

Knocking Noise From Fuel Tank Area

Service Category Engine/Hybrid System

Section Fuel System

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2017 - 2019	Highlander	

Introduction

Some 2017 – 2019 model year Highlander vehicles may exhibit a knocking noise from the fuel tank area at idle, vehicle stationary, with a full tank of gasoline. Follow the Repair Procedure in this bulletin to address this condition.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFFP	T1	T2
EG1824	Install Valve Assembly, Charcoal Canister Plate and R & R Fuel Tank Protector	1.0	77404-0E050	91	52

APPLICABLE WARRANTY

- This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 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.
- For California specification vehicles sold, registered, and operated in California, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington, warranty is in effect for 36 months or 50,000 miles, whichever occurs first, from the vehicle's in-service date.

Knocking Noise From Fuel Tank Area

Parts Information

PART NUMBER		PART NAME	QTY
PREVIOUS	NEW		
77606-0E040 77606-0E050	77606-48160	Protector Sub-assy, Fuel Tank	1
17451-0D140		Gasket, Exhaust Pipe, Center	1
90917-A6001		Gasket, Exhaust Pipe	1
N/A	77720-48060	Valve Assy, Fuel Outlet	1
N/A	77743-48020	Plate, Charcoal Canister, No. 1	1

Required Tools & Equipment

REQUIRED TOOLS & MATERIAL	PART NUMBER	QTY
Nitto Tape	360UL	1

NOTE

Nitto Tape is located in the unusual interior noise (UIN) kit (PN 08231-00801), which is stocked by most dealers. Check the kit first before ordering.

Repair Procedure

1. Confirm the condition exists.
Does the vehicle exhibit a knocking noise from the fuel tank area at idle, vehicle stationary, with a full tank of gasoline?
 - **YES** — Continue to step 2.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

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Repair Procedure (continued)

2. Confirm if the vehicle has the NEW pulsation damper valve assembly installed.

NOTE

The NEW part can be identified by the addition of a bracket and valve assembly attached to the charcoal canister.

Does the vehicle have the NEW pulsation damper valve assembly installed?

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

Figure 1. Without Pulsation Damper Valve Assembly Installed

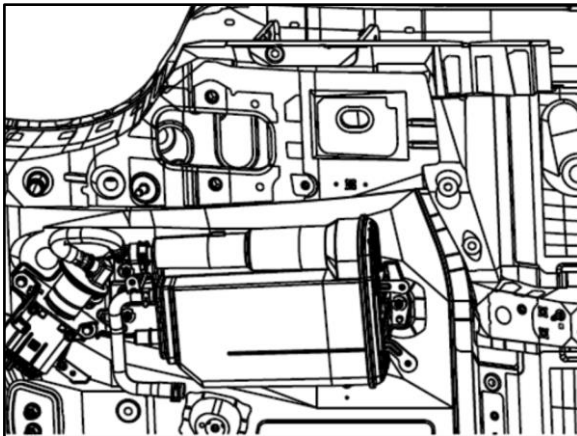
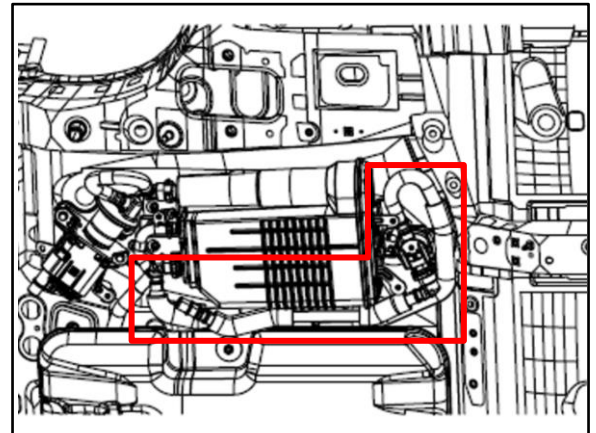


Figure 2. With Pulsation Damper Valve Assembly Installed

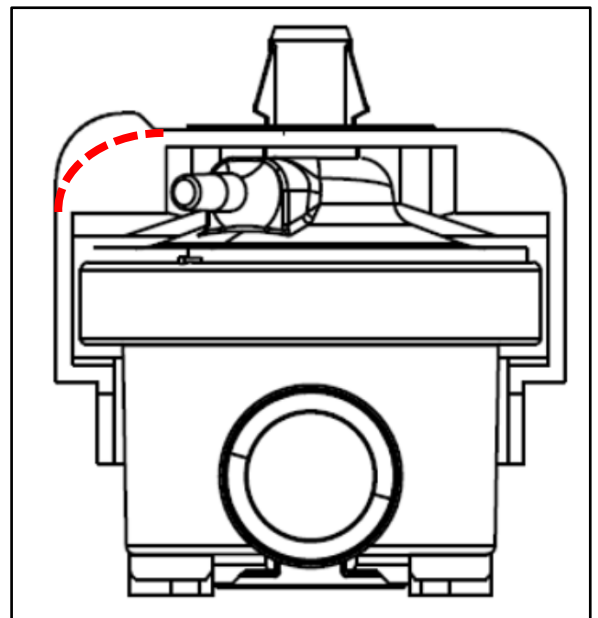


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Repair Procedure (continued)

