

Technical Service Bulletin (TSB)
Engine Cylinder Block Porosity Inspection
- Engine Cold Start Rough Idle

REFERENCE:	TSB: 09-018-25 GROUP: 09 - Engine	Date:	July 16, 2025	REVISION:	—
VEHICLES AFFECTED:	2021 - 2024 (JL) Jeep Wrangler 2021 - 2024 (MP) Jeep Compass 2021 - 2024 (WL) Jeep Grand Cherokee / Grand Cherokee L This bulletin applies to vehicles equipped with either of the following: <ul style="list-style-type: none"> • 2.0L I4 DOHC DI Turbo Engine w/ ESS (Sales Code EC1). • 2.0L I4 DOHC DI Turbo PHEV Engine (Sales Code ECX). 	MARKET APPLICABILITY:			
CUSTOMER SYMPTOM:	Customers may experience the following: <ul style="list-style-type: none"> • Rough engine idle when cold starting the engine. • Low coolant level in coolant recovery bottle. 				
CAUSE:	Cylinder block porosity				
		<input checked="" type="checkbox"/> NA <input type="checkbox"/> MEA <input type="checkbox"/> SA <input type="checkbox"/> IAP <input type="checkbox"/> EE <input checked="" type="checkbox"/> CH NOTE: This bulletin applies to North America and China markets.			

SPECIAL TOOLS/EQUIPMENT:

Description	Ref. No.	Notes
Tester, Cooling System Pressure	10447A	
Borescope	NPN	Commercially available.

DISCUSSION:

This Information Only TSB is to provide information on how to inspect for the presence of porosity or cracks in the engine cylinder block [Fig. 1](#) and [Fig. 2](#). Inspections for porosity and cracks presence should be performed before any of the cooling or engine system components are replaced.

NOTE: Address any external cooling system leaks prior to performing this diagnosis.

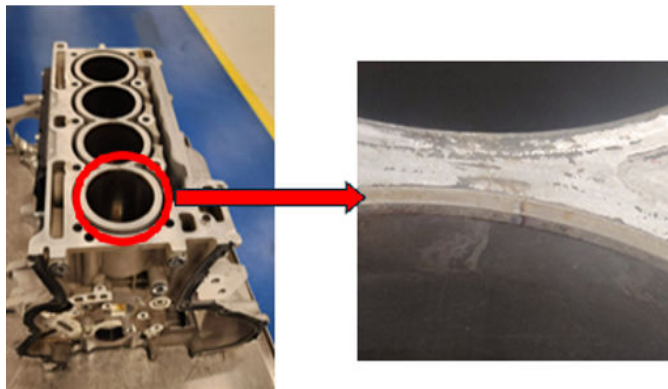


Fig. 1
Engine Cylinder Block Crack

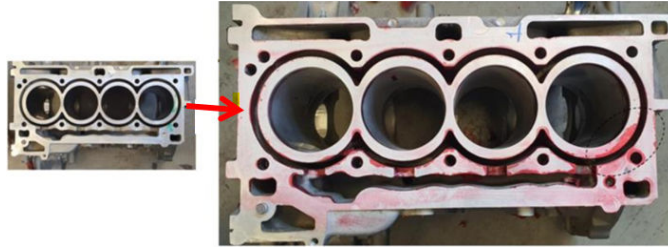


Fig. 2

Dye Liquid Penetrant On Deckface - Red Spot Related To Porosity Is Highlighted

1. Cold start the engine to verify that the engine runs rough initially and then runs normally after 30 seconds of run time.
2. Does the engine run rough on a cold start and then runs normally after 30 seconds of run time?
 - YES>>> Proceed to [Step 3](#).
 - NO>>> This bulletin does not apply. Normal diagnosis should be performed.
3. Identify the cylinder or cylinders having the misfire condition.
4. Set the cylinders piston to the bottom dead center position.
5. Using a cooling system pressure tester, pressurize the coolant system up to 21 psi with the vehicle at normal operating temperature for 12 minutes.
6. Observe for pressure decay on the cooling system pressure tester gauge.
7. Using a borescope, inspect for any trace of coolant in the affected cylinder or cylinders while the cooling system is still pressurized. Ensure that the entire perimeter of the bore is inspected.
8. Is coolant detected in the affected cylinder?
 - YES>>> Proceed to [Step 9](#).
 - NO>>> This bulletin does not apply. Normal engine misfire diagnosis should be performed.
9. Replace the engine long block assembly. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info> 09 - Engine, 2.0L / Engine Assembly / Removal and Installation.

NOTE: Obtain an oil sample and digital image proof of the coolant and create a Dealer Issue Detection Incident (DID I).

POLICY:

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