

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, Sienna	

REVISION NOTICE

December 11, 2020 Rev2:

- The entire bulletin has been updated.

February 02, 2018 Rev1:

- Applicability has been updated to include 2018 model year Sienna vehicles.
- The entire bulletin has been updated.

Any previous printed versions of this bulletin should be discarded.

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 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 after the original repair, additional ECM (PCM) replacement and reprogramming will be required. This additional ECM (PCM) replacement and/or reprogramming is NOT covered under warranty.

Use the information in this bulletin to confirm 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

MODEL	OP CODE	DESCRIPTION	TIME	OFF	T1	T2
All	369011#	Z Time Add-on to Transaxle Replacement OP Code	##	30500-####0*	TBD**	TBD**
Sienna	895011	R & R Computer, Engine Control (ECM/PCM)	0.5	89661-####*#	8A	99
Highlander			0.6			
All	800269	Reprogram ECM (PCM)	0.7			

*Warranty claim MUST be submitted with the correct 10-digit OFF. Choose the correct OFF for the vehicle being repaired.

**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 or replaced 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

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

Table 2.

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*.

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Required Tools & Equipment

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

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 15.30.027 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 for more information regarding J2534 reprogramming.

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Battery Diagnostic Tool*	DCA-8000P T	1

*Essential SST.

NOTE

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

NOTE

- The battery diagnostic tool 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 battery diagnostic tool, refer to the [DCA-8000 Instruction Manual](#) located at *TIS – Diagnostics – Tools & Equipment – Battery Diagnostics*.

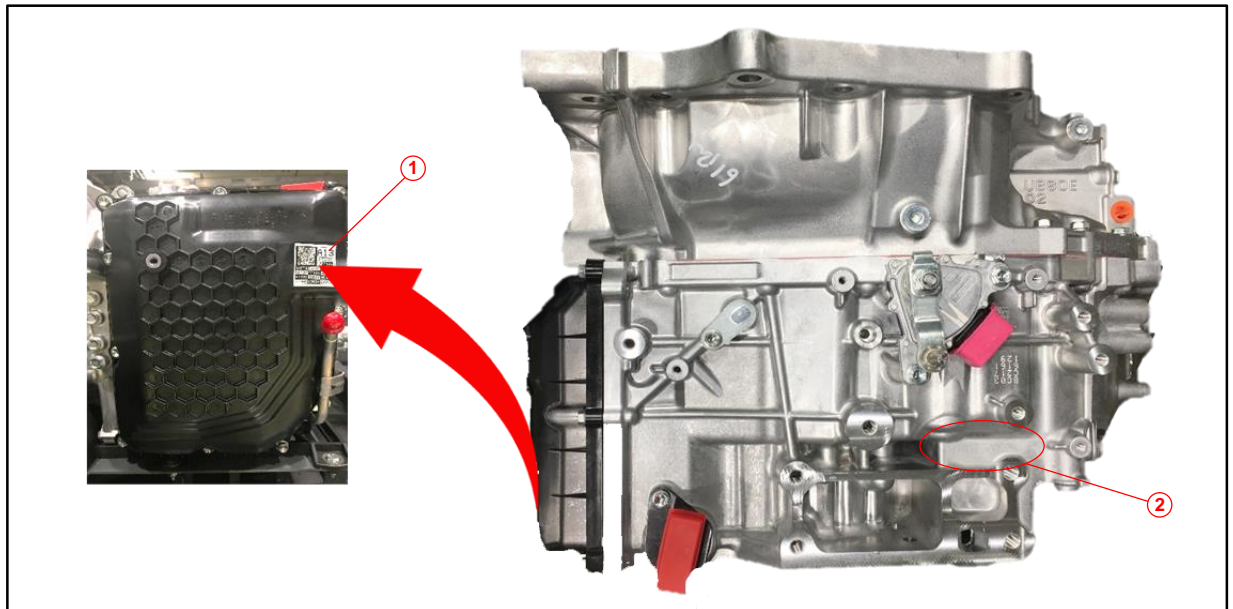
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Production Change Confirmation Procedure