3. Install the NEW pulsation damper valve assembly.
 - A. Remove the tail exhaust pipe assembly and the charcoal canister protector. Refer to TIS, applicable model and model year Repair Manual:
 - 2017 – 2019 Highlander:
Engine/Hybrid System – Emission Control – [“2GR-FKS Emission Control: Canister: Removal”](#)
 - B. Remove the front center floor cover and the No. 1 fuel tank protector sub-assembly. Refer to TIS, applicable model and model year Repair Manual:
 - 2017 – 2019 Highlander:
Engine/Hybrid System – Fuel System – [“2GR-FKS Fuel: Fuel Tank: Removal”](#)
 - C. Disconnect the fuel tank vent hose sub-assembly. Refer to TIS, applicable model and model year Repair Manual:
 - 2017 – 2019 Highlander:
Engine/Hybrid System – Emission Control – [“2GR-FKS Emission Control: Canister: Removal”](#)
 - D. To provide adequate clearance to the NEW bracket, trim the NEW pulsation damper valve as shown.

Figure 3.



Knocking Noise From Fuel Tank Area

Repair Procedure (continued)

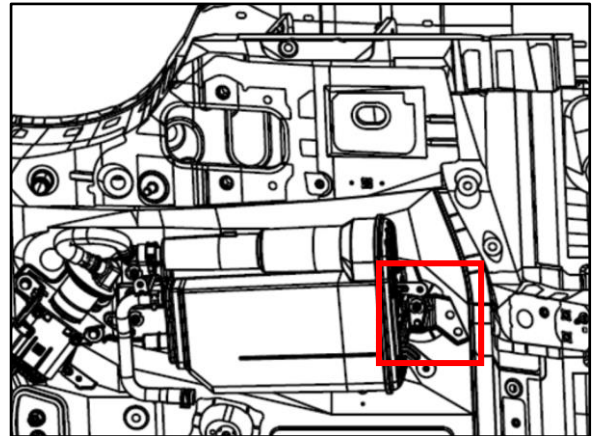
E. Ensure clearance between the valve and bracket BEFORE proceeding to the next step.

F. Install the NEW bracket to the charcoal canister.

- (1) Remove the nut from the front of the charcoal canister.
- (2) Install the bracket on the stud.
- (3) Tighten the nut and valve assembly plate into place.

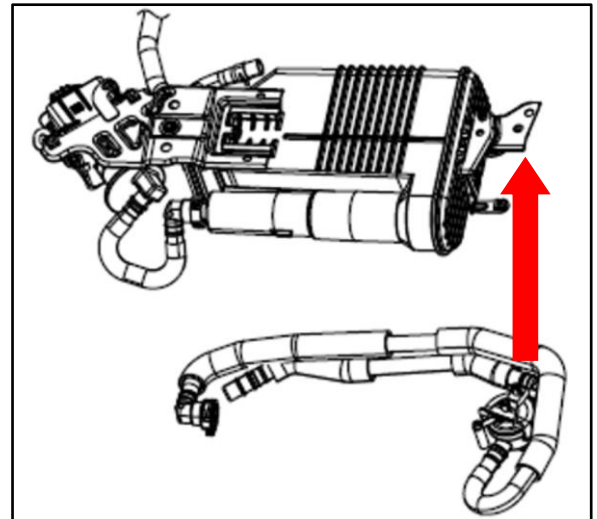
Torque: 5.5 N*m (56 kgf*cm, 49 in*lbf)

Figure 4.



G. Install the NEW pulsation damper valve assembly onto the NEW bracket. Push both retaining clips of valve assembly through the two holes on the bracket.

Figure 5.

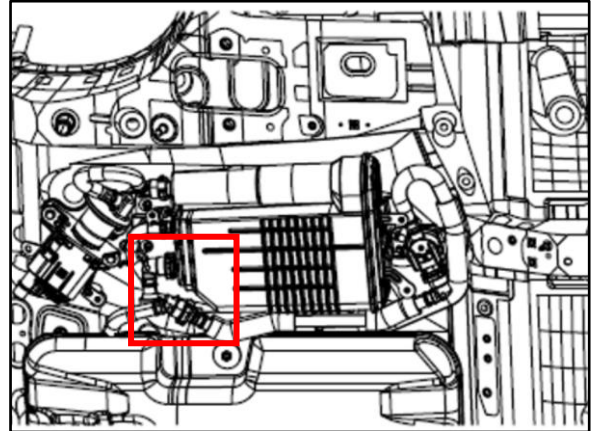


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Repair Procedure (continued)

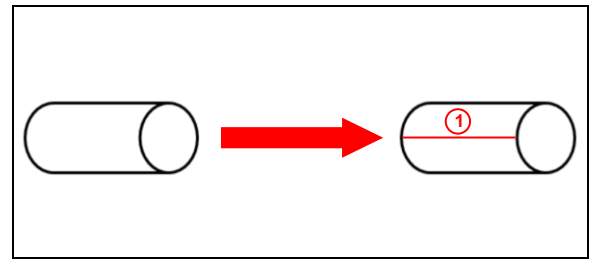
- H. Connect the NEW pulsation damper valve assembly to the charcoal canister.

