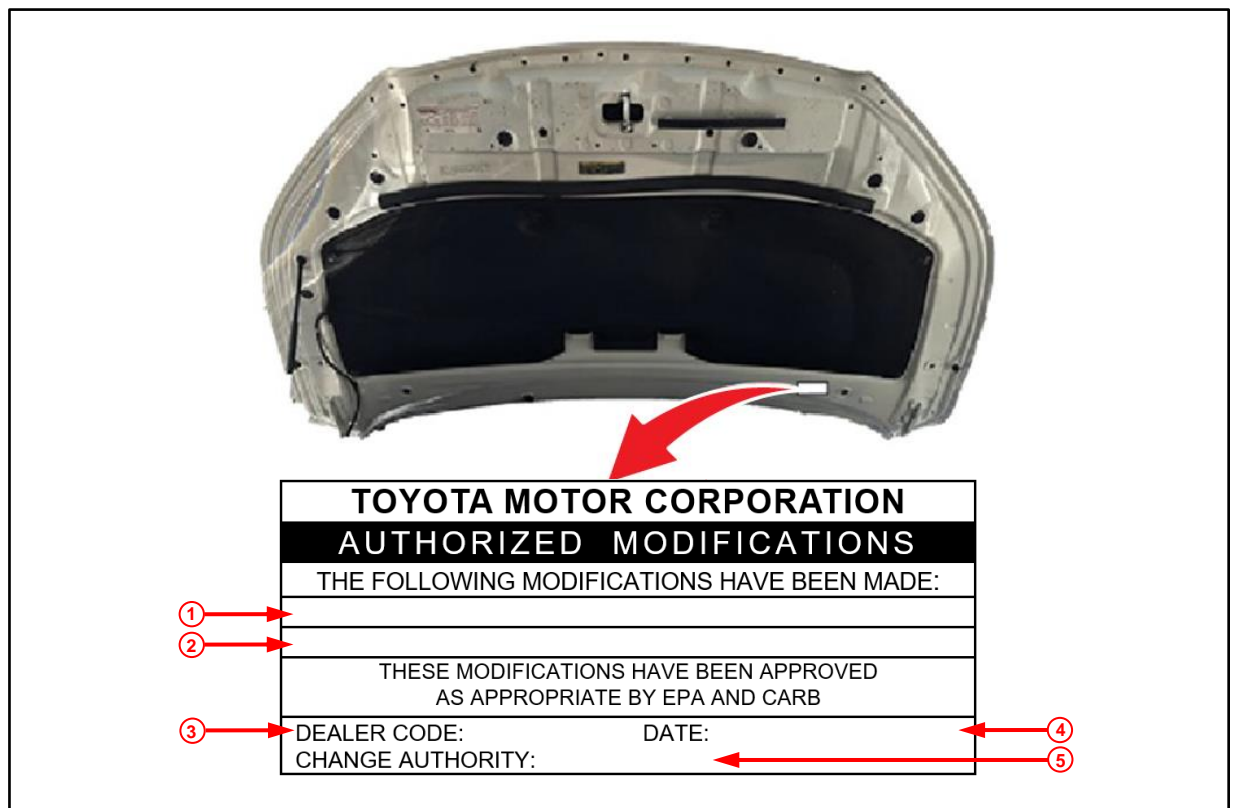
### Repair Procedure

1. Does the ECM (PCM) need to be reprogrammed?
  - **YES** — Continue to step 2.
  - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
2. Check for the Authorized Modifications Label affixed to the vehicle in the applicable locations shown below.
 

Is the calibration ID listed the latest ECM (PCM) calibration?

  - **YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
  - **NO** — Continue to step 2.

