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Transaxle Whine Noise, Harsh Shift, MIL ON, or **Reduced Power**

Service

Category Drivetrain

Section	Automatic Transmission/Transaxle	Market USA	ASE Certification
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Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2017 - 2018	Highlander, Sienna	Transmission(s): 8AT

Introduction

Some 2017 - 2018 model year Highlander and Sienna vehicles may exhibit a whine noise while driving, a harsh shift, MIL ON, or reduced power.

The following Diagnostic Trouble Codes (DTCs) may be present.

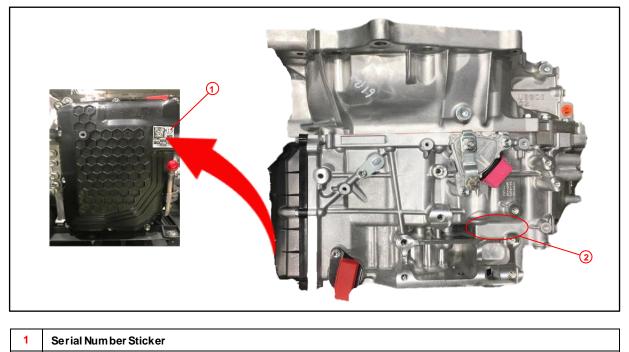
- P07457F
- P07757F •
- P07957F •
- P28077F •
- P28167F •
- P08BA7F •
- P27137F
- P07407E
- P27567F
- P211904 •
- P071531 •

For transaxles within the specified dates that meet the required symptoms, a remanufactured transaxle is available. Follow the Repair Procedure in this bulletin to address this condition.

Production Change Confirmation Procedure

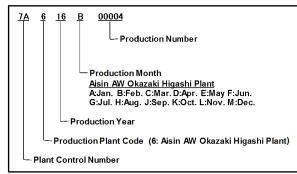
Locate the transaxle serial number, found on the sticker located on the transaxle assembly side cover or on the engraved location as shown. A serial number decoder is also provided below.

Figure 1. Serial Number Sticker and Engraved Serial Number Location



2 Engraved Serial Number Location

Figure 2. AW Plant Serial Number Decoder



MODEL	PLANT	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE AT SERIAL NUMBER	
Highlander	AW	8AT	7A617E03416	
Sienna	~~~		77017203410	

Warranty Information

	OP CODE	DESCRIPTION	MODEL	TIME	OFP	T1	T2
	369011		Sienna (FWD)	7.4			
			Sienna (AWD)	8.5	30500-####0		
	369011Q	R & R Transaxle	Highlander (FWD)	7.3		TBD*	TBD*
3090112		Highlander (AWD)	8.2				

*T1 and T2 values are based on replacement phenomenon.

APPLICABLE WARRANTY

- This repair is covered under the Toyota Powertrain Warranty. This warranty is in effect for 60 months or 60,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

Parts Information

PART NUMBER	PART NAME	QTY
30510-45071-84	30510-45071-84	
30510-45081-84	Reman ATM	1*
30510-48601-84		
90080-43036		2 – 3*
17451-0D140	- Gasket, Exhaust Pipe	1
17173-0P040	Gasket, Exhaust Manifold to Head	1**
17176-31130	Gasket, Air Surge Tank to Intake Manifold	1**
90080-17238	Nut, Lock	2
90080-11555	90080-11555 Bolt, W/Washer	
95381-03025	Pin, Cotter	2
90080-52017	Ring, Hole Snap	1
90901-19060	Bolt, W/Washer	1***
90521-73001	Ring, Hole Snap	1***
35150-45010 Plug Assy, Transmission Case		1
90430-18008	Gasket	2
90116-12051	Dolt Stud	3***
90116-12052	Bolt, Stud	1***
12157-10010	7-10010 Gasket, Drain Plug	
08885-02506	08885-02506 Gear Oil, LT 75W-85	
00289-ATFWS	ATF WS	As Needed
00272-SLLC2	Super Long Life Coolant	As Needed

*Use the VIN # to order the correct transaxle and quantity of gaskets. **Highlander ONLY. ***AWD vehicle ONLY.

Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Drive Shaft Nut Chisel*	<u>09930-00010</u>	1
Ball Joint Puller*	<u>09960-20010-01</u>	1
Drive Shaft Remover Attachment*	<u>09520-01010-02</u>	1
Differential Side Gear Shaft Tool	<u>09520-24010</u>	1
Transmission Oil Plug	<u>09325-20010</u>	1
Ratcheting Strap*	00002-2SUPP	1
Crankshaft Pulley Holding Tool*	<u>09213-70011</u>	1
Companion Flange Holding Tool*	<u>09330-00021</u>	1
Transmission Fill System*	00002-11100-02	1
Engine Support Bar*	00002-ESUPPT-01	1

*Essential SST.

NOTE

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

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

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 13.30.018 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

Repair Procedure

1. Confirm the transaxle serial number.

Does the transaxle serial number begin with 7A6 AND come BEFORE 7A617E03416?

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

Repair Procedure (continued)

- 2. Confirm the NT sensor speed.
 - A. Connect Techstream to the vehicle and select Engine Data List.
 - B. Place the vehicle in Park and apply the parking brake.
 - C. Increase the engine speed to 1,000 rpm.

Is the NT sensor speed less than or equal to the specification in Table 1 at the given parameter?

N	NOTE
L	Jse parameter No. 1 or No. 2 in Table 1.

- YES Continue to step 3.
- NO This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

Figure 3.

File Function Setup T	is user Help		
Stored Data			
2017 Sienna			1
2GR-FKS	Parameter	Value	Unit
	Engine Speed	0	rpm
012806 mile	Accelerator Position	0.0	%
	NT Sensor Speed	0	rpm
	Shift SW Status (P Range)	ON	
5TDKZ3DC5HS837730	Shift SW Status (R Range)	OFF	
2017 Sienna 20	Shift SW Status (N Range)	OFF	
File Notes	Shift SW Status (D Range)	OFF	
Health Check	A/T Oil Temperature No.1	108.5	F
Engine			

Table 1.

		PARA	METER	NT SENSOR SPEED	(rpm)
NO.	NO. SHIFT ENGINE SPEED A/T OIL TEMPERATURE NO. 1 (rpm)		CONTINUE DIAGNOSIS USING THE APPLICABLE REPAIR MANUAL GO TO STE		
1	P	1 000	81° – 104°F (27° – 40°C)	Greater Than 850	850 or Under
2		1,000	105° – 212°F (41° – 100°C)	Greater Than 900	900 or Under

Repair Procedure (continued)

- 3. Confirm if ANY of the following conditions are present.
 - A. Diagnostic Trouble Code (DTC) P07457F, P07757F, P07957F, P28077F, P28167F, P08BA7F, P27137F, P07407E, P27567F, P211904, or P071531 is present.
 - B. Harsh shift.
 - C. A whine noise is present while driving in D range.
 Refer to the video links below for examples of the whine noise condition.
 <u>Whine Noise Example No. 1</u> / <u>Whine Noise Example No. 2</u>

Are ANY of the conditions listed above present?

- YES Continue to step 4.
- NO This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- 4. Replace the transaxle.

Refer to TIS, applicable model and model year Repair Manual:

- 2017 2018 Highlander (2WD): Drivetrain – Automatic Transmission/Transaxle – "UA80E Automatic Transmission / Transaxle: Automatic Transaxle Assembly: <u>Removal</u> / <u>Installation</u>"
- 2017 2018 Highlander (4WD): Drivetrain – Automatic Transmission/Transaxle – "UA80F Automatic Transmission / Transaxle: Automatic Transaxle Assembly: Removal / Installation"
- 2017 2018 Sienna (2WD): *Drivetrain – Automatic Transmission/Transaxle* – "UA80E Automatic Transmission / Transaxle: Automatic Transaxle Assembly: <u>Removal</u> / <u>Installation</u>"
- 2017 2018 Sienna (4WD): Drivetrain – Automatic Transmission/Transaxle – "UA80F Automatic Transmission / Transaxle: Automatic Transaxle Assembly: <u>Removal</u> / <u>Installation</u>"
- 5. Test-drive the vehicle to confirm proper operation.