Figure 6.



- I. Cut the two reflect sleeves as shown.

Figure 7.



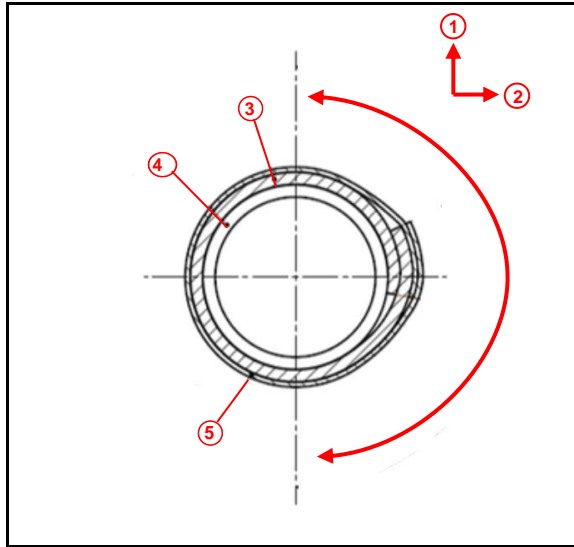
1	Cut Location
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Repair Procedure (continued)

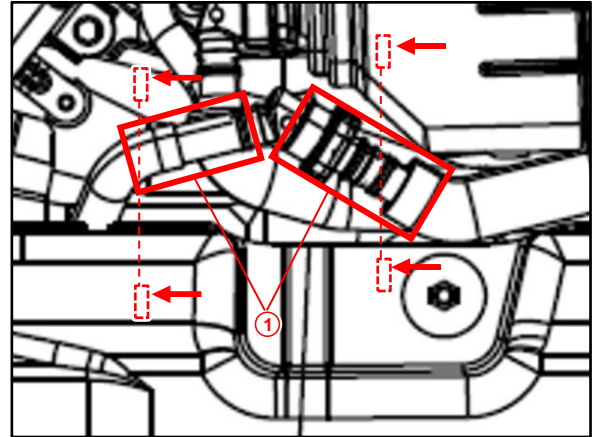
- J. Wrap the two reflect sleeves around each of the vent tube connections and tape them into place as shown in Figures 8 and 9.

Figure 8.



1	RH
2	Up
3	Reflect Sleeve
4	Vent Tube
5	Nitto Tape

Figure 9.



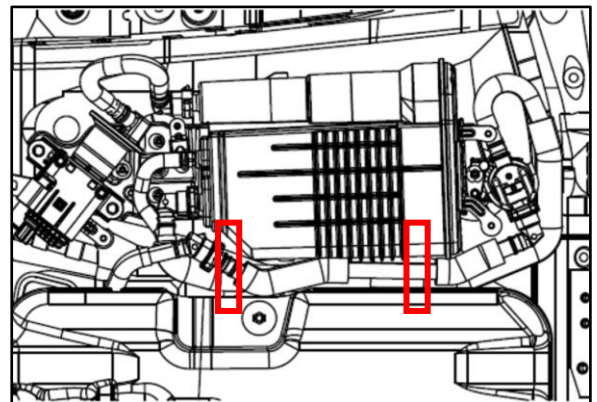
1	Reflect Sleeve
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- K. Using the zip ties supplied, tie the NEW pulsation damper valve assembly to the purge line as shown by doubling the zip ties together for each location.

NOTE

Double or connect the zip ties to provide adequate length to secure assembly.

Figure 10. Zip-Tie Locations



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Repair Procedure (continued)

- L. Trim the excess zip-tie tail between 3 mm – 5 mm.

- M. Install the No. 1 fuel tank protector sub-assembly and the front center floor cover.
Refer to TIS, applicable model and model year Repair Manual:
 - 2017 – 2019 Highlander:
Engine/Hybrid System – Fuel System – [“2GR-FKS Fuel: Fuel Tank: Installation”](#)

- N. Install the charcoal canister protector and the tail exhaust pipe assembly.
Refer to TIS, applicable model and model year Repair Manual:
 - 2017 – 2019 Highlander:
Engine/Hybrid System – Emission Control – [“2GR-FKS Emission Control: Canister: Installation”](#)

- O. Make sure the vehicle has a full tank of gasoline and start the engine.

- P. At idle, vehicle stationary, confirm the knocking noise is no longer present.