



Service Bulletin

PRELIMINARY INFORMATION

Subject: Malfunction Indicator Lamp Illuminated With DTC P0324 And / Or Spark Knock (Detonation) Type Noise.

Models: 2014-2015 Chevrolet Spark
Equipped with 1.2L Engine (RPO LLO)

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition/Concern

A technician may encounter a stock unit or customer's vehicle with a Malfunction Indicator Lamp (MIL) illuminated, a P0324 set as a current (fault active) or history DTC.

A rattle or spark knock type noise may also be heard while driving.

This condition may be caused by hydraulic lifter assemblies becoming spongy due to lifter oil bleed down.

The ECM may interpret the spongy lifter as detonation and adjust engine performance accordingly.

This would predominately occur on stock units, new car deliveries received by the dealer or customer vehicles built after March 1, 2014 which have sat without the engine running for an extended period of time.

For vehicles with this concern built prior to March 1 2014, refer to 14076D (Service Update for Inventory Vehicles Only) or PI1206D.

Recommendation/Instructions

Perform the inspection procedure below to determine if vehicle repair is required.

Inspection Procedure.

1. Allow the vehicle to cold soak overnight.
2. With the ignition key in the on position and the engine off, install GDS2 and select Module Diagnosis >Engine Control Module >Diagnostic Trouble Code (DTC)>View Codes and Clear Codes.
3. Select Data Display>Ignition Data and monitor the Total Knock Retard Parameter.

On vehicles equipped with Automatic Transmissions.

4. Set the parking brake.
5. Start the vehicle and run at idle for 10 seconds.
6. Firmly apply and hold the brake and place the vehicle into 'D' drive.
7. Raise and hold the engine speed between 1800 and 2000 RPM for 10 seconds and then return to idle for 5 seconds. Repeat this cycle 7 times.

On vehicles equipped with Manual Transmissions.

1. Allow the vehicle to cold soak overnight.
2. With the ignition key in the on position and the engine off, install GDS2 and select Module Diagnosis >Engine Control Module >Diagnostic Trouble Code (DTC)>View Codes and Clear Codes.
3. Select Data Display>Ignition Data and monitor the Total Knock Retard Parameter.
4. Start the vehicle and run at idle for 10 seconds.
5. Drive vehicle in gear at 1800 to 2000 RPM for 10 seconds (light brake application will aid to maintain engine load in the 2000 RPM range) stop and idle for 5 seconds. Repeat this cycle 5 times.

6. Turn off the engine.
7. Review the GDS2 session log Total Knock Retard Parameter.

If the readings during the raised RPM testing were continuously above 6.0 degrees for more than 5 seconds, the vehicle requires repair. Refer to the repair procedure listed below.

If the readings during the raised RPM testing were NOT continuously above 6.0 degrees for more than 5 seconds, no further action is required within the scope of this bulletin.

Repair procedure.

1. Check and verify engine oil level is correct.
2. Allow engine to idle for one hour. Every 15 minutes increase the engine rpms to 2000 and hold for 5 minutes. Or drive the vehicle for 25 to 30 miles.
3. Allow the engine to cold soak overnight and then repeat the inspection procedure.
4. Review the GDS2 session log Total Knock Retard Parameter.

If the readings during the raised RPM testing were continuously above 6.0 degrees for more than 5 seconds, the vehicle requires repair. Contact Technical Assistance for further diagnostic assistance.

If the readings during the raised RPM testing were NOT continuously above 6.0 degrees for more than 5 seconds, no further action is required within the scope of this bulletin.

Return the vehicle to the owner.

Warranty Information:

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
4080438*	Diagnose Spark Knock (Detonation) Type Noise, Malfunction Indicator Lamp Illuminated (MIL), DTC P0324	0.5 hr
*This is a unique Labor Operation for Bulletin use only. It will not be published in the Labor Time Guide.		

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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