


MIL "ON" DTC P030# and/or Intermittently Runs Rough

Service Category Engine/Hybrid System

Section Engine Control

Market USA

Lexus Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2006 – 2010	IS250, IS250C	

Introduction

Some 2006 – 2010 model year IS 250 and IS 250C vehicles may exhibit one or more of the following conditions:

- MIL "ON" DTC P0300, P0301, P0302, P0303, P0304, P0305, and/or P0306.
- Runs rough after coming to a stop with the engine at operating temperature.
- Runs rough with engine misfires present after a cold soak startup.

Follow the procedures in this bulletin to address these conditions.

Production Change Information

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

MODEL	PLANT	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN
IS 250	Tahara	2WD	JTHBF5C2#A5111618
		4WD	JTHCF5C2#A5038287
	TMK	2WD	JTHBF5C2#A2095102
		4WD	JTHCF5C2#A2032832
IS 250C	Tahara	2WD	JTHFF2C2#A2507310

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Warranty Information

OP CODE	DESCRIPTION	TIME		OFP	T1	T2
		2WD	29.0			
EG9057	R & R Pistons/Piston Ring Set, Valve Springs, Valve Lash Adjusters, and Valve Spring Retainers (if applicable)	4WD	29.9	13#01-310#0	8A	99

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

NOTE

Refer to the Repair Procedure PRIOR to ordering parts.

PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
04111-31780	04111-31780	Gasket Kit, Engine Overhaul	1
04111-31530			
13011-31120	13011-31121	Ring Set, Piston	1
13101-31050-A0	Same	Piston Sub-assy, w/Pin, RH	As Needed*
13101-31050-B0	Same		As Needed*
13101-31050-C0	Same		As Needed*
13301-31020-A0	Same	Piston Sub-assy, w/Pin, LH	As Needed*
13301-31020-B0	Same		As Needed*
13301-31020-C0	Same		As Needed*
13750-75020	13750-31020	Adjuster Assembly, Valve Lash	24**
90501-33019	90501-30030	Spring, Compression (for inner)	24**
13741-20021	13741-31020	Retainer, Valve Spring	24**
04152-YZZA3	Same	Element Kit, Oil Filter (2WD)	1
04152-YZZA2	04152-YZZA5	Element Kit, Oil Filter (4WD)	1

* Refer to Repair Procedure prior to ordering pistons to ensure the correct size is ordered.

** Only applicable to 2006 model year vehicles that fall before the production break and have NOT had TSIB [L-SB-0088-08](#) or [EG019-06](#), "MIL 'ON' DTC P0300, P0301, P0302, P0303, P0304, P0305, or P0306", performed.

See NOTE in step 4 of the Repair Procedure for more details.

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Required Tools & Equipment

TOOLS & MATERIAL	PART NUMBER	QUANTITY	
Three Bond 1324 or Equivalent	08833-00070	As Needed	
Three Bond 1282B or Equivalent	08826-00100	As Needed	
Three Bond 1207B or Equivalent	00295-00103	As Needed	
Super Long Life Coolant (SLLC)	00272-SLLC2	9.6 U.S. qts. (9.1 liters)	
ILSAC GF-4 Multi-grade SAE 5W-30	–	2WD	6.7 U.S. qts. (6.3 liters)
	–	4WD	6.8 U.S. qts. (6.4 liters)
Green Plastigage™	–	As Needed	
Cylinder Ridge Reamer	–	1	
Torque Yield Wrench	–	1	
Precision Straight Edge	–	1	
Piston Heater	–	1	
Piston Ring Compressor	–	1	
Torque Wrench	–	1	
Large Brass Punch	–	1	
Piston Ring Expander	–	1	
Thread Chaser	–	1	
Feeler Gauge	–	1	
Caliper Gauge	–	1	
Micrometer	–	1	
Vernier Caliper	–	1	
Engine Stand	–	1	
Precision Straight Edge	–	1	
Dye Penetrant	–	As Needed	

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Gasket Seal Cutter*	09032-00100	1
Crankshaft Pulley Holding Tool*	09213-70011-01	1
Companion Flange Holding Tool*	09330-00021	1
Universal Puller Set "D"*	09950-50013-02	1

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Required Tools & Equipment (Continued)

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Valve Service Tool Set (Valve Spring Compressor) (Starter Armature Bearing Replacer)	00002-53464C-02 (09202-70020) (09201-41020)	1
Variable Open Wrench*	09922-10010-01	1
Crankshaft Service Tool Set* (Connecting Rod Bushing Remover/Replacer) (Crankshaft Rear Oil Seal Replacer)	00002-62091-02 (09222-30010) (09223-15030)	1
Crankshaft Front Oil Seal Replacer	09223-22010	1
Hydraulic Lash Adjuster	09276-75010-01	1
Handle Set*	09950-70010-02	1
Pinion Rear Bearing Cone Replacer	09506-35010	1
Oil Filter Wrench*	09228-06501	1

* Essential SST.

NOTE

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

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Diagnostic Procedure

1. Confirm the condition per the Introduction.
2. Perform misfire diagnosis.

Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:

- [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) IS 250; [2010](#) IS 250C:

Engine/Hybrid System – Engine Control – “4GR-FSE Engine Control System: SFI System: P0300-P0306: Random / Multiple Cylinder Misfire Detected”

NOTE

Normal mechanical engine condition, engine control system, fuel supply/injection systems, and ignition system operation must be present or this TSIB does NOT apply.