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

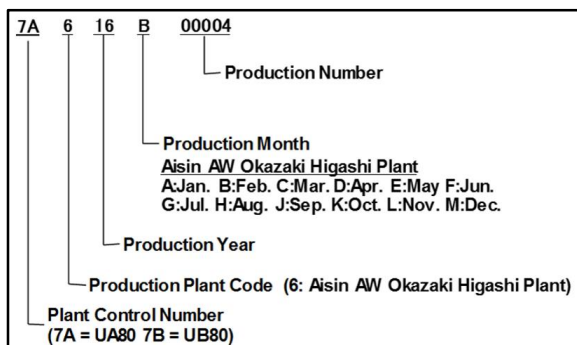
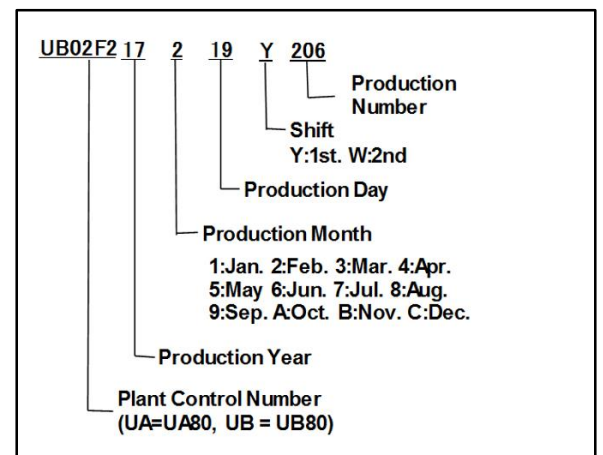


Figure 3. Kinuura Plant Serial Number Decoder

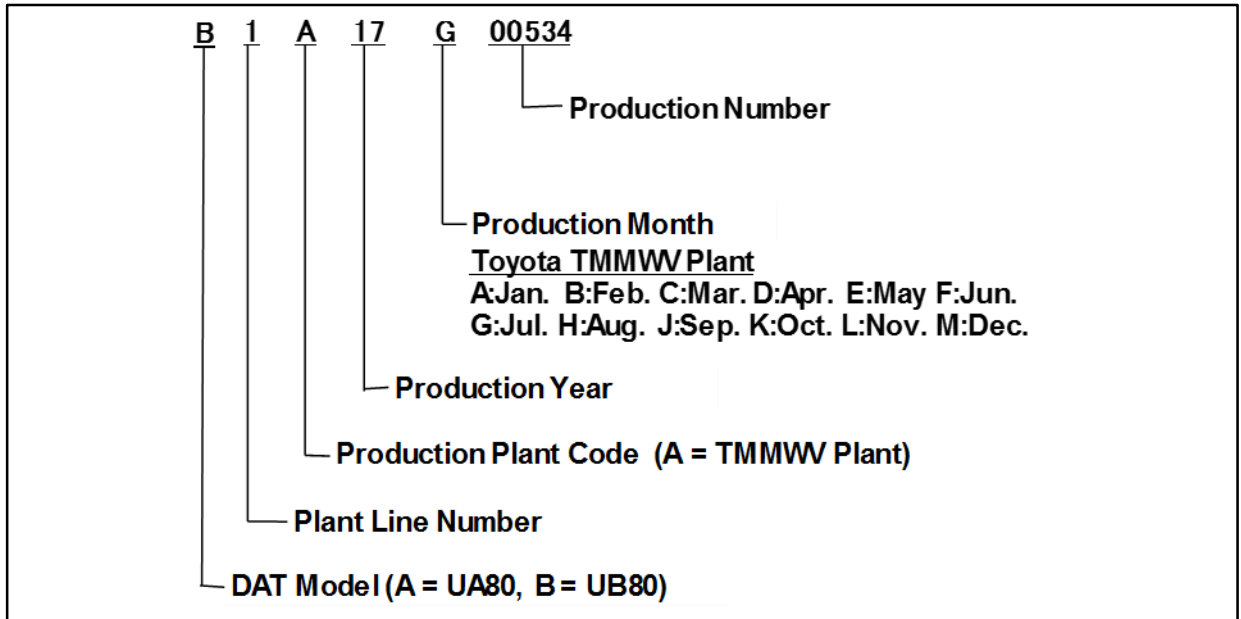


Transaxle Assembly and ECM (PCM) Software Confirmation

Production Change Confirmation Procedure (continued)