**Figure 4. Location of Authorized Modifications Label for 2017 – 2018 Highlander**



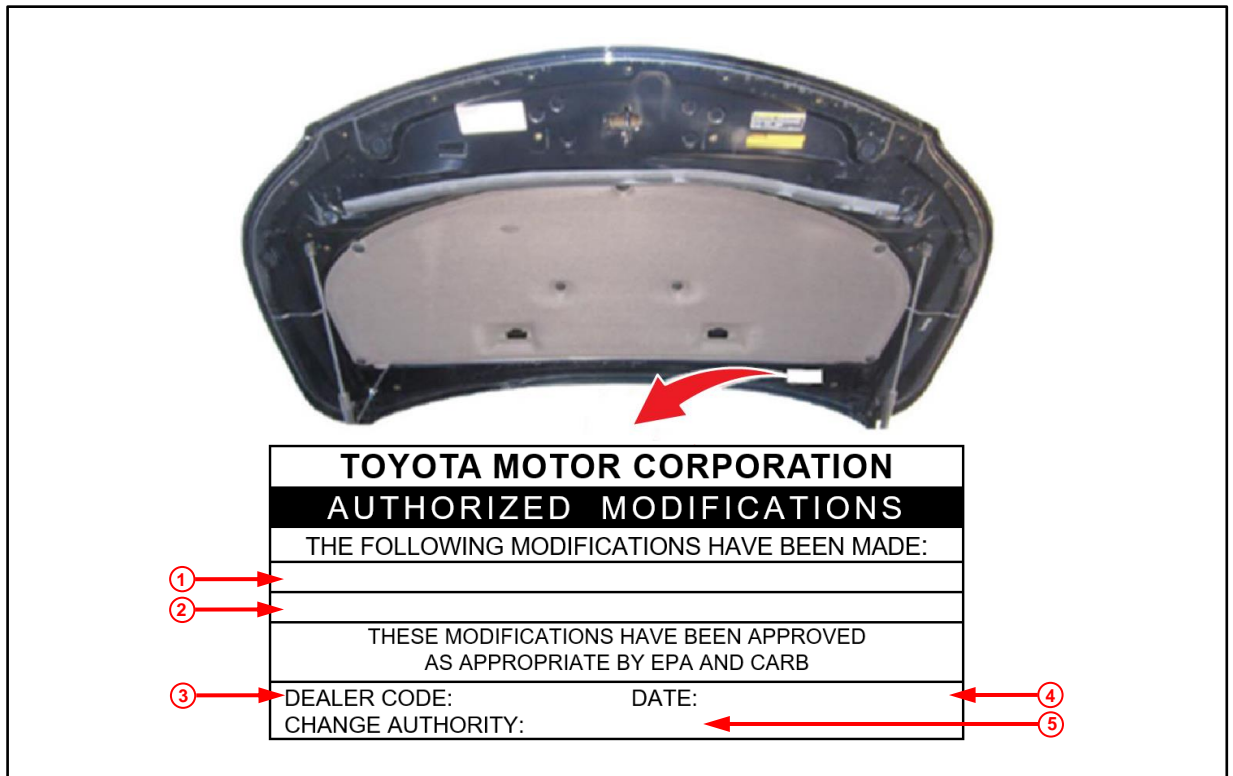
|          |   |
|----------|---|
| <b>1</b> | <b>Replacement ECM (PCM) Part Number</b><br>(e.g., 89661-0E832) |
| <b>2</b> | <b>New Calibration ID</b> (e.g., 896630E43200)                  |
| <b>3</b> | <b>Dealer Code</b>  |

|          |                       |
|----------|-----------------------|
| <b>4</b> | <b>Date Completed</b> |
| <b>5</b> | <b>This SB Number</b> |

## Transaxle Assembly and ECM (PCM) Software Confirmation

### Repair Procedure (Continued)

**Figure 5. Location of Authorized Modifications Label for 2017 Sienna**



|          |  |
|----------|--|
| <b>1</b> | <b>Replacement ECM (PCM) Part Number (e.g., 89661-08165)</b> |
| <b>2</b> | <b>New Calibration ID (e.g., 896630836500)</b>               |
| <b>3</b> | <b>Dealer Code</b>   |

|          |                       |
|----------|-----------------------|
| <b>4</b> | <b>Date Completed</b> |
| <b>5</b> | <b>This SB Number</b> |

3. Flash reprogram the ECM (PCM).

**NOTE**

- The GR8 Battery Diagnostic Station **MUST** be used in Power Supply Mode to maintain battery voltage at 13.5V while flash reprogramming the vehicle.
- For details on how to use the GR8 Battery Diagnostic Station, refer to the [GR8 Instruction Manual](#) located at *TIS – Diagnostics – Tools & Equipment – Battery Diagnostics*.

Follow the procedures outlined in Service Bulletin No. [T-SB-0134-16](#) “Techstream ECU Flash Reprogramming Procedure,” and flash the ECM (PCM) with the NEW calibration file update.

## Transaxle Assembly and ECM (PCM) Software Confirmation

---

### Repair Procedure (Continued)

4. Prepare and install the Authorized Modifications Label.
  - A. Using a permanent marker, enter the following information on the label:
    - ECM (PCM) part number [Refer to the **Parts Information** section for *the **NEW PART NUMBER***]
    - Calibration ID [Refer to the **Calibration Information** section for the **NEW CALIBRATION ID**]
    - Dealer Code
    - Repair Date
    - Change Authority [***This bulletin number***]
  - B. Affix the Authorized Modifications Label to the vehicle at the location shown in Figures 4 and 5. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.
5. Test drive the vehicle to confirm proper vehicle operation.