3. If the concern is NOT resolved after following the Repair Manual misfire diagnosis, proceed with the repair procedure below.

Repair Procedure

1. Remove the engine assembly.

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

- [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) IS 250; [2010](#) IS 250C:

Engine/Hybrid System – Engine Mechanical – “4GR-FSE Engine Mechanical: Engine Assembly: Removal”

2. Disassemble the engine to replace the pistons and piston rings.

HINT

Only disassemble what is necessary for the parts being replaced.

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

- [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) IS 250; [2010](#) IS 250C:

Engine/Hybrid System – Engine Mechanical – “4GR-FSE Engine Mechanical: Engine Unit: Disassembly”

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Repair Procedure (Continued)

3. Inspect and clean the engine components related to this repair.

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

- [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) IS 250; [2010](#) IS 250C:

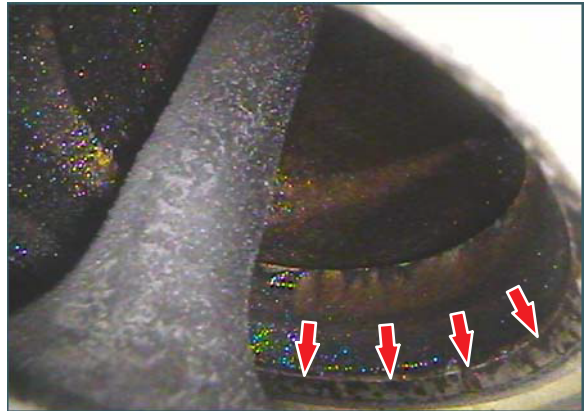
Engine/Hybrid System – Engine Mechanical – “4GR-FSE Engine Mechanical: Engine Unit: Inspection”

- A. Thoroughly clean and decarbonize the cylinder head and valves.

NOTE

- It is normal for small pitting to be present on the valve seats.

Figure 1.



- If any cylinder head components (i.e., valve guides, valves, etc.) are found to be outside of Repair Manual specification as per the Inspection Procedure, each should be replaced as necessary.

- B. Thoroughly clean and decarbonize the engine block.

NOTE

If any engine block components (i.e., piston pin bushing, connecting rod bearings, etc.) are found to be outside of Repair Manual specification as per the Inspection Procedure, each should be replaced as necessary.

HINT

If necessary, sublet specialized and precision operations to a local engine machining shop.

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Repair Procedure (Continued)

C. Inspect the cylinder bore.

Visually check the cylinder bore for the presence of crosshatch and/or vertical scratches.

- If the cylinder bore has visible crosshatch and no vertical scratches, the cylinder block is OK to re-use.
- If vertical scratches are present and can be felt with a fingernail, or if the crosshatch is not visible, replace the short block assembly.

Figure 2.



NOTE

- **Vertical carbon scoring is common and should not be interpreted as excessive cylinder wall scratches.**
- **Do NOT hone the cylinder walls.**

D. Following engine component inspection and piston identification, note the part numbers required for the repair.

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Repair Procedure (Continued)

4. Reassemble the engine with the following new parts:

- Pistons
- Piston ring set
- Valve stem seals
- Valve springs, valve lash adjusters, and valve spring retainers (applicable 2006 MY vehicles ONLY – See Note below).

NOTE

FOR 2006 MY IS 250 ONLY:

BEFORE starting the repair procedure, the following **MUST** be confirmed:

Is the VIN applicable to TSIB No. [L-SB-0088-08](#), "MIL 'ON' DTC P0300, P0301, P0302, P0303, P0304, P0305, or P0306"? (Was the vehicle produced BEFORE the Production Change Effective VINs shown below?)

MODEL	PLANT	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN
IS 250	Kyushu	2WD	JTHBK262#62017120
		4WD	JTHCK262#62007184
	Tahara	2WD	JTHBK262#65020537
		4WD	JTHCK262#65006155

- **NO** — Replacement of valve springs, valve lash adjusters, and valve spring retainers is **NOT** necessary.
- **YES** — Was TSIB No. [EG019-06](#) or [L-SB-0088-08](#) performed?
 - **YES** — Replacement of valve springs, valve lash adjusters, and valve spring retainers is **NOT** necessary.
 - **NO** — Replace the valve springs, valve lash adjusters, and valve spring retainers.

- Replace any other components as necessary **ONLY** if measured out of specification during inspection.

For reassembly instructions, refer to TIS, applicable model and model year Repair Manual:

- [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) IS 250; [2010](#) IS 250C:

Engine/Hybrid System – Engine Mechanical – “4GR-FSE Engine Mechanical: Engine Unit: Reassembly”

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Repair Procedure (Continued)

5. Reinstall the engine assembly.

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

- [2006](#) / [2007](#) / [2008](#) / [2009](#) / [2010](#) IS 250; [2010](#) IS 250C:

*Engine/Hybrid System – Engine Mechanical – “4GR-FSE Engine Mechanical:
Engine Assembly: Installation”*

6. Verify normal vehicle operation.