Confirmation by Production Change Effective Serial Number (continued)

Figure 4. TMMWV Plant Serial Number Decoder



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

This bulletin applies to vehicles equipped with both old AND new type DAT UA80* transmissions. Use Table 3 to determine what type of (B1 clutch) DAT is installed.

For units built BEFORE the production change effective serial numbers shown, use the table in the Calibration information section to determine the correct calibration file to use based on transmission identification information.

Transaxle Assembly and ECM (PCM) Software Confirmation

Production Change Information

Table 3.

TRANSMISSION MODEL NO.	PLANT	SERIAL NO. PRODUCTION CHANGE (NEW B1 CLUTCH)		TRANSMISSION PRODUCTION DATE	
		SINGLE UNIT NEW B1*	SERIAL NO. BREAK POINT		
UA80E/F	TMMWV	-	A3A18E00259	May 29 – 31, 2018	
			A4A18E00042		
	AW-J		17M7A22012	December 22, 2017	
	KINUURA		UA03L217C25W004	December 25, 2017	
			UA03L217C21W###	-	December 21, 2017
			UA03L217C21Y###		
			UA03L217C22W###		December 22, 2017
	UA03L217C22Y###				

*For single unit NEW B1, use the first 12 values from Table 3 and compare with Table 4 to confirm if unit is exact. If value matches transmission has NEW B1 installed, complete repair as indicated for DAT with NEW B1.

Table 4.

TRANSMISSION MODEL NO.	PLANT	SERIAL NO. PRODUCTION CHANGE (NEW B1 CLUTCH)	
		SINGLE UNIT NEW B1*	SERIAL NO. SEQUENCE
UA80E/F	KINUURA	UA03L217C21W###	005, 007, 009, 014, 017, 021, 023, 068, 074, 077, 114, 123, 130, 149, 151, 158, 163, 168-169, 173, 175, 180, 183, 201, 206, 213, 218-219, 229, 231-234, 247, 253, 258-261, 263, 266-267, 269-271, 273, 276, 278, 282-283, 285-288, 290, 293, 299, 302, 312, 315
		UA03L217C21Y###	002, 063, 082, 085, 128, 173, 179-180, 188, 192, 198, 200, 212, 217, 229-230, 232-233, 236-239, 242
		UA03L217C22W###	001, 008, 011, 017, 019, 030, 063, 069, 076-078, 092, 096, 100, 102, 108, 111, 113, 115, 125-126, 133, 135, 138-139, 144, 149-150, 153-155, 159-167, 170, 175, 177-178, 182, 187-188, 201, 204, 207-208, 212, 216, 220, 222, 223, 225-226, 228, 230-235, 237-243, 245-251, 253-259, 261-268, 270-306, 308-337, 339-344
		UA03L217C22Y###	022-023, 031, 033, 044, 064, 068, 072, 082, 088, 093, 100, 109-110, 114, 118, 125, 131, 133-134, 148, 154, 157, 185-186, 208, 210, 212, 214-215, 223, 227-230, 238, 245, 255-257, 260-261, 265, 269, 271, 273, 275-278, 320, 332

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Production Change Information (continued)

Reman effective serial number change point: Confirm vehicle repair history if transmission has previous replacement check serial number of reman unit and compare to Table 5 for OLD hardware for B1 clutch used on reman unit. Location of serial number is same as normal; however, reman units end with an X.

Table 5.

