



NUMBER: 09-012-22

GROUP: 09 - Engine

DATE: October 1, 2022

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SUBJECT:

Spark Knock/Engine Symptoms

OVERVIEW:

This bulletin involves cleaning the piston heads and cylinder head combustion chambers to resolve a spark knock condition being caused by oil intrusion through the PCV system.

MODELS:

2018 - 2022	(JL)	Jeep Wrangler
2020 - 2022	(JT)	Jeep Gladiator
2018 - 2022	(WK)	Jeep Grand Cherokee

NOTE: This bulletin applies to vehicles within the following markets/countries: North America, India/Asia Pacific, Middle East/Africa, and Enlarged Europe.

NOTE: This bulletin applies to:

- JL vehicles built equipped with a 3.6L V6 24V VVT Engine (Sales Code ERC) or a 3.6L V6 24V VVT E-torque Engine (Sales Code ERG).
- JT vehicles built equipped with a 3.6L V6 24V VVT Engine (Sales Code ERC).
- WK vehicles built equipped with a 3.6L V6 24V VVT Engine (Sales Code ERC).

SYMPTOM/CONDITION:

The customer may describe a knocking or pinging noise coming from the engine upon acceleration.

DIAGNOSIS:

If the customer describes the symptom/condition listed above, perform the Repair Procedure.

PARTS REQUIRED:

Qty.	Part No.	Description
1	68609110AA	PCV Valve
6	SP225755AA	Spark Plug
16	06509564AA	Cylinder Head Bolts
1	68284905AA	Cylinder Head Gaskets - Left
1	68284904AA	Cylinder Head Gaskets - Right
11.2 Qts.	68153921AA	Antifreeze, Coolant, Gallon, US, OAT, Concentrate
5 Qts.	68218950AB	Oil - 0W-20
1	68191349AC	Oil Filter
1	04893804AB	Valve Cover Gasket - Right
1	04893805AB	Valve Cover Gasket - Left
1	68082860AB	RTV
6	68217514AB	Upper Intake Gaskets
6	68232614AA	Lower Intake Gaskets
1	04861965AA	EGR Cooler Gaskets
2	68093232AA	Converter Gaskets
1	68078604AA	Timing Cover Gasket
1	68079589AA	Front Crankshaft Seal
4	04893806AB	Camshaft Phaser Actuator Gaskets
2	05184772AB	Camshaft Sensor Gasket

REPAIR PROCEDURE:

1. Remove the cylinder heads. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info>09 - Engine, 3.6L / Cylinder Head / Removal.
2. Perform the cylinder head and piston crown cleaning. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info>09 - Engine, 3.6L / Cylinder Head / Cleaning.
3. Reinstall the cylinder heads with new cylinder head gaskets in place. Use new cylinder head bolts. Refer to the detailed service procedures available in DealerCONNECT> TechCONNECT under: Service Info>09 - Engine, 3.6L / Cylinder Head /Installation.
4. Replace the spark plugs. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info>09 - Engine, 3.6L / Ignition Control / Spark Plug/ Removal and Installation.
5. Change the engine oil and filter. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info>09 - Engine, 3.6L / Lubrication / Standard Procedure.
6. Refill engine coolant. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info> 09 - Engine, 3.6L / Cooling System / Engine Cooling / Standard Procedure.

7. Replace PCV valve with updated part. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info> 25 - Emissions Control / Crankcase Ventilation / VALVE, Positive Crankcase Ventilation (PCV) / Removal and Installation.
8. Clear any Diagnostic Trouble Codes (DTC)s that may have set during repair procedure.

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Skill Category	Amount
09-35-30-93	JL/JT Piston head and cylinder combustion chamber cleaning - Perform (3 - Highly Skilled)	1 - Engine Repair and Performance	10.50 Hrs.
09-35-30-94	WK Piston head and cylinder combustion chamber cleaning - Perform (3 - Highly Skilled)	1 - Engine Repair and Performance	8.30 Hrs.

RELATED LOPS:

07-FF-01-50	Drain and fill, Coolant (3 - Highly Skilled)	1 - Engine Repair and Performance	0.3 Hrs.
09-FF-03-50	Drain and fill, Engine Oil (3 - Highly Skilled)	1 - Engine Repair and Performance	0.1 Hrs.

OPTIONAL EQUIPMENT:

09-35-30-67	ESS Equipped (3 - Highly Skilled)	1 - Engine Repair and Performance	0.5 Hrs.
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FAILURE CODE:

CC	Customer Concern
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