

Popping Noise When the Engine is Running

Service Category Engine/Hybrid System

Section Engine Mechanical

Market USA

Toyota Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2023	ES250	

Introduction

Some 2023 model year ES 250 vehicles equipped with an A25A-FKS engine may exhibit a condition in which a popping noise is present when the engine is running. Follow the Repair Procedure in this bulletin to address this condition.

Production Change Information

This bulletin applies to vehicles produced **BEFORE** the Production Change Effective VINs shown below.

MODEL	PLANT	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN
ES 250	TMMK	AWD	58AE11D1 #PU011618
			58AB11D1# PU011618
			58AC11D1# PU011618
			58AG11D1# PU011618
			58AD11D1# PU011618

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Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
EG2304	R & R Cylinder Head	23.8	11101#####*	91	50

*Warranty claim MUST be submitted with the correct 10-digit OFP. Choose the correct OFP for the vehicle being repaired by searching for the parts in the Electronic Parts Catalog using the VIN filter.

APPLICABLE WARRANTY

- This repair is covered under the Lexus Powertrain Warranty. This warranty is in effect for 72 months or 70,000 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 DESCRIPTION	QTY
11101-29627	Head Sub-assy, Cylinder	1
17173-F0010	Gasket, Exhaust Manifold to Head	1
22271-F0010	Gasket, Throttle Body	1
17171-25010	Gasket, Intake Manifold to Head, No. 1	1
90301-92005	Ring, O (for Cam Timing Control Motor)	1
11193-F0010	Gasket, Spark Plug Tube	4
11115-F0010	Gasket, Cylinder Head	1
11213-25020	Gasket, Cylinder Head Cover	1
90910-02201	B Bolt (for Cylinder Head Set)	6
90910-02202	A Bolt (for Cylinder Head Set)	4
00295-00103	Toyota Seal Packing	1
00272-SLLC2	Super Long Life Coolant	As Needed

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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.
- GTS+ software version 2023.02.001.02 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 condition exists.
Is there a popping noise present when the engine is running?
 - **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. Inspect the cylinder head for machine markings.
 - A. Leaning into the engine bay, towards the bulkhead side, use a phone or borescope to point the camera to see the backside of the engine.

NOTE

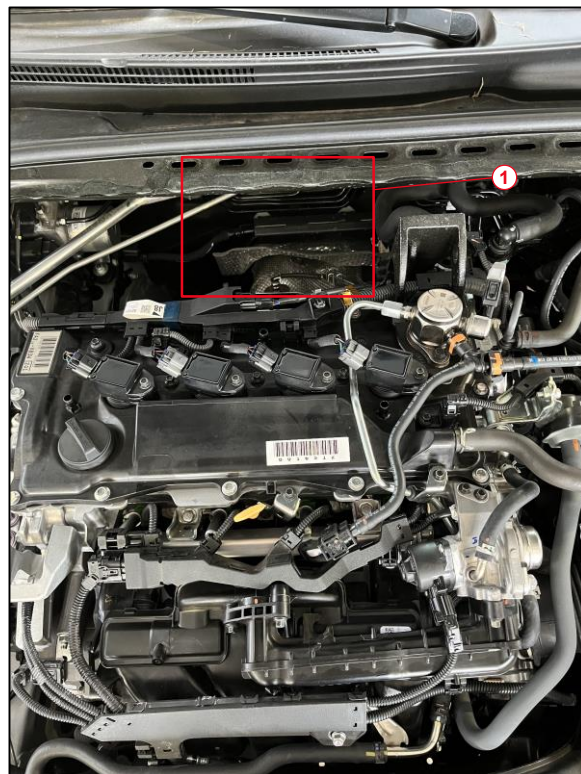
Focus on the middle of the head casting, just above the exhaust manifold.

- B. Make the water-jacket plug the reference point for the machine markings location.

NOTE

The water-jacket plug is located on the middle of the head casting, just above the exhaust manifold.

Figure 1. Engine Bay



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Area of Focus (for Phone or Borescope)

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Repair Procedure (continued)

- C. Verify the machine number markings drilled into the casting, using the water-jacket plug as the starting point of reference.

NOTE

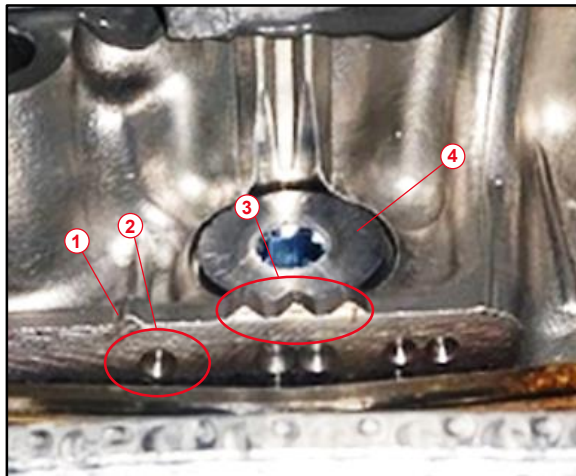
The markings will appear just below the water-jacket plug in the form of drilled dots.

- D. Locate the leftmost casting rib as shown in Figures 2 and 3.
Is there more than one dot located to the left of the leftmost casting rib?
- **YES** — This bulletin does NOT apply.
Continue diagnosis using the applicable Repair Manual.
 - **NO** — Continue to step 3.

NOTE

Some dots may be smaller or drilled lighter than others.

Figure 2. Indications of a Suspect Cylinder Head



1	Left Side: One Casting Rib
2	One Marking Present
3	Right Side: Three Casting Ribs
4	Water-jacket Plug

Figure 3. Indication of Non-suspect Cylinder Head



1	More Than One Marking Present
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Repair Procedure (continued)

3. Replace the cylinder head sub assembly.
 - A. Remove the cylinder head sub assembly.

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

 - [2023](#) ES 250:
Engine/Hybrid System – Engine Mechanical – “A25A-FKS (Engine Mechanical): Cylinder Head Gasket: Removal”
 - B. Disassemble the cylinder head sub assembly.

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

 - [2023](#) ES 250:
Engine/Hybrid System – Engine Mechanical – “A25A-FKS (Engine Mechanical): Cylinder Head: Disassembly”
 - C. Transfer ALL valve spring retainers, ALL springs, and ALL valves, from the old cylinder head onto the NEW cylinder head.

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

 - [2023](#) ES 250:
Engine/Hybrid System – Engine Mechanical – “A25A-FKS (Engine Mechanical): Cylinder Head: Reassembly”
 - D. Install the NEW cylinder head sub assembly.

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

 - [2023](#) ES 250:
Engine/Hybrid System – Engine Mechanical – “A25A-FKS (Engine Mechanical): Engine Unit: Reassembly”
4. Test-drive the vehicle to confirm the condition no longer exists.