MODEL	PART NO.		PART NAME	TRANSMISSION MODEL	DRIVELINE
	OLD (B1 CLUTCH)	NEW (B1 CLUTCH)			
Highlander, Sienna	30510-###70-84	30510-###71-84	Reman ATM	UA80	2WD
	30510-###80-84	30510-###81-84			4WD
	30510-###00-84	30510-###01-84			

TRANSMISSION MODEL NO.	PLANT	SERIAL NO. PRODUCTION CHANGE (NEW B1 CLUTCH)	
		SINGLE UNIT NEW B1*	### SERIAL NO. SEQUENCE OF REMAN UNIT WITH OLD B1
UA80E/F	AW-J (Reman)	16J7A1####X	2145, 2147, 2149, 2151
		16K7A0####X	4181, 4183, 4942
		17D7A1####X	9616, 9618, 9620, 9622, 9624
		17F5629639X	
		17F7A1####X	3493, 3478, 3480, 3482, 3485, 3487, 3489, 3496, 3498, 3501, 3535, 3537, 8550, 8557, 8558, 8561
		17G7A1####X	1298, 1314, 1315, 1319, 1322, 1324, 1328, 1333, 1337, 3732, 3738, 3742, 3747, 3752, 3756, 6289, 6295, 6305, 7881, 7887, 7897, 8980, 8999, 9005, 9007, 9015, 9023, 9031, 9040, 9048, 9056, 9065, 9073
		17G7A2####X	0242, 0248, 0252, 0254, 0258, 0260, 0263, 0267, 0269, 0272, 0279, 0287, 2593, 2640, 2648, 2655, 2663, 2671, 2673, 2677, 2682, 2688, 2692, 2697
		17H7A0####X	0129, 0164, 0172, 0179, 0186, 0194, 0201, 0208, 0216, 0222, 0231, 0236, 2919, 2927, 2934, 2940, 2949, 2957, 2964, 2971, 2986, 2994, 2997, 3000, 7156, 7162, 7169, 7175, 7182, 7188
		17J7A0####X	6457, 6467, 6469, 6471, 6473, 6475, 6477
		17J7A17056X	

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Production Change Information (continued)

TRANSMISSION MODEL NO.	PLANT	SERIAL NO. PRODUCTION CHANGE (NEW B1 CLUTCH)	
		SINGLE UNIT NEW B1*	#### SERIAL NO. SEQUENCE OF REMAN UNIT WITH OLD B1
UA80E/F	AW-J (Reman)	17K7A1####X	5919, 7292, 7298, 7301, 7302, 7305, 7307, 7309, 7313, 7315, 9767, 9769, 9771, 9773, 9775, 9777, 9779, 9781, 9783, 9791
		17K7A2####X	0495, 0499, 0895, 0901, 0903, 0905, 0907, 0912, 0914, 0916, 0920, 0922, 2482, 2496, 2505, 2509, 2514, 2518, 2523, 2526, 2531, 2537, 3205, 3209, 3214, 3224, 3224, 3229, 3233, 3237, 3241, 3247, 3251, 3255, 3260, 3264, 3268, 3274, 3278, 3282, 4281, 4295, 4658, 4668, 4672, 4676, 4681, 4687, 4691, 4696, 5151, 5152, 5155, 5157, 5159, 5161, 5163, 5165, 5167, 5171, 5173, 5214, 5219, 5220, 5223, 5225, 5227, 5228, 5231, 5233, 6307, 6309, 6311, 6313, 6314, 6319, 6321, 6323, 6325
		17K7Z26316X	
		17L7A1####X	6581, 6585, 6588, 6590, 6591, 6595, 6598, 6600, 6602, 6605
		17M7A0####X	8277, 8279, 8281, 8283, 8285, 8287, 8289, 8296, 8297, 8302, 9628, 9630, 9634, 9636, 9638, 9640, 9642, 9645, 9646, 9648
		17M7A1####X	1145, 1150, 1152, 1154, 1156, 1159, 1160, 1163, 1165, 1167, 2727, 2730, 2731, 2733, 2736, 2737, 2739, 2742, 2744, 2745, 3128, 4802, 4804, 4806, 4809, 4810, 4813, 4815, 4816, 4818, 4821, 5023, 5713, 5717, 5719, 5726, 5727, 5729, 5732, 5735, 5740, 7117, 7122, 7124, 7126, 7128, 7132, 7134, 7136, 7138, 7140, 8165, 8166, 8169, 8171, 8173, 8175, 8177, 8179
		17M7A2####X	0176, 0179, 0180, 0183, 0185, 0189, 0191, 0193, 0195, 0197, 1671, 1679, 1681, 1683, 1685, 1687, 1689, 1691, 1693, 1697
		7A616F0####X	0207, 0422, 0423, 0424, 0425, 0427, 0428, 0429, 0430, 0431, 0433, 0434, 0435, 0437, 0438, 0442, 0444, 2746, 2961, 2963, 2964, 2966, 2968, 2972, 2976, 2977, 3016, 3018, 3020, 3022, 3024, 3025, 3027, 3029, 3031, 3033, 3514, 3416, 3518, 3520, 3522, 3526, 3528, 3529, 3531, 3626, 3630, 3632, 3634, 3639, 3645, 3647, 3650
		7A616K0####X	4185, 4187, 4190, 4192, 4194, 4196, 4201, 4203, 4930, 4934

