



TECHNICAL SERVICE BULLETIN

Misfire With DTC(s) P0301, P0302, P0303, And/Or P0304 Stored In The PCM

25-2074

06 March
2025

This bulletin supersedes 24-2384. Reason for update: vehicle models affected

Model:

| | |
|-------------------------------------|---|
| Ford 2025 Bronco | Engine: 2.3L EcoBoost |
| 2023-2025 Escape | Engine: 1.5L EcoBoost Engine: 2.0L EcoBoost |
| 2025 Explorer | Engine: 2.3L EcoBoost |
| 2024-2025 Mustang | Engine: 2.3L EcoBoost |
| 2025 Ranger | Engine: 2.3L EcoBoost |
| Lincoln 2023-2025 Corsair | Engine: 2.0L EcoBoost |
| 2024-2025 Nautilus | Engine: 2.0L EcoBoost Engine: 2.0L EcoBoost Hybrid |

Markets: North American markets only

Issue: Some of the vehicles listed in the Model statement above may exhibit an engine misfire condition with DTCs P0301, P0302, P0303 and/or P0304 set in the PCM.

Action: For vehicles that meet all of the criteria in the Issue and Model statements, follow the Service Procedure to diagnose the vehicle.

Warranty Status: Information Only.

Repair/Claim Coding

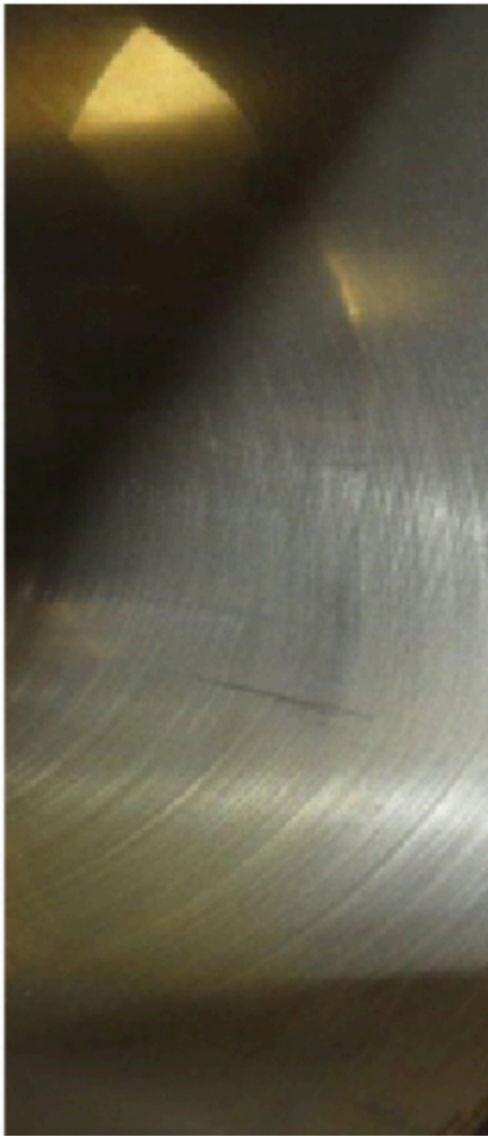
| | |
|-----------------|----|
| Causal Part: | IN |
| Condition Code: | -1 |

Service Procedure

NOTE: This article is for information only. Determine the causal part number and use available labor times in the SLTS Manual or claim M-time in accordance with the Warranty and Policy Manual, do not use this article number as the M-Time labor operation. Causal part number IN in this article refers to the information only status and is not able to be claimed.