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Production Change Information (continued)

TRANSMISSION MODEL NO.	PLANT	SERIAL NO. PRODUCTION CHANGE (NEW B1 CLUTCH)	
		SINGLE UNIT NEW B1*	### SERIAL NO. SEQUENCE OF REMAN UNIT WITH OLD B1
UA80E/F	AW-J (Reman)	7A617D2####X	4994, 4996, 4998, 5000, 5002, 5005, 5007, 5011, 5013, 5016, 5017, 5020, 5022, 5023, 5026, 5027, 5030, 5032, 5034, 5036
		7A617E00182X	
		7A617F1####X	3521, 3524, 3525, 3528, 3532, 3540, 3541, 3544, 6251, 6254, 6259, 6263, 6275, 8554
		7A617F2####X	0316, 0419, 0423, 0428, 0429, 0432, 0433, 0436, 0437, 0439, 0440, 0441, 0442, 0444, 0445, 0447, 0448, 0449, 0451, 0453, 0454, 0455, 0457, 0458, 0459, 0461, 0462, 0463, 0467, 0473, 0960, 0968, 0970, 0976, 0985, 0993, 1803, 1807, 1811, 1812, 1815, 1816, 1817, 1819, 1821, 1828, 1830, 1927, 1986
		7A617G1####X	1305, 1339, 1348, 3692, 3699, 3705, 3714, 3734, 3749, 6266, 6272, 6278, 6292, 6301, 6309, 6315, 6325, 6333, 6467, 7583, 7588, 7594, 7600, 7604, 7609, 7862, 7871

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

Transaxle Assembly and ECM (PCM) Software Confirmation

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 installed or ordered for ANY replacements needed.

Table 6.

MODEL	MODEL YEAR	JUDGEMENT (B1 CLUTCH)	START & STOP	DRIVELINE	ECU PARTS NO.	
					OLD PARTS NO.	NEW PARTS NO.
Highlander	2017 – 2018	Old	Y	AWD	89661-0E830-B 89661-0E831 89661-0E832 89661-0E833	89661-0E835
			N		89661-0E840-B 89661-0E841 89661-0E842 89661-0E843	89661-0E845
			Y	FWD	89661-0E850-B 89661-0E851 89661-0E852 89661-0E853	89661-0E855
			N		89661-0E860-B 89661-0E861 89661-0E862 89661-0E863	89661-0E865
		New	Y	AWD	89661-0ED60	89661-0ED61
			N		89661-0ED70	89661-0ED71
			Y	FWD	89661-0ED80	89661-0ED81
			N		89661-0ED90	89661-0ED91
Sienna	2017	Old	N/A	FWD	89661-08160-B 89661-08163 89661-08164 89661-08165 89661-08166	89661-08167
				AWD	89661-08440-B 89661-08443 89661-08444 89661-08445 89661-08446	89661-08447
		New		FWD	89661-08530 89661-08531	89661-08532
				AWD	89661-08540 89661-08541	89661-08542

Transaxle Assembly and ECM (PCM) Software Confirmation

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

Table 6 (continued).

MODEL	MODEL YEAR	JUDGEMENT (B1 CLUTCH)	START & STOP	DRIVELINE	ECU PARTS NO.	
					OLD PARTS NO.	NEW PARTS NO.
Sienna	2018	Old	N/A	FWD	89661-08400 89661-08401	89661-08402
				AWD	89661-08460 89661-08461	89661-08462
		New		FWD	89661-08580 89661-08581	89661-08582
				AWD	89661-08590 89661-08591	89661-08592

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 (B1 CLUTCH)	YEAR	MODEL	DRIVETRAIN	START & STOP	ECU TYPE	CALIBRATION ID	
						PREVIOUS	NEW
Before	2017 – 2018	Highlander	2WD	Y	Engine	896630E45300 896630E45200 896630E45100 896630E45000	896630E45400/ 896650E11200
					Transmission	896650E11100 896650E11000	
				N	Engine	896630E46300 896630E46200 896630E46100 896630E46000	896630E46400/ 896650E12200
					Transmission	896650E12100 896650E12000	
			4WD	Y	Engine	896630E43300 896630E43200 896630E43100 896630E43000	896630E43400/ 896650E09200
					Transmission	896650E09100 896650E09000	
	2017	Sienna	2WD	N	Engine	896630E44300 896630E44200 896630E44100 896630E44000	896630E44400/ 896650E10200
					Transmission	896650E10100 896650E10000	
				N	Engine	896630828600 896630828500 896630828400 896630828300 896630828000	896630828700/ 896650807300
					Transmission	896650807200 896650807100 896650807000	

Transaxle Assembly and ECM (PCM) Software Confirmation

Calibration Information (continued)

JUDGEMENT (B1 CLUTCH)	YEAR	MODEL	DRIVETRAIN	START & STOP	ECU TYPE	CALIBRATION ID	
						PREVIOUS	NEW
Before	2017	Sienna	4WD	N	Engine	896630836600	896630836700/ 896650808300
						896630836500	
					896630836400		
	896630836300						
	896630836000						
	Transmission		896650808200				
896650808100							
896650808000							
2018	2WD	Engine	896630832100	896630832200/ 896650811100			
			896630832000				
		Transmission	896650811000				
4WD	Engine	896630838100	896630838200/ 896650812100				
		896630838000					
Transmission	896650812000						
After	2017 – 2018	Highlander	2WD	Y	Engine	896630E85000	896630E85100/ 896650E43100
					Transmission	896650E43000	
				N	Engine	896630E86000	896630E86100/ 896650E44100
			Transmission		896650E44000		
			4WD	Y	Engine	896630E83000	896630E83100/ 896650E41100
					Transmission	896650E41000	
	N	Engine		896630E84000	896630E84100/ 896650E42100		
		Transmission	896650E42000				
	2017	Sienna	2WD	N	Engine	896630846100	896630846200/ 896650819100
						896630846000	
			Transmission		896650819000		
	4WD				Engine	896630847100	896630847200/ 896650820100
896630847000							
Transmission	896650820000						
	2018	2WD	Engine	896630851100	896630851200/ 896650823200		
896630851000							
Transmission		896650823100					
	896650823000						
4WD	Engine	896630852100	896630852200/ 896650824200				
		896630852000					
Transmission	896650824100						
896650824000							

Transaxle Assembly and ECM (PCM) Software Confirmation

Repair Procedure

1. Does the ATM (B1 Clutch) type match the ECM (PCM) hardware?
 - **YES** — Go to step 3.
 - **NO** — Continue to step 2

2. Replace the ECM (PCM) hardware with the latest correct part, and then go to step 6.
Refer to TIS, applicable model and model year Repair Manual:
 - 2017 – 2018 Highlander:
Power Source/Network – Networking – “Networking: Network Gateway ECU:
[Removal](#) / [Installation](#)”
 - 2017 Sienna:
Power Source/Network – Networking – “Networking: Network Gateway ECU:
[Removal](#) / [Installation](#)”
 - 2018 Sienna:
Power Source/Network – Networking – “Networking: Network Gateway ECU:
[Removal](#) / [Installation](#)”

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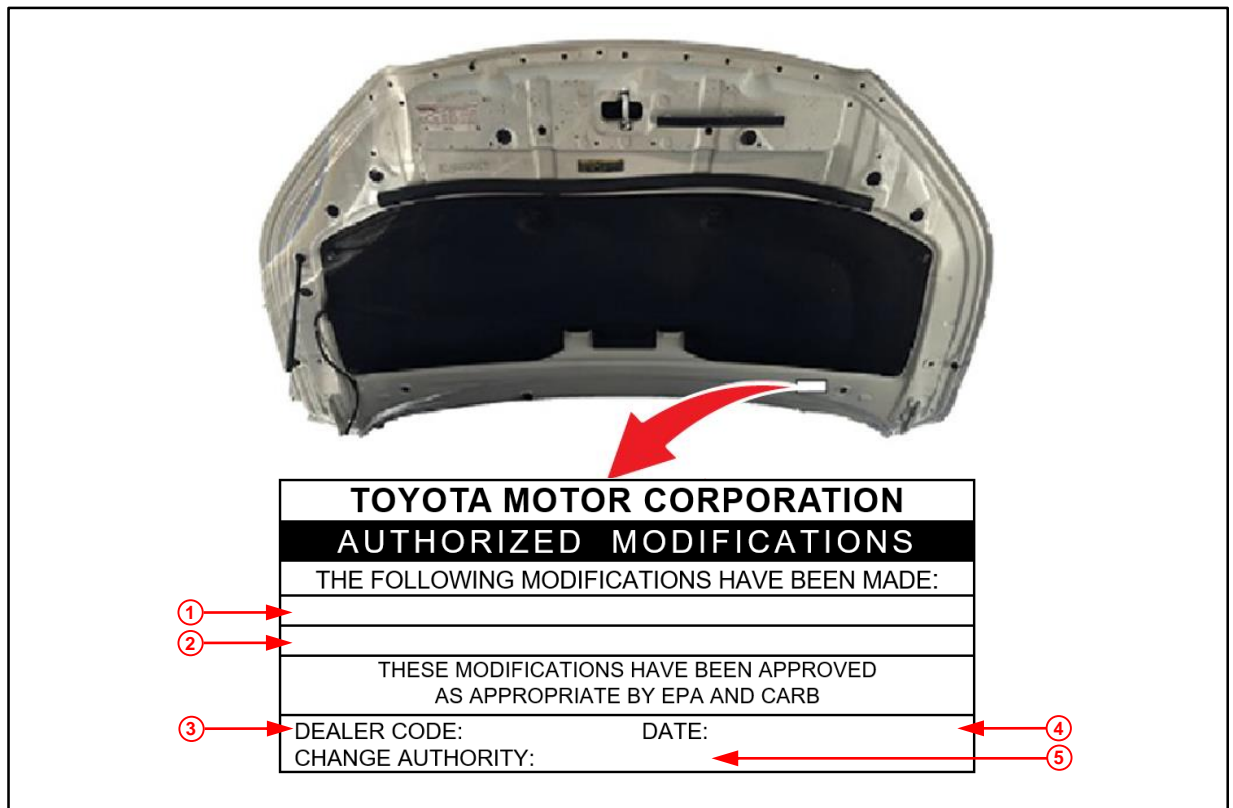
Repair Procedure (continued)

- Check for the Authorized Modifications Label affixed to the vehicle in the applicable location shown in Figure 5 or 6.

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 4.

Figure 5. Location of Authorized Modifications Label for 2017 – 2018 Highlander



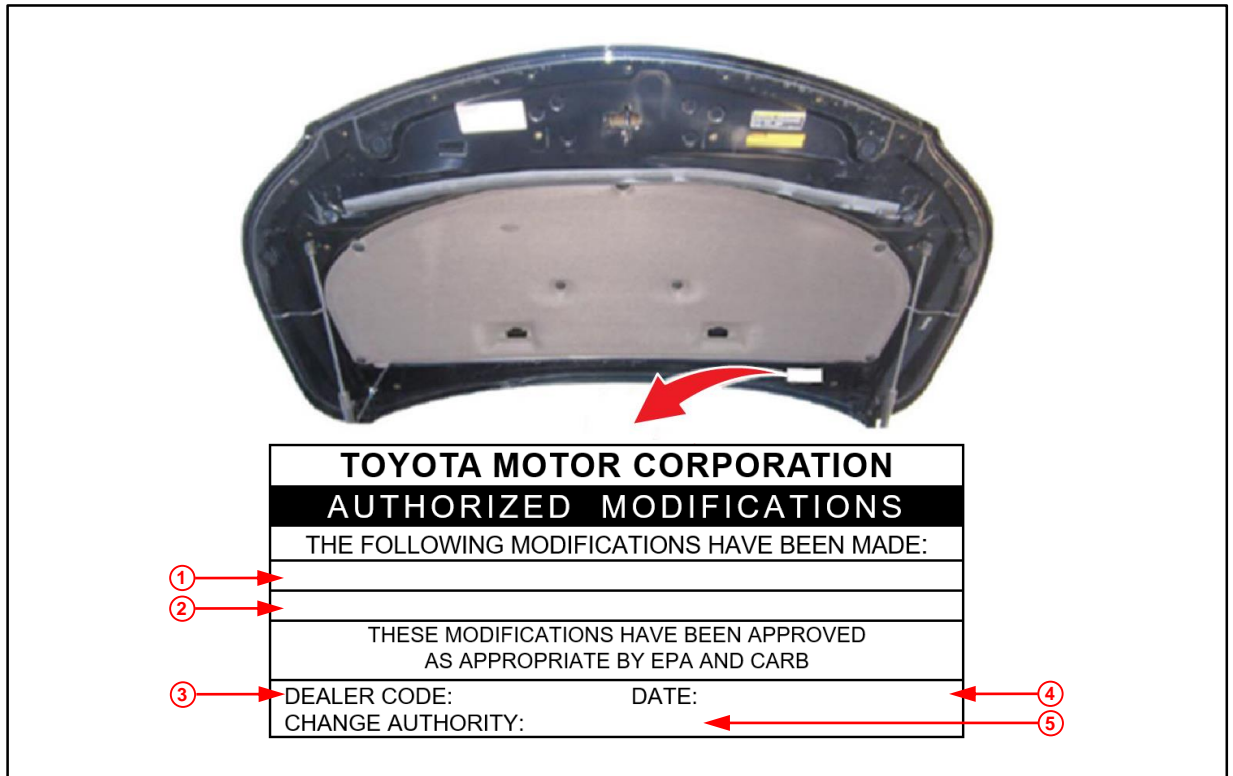
1	Replacement ECM (PCM) Part Number (e.g., 89661-0E832)
2	New Calibration ID (e.g., 896630E43200)
3	Dealer Code

4	Date Completed
5	This SB Number

Transaxle Assembly and ECM (PCM) Software Confirmation

Repair Procedure (continued)

Figure 6. Location of Authorized Modifications Label for 2017 – 2018 Sienna



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

4	Date Completed
5	This SB Number

4. Flash reprogram the ECM (PCM).

NOTE

- The battery diagnostic tool **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 battery diagnostic station, refer to the [DCA-8000 Instruction Manual](#) located at *TIS – Diagnostics – Tools & Equipment – Battery Diagnostics*.

Follow the procedures outlined in Service Bulletin [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)

5. 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 5 and 6. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.

6. Test-drive the vehicle to confirm proper vehicle operation.