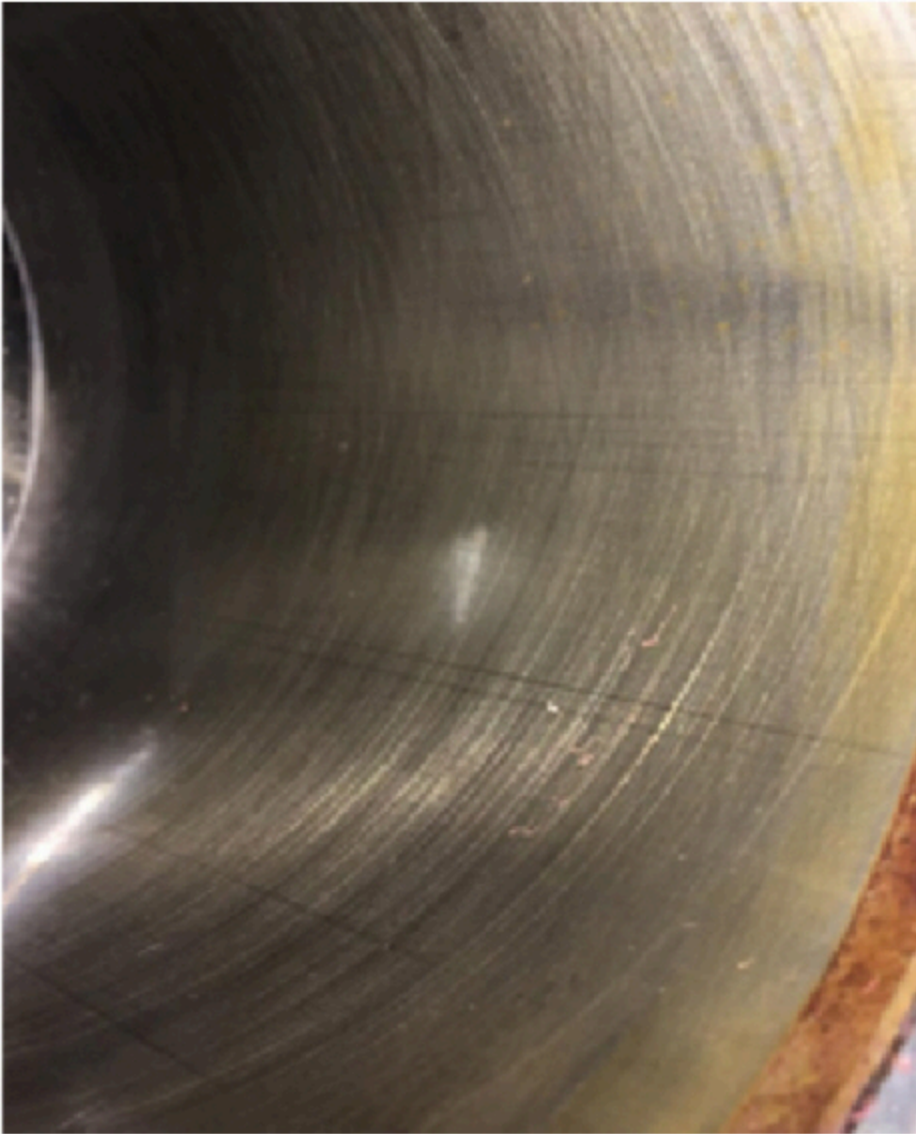
- Remove and inspect the condition of all spark plugs. Refer to the WSM, Section 303-07. Are any spark plugs damaged?
 - Yes - proceed to Step 2.
 - No - this article does not apply, replacement of the spark plugs is not necessary, proceed with normal diagnostics found in the WSM.
- Inspect the 12v battery positive and negative terminals for a loose condition, refer to WSM, Section 414-01 and repair as necessary.
- Inspect all PCM ground circuitry for loose connections and/or high resistance and repair as necessary.
- Use a borescope to inspect the condition of the affected pistons and cylinder walls. Refer to Figures 1-3 for examples of normal cylinder wall wear and Figures 4-5 for examples of damaged cylinder walls. Additional examples of engine wear can be found in the Engine Failure Analysis GSB > Cylinder Wall and Piston Skirt Inspection. Do the pistons and/or cylinder walls appear to be damaged?

Figure 1 - Showing normal cylinder wall wear



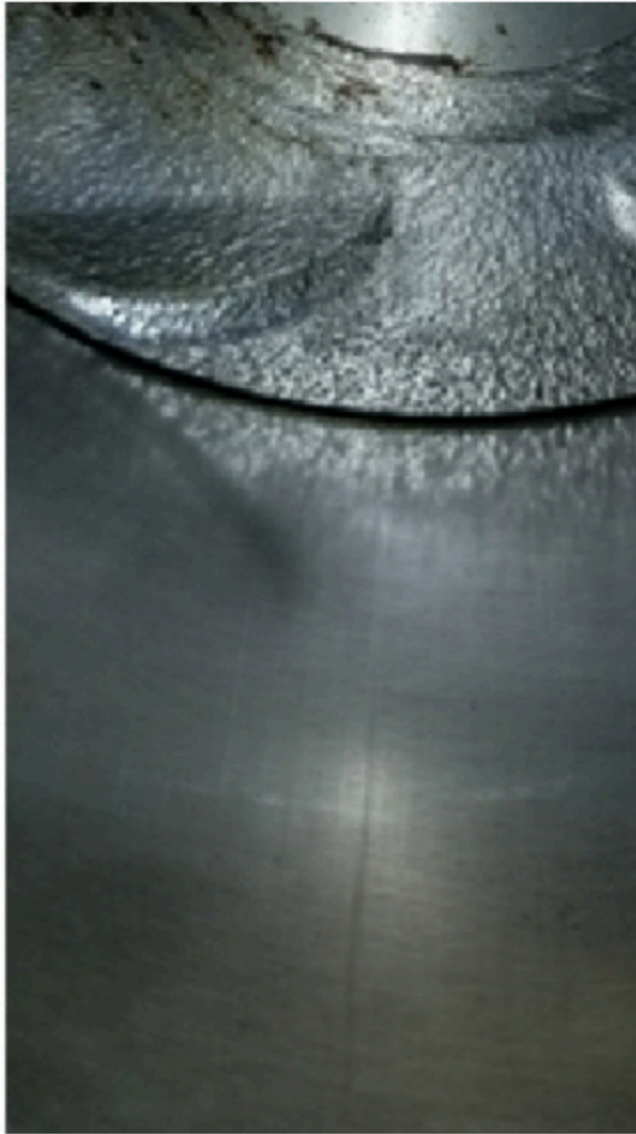
E336316

Figure 2 - Showing normal cylinder wall wear



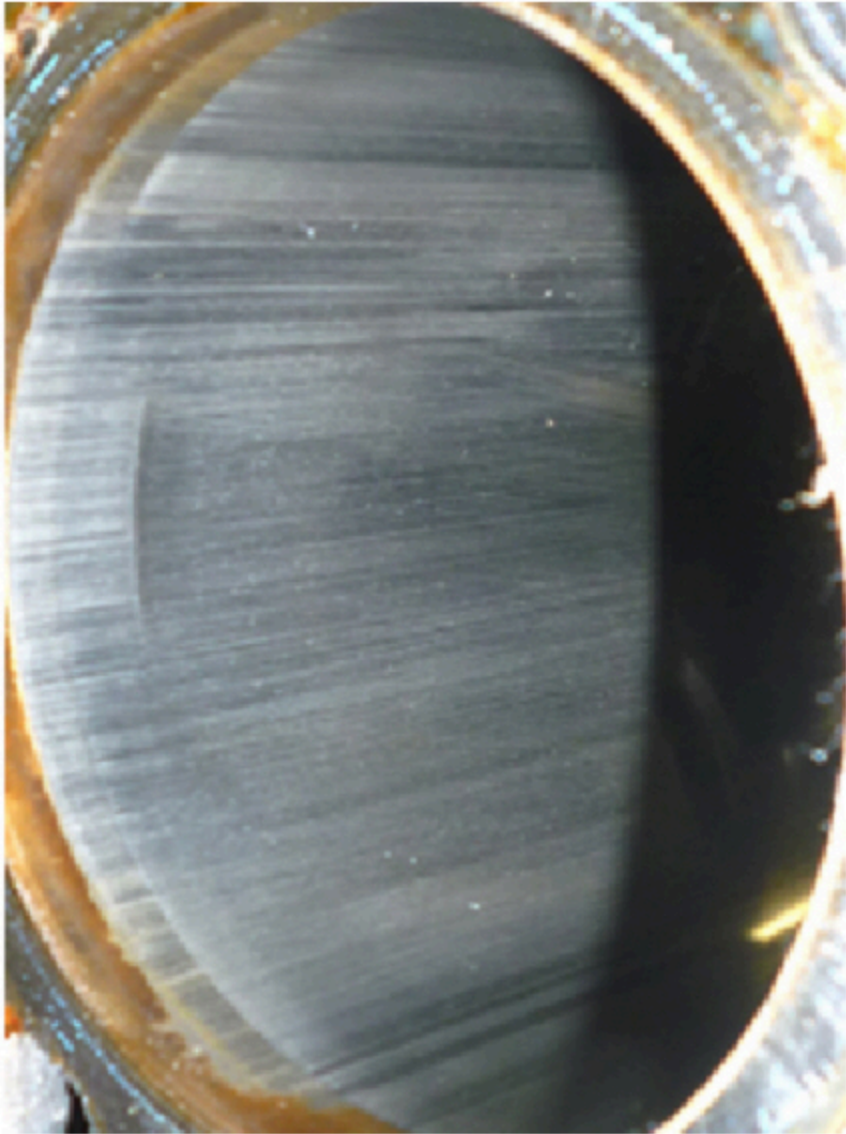
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Figure 3 - Showing normal cylinder wall wear



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Figure 4 - Showing a damaged cylinder wall



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Figure 5 - Showing a damaged cylinder wall



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- (1). Yes - remove the cylinder head to perform a more detailed inspection of the suspect damage. Refer to the Engine Failure Analysis [GSB](#) > Cylinder Wall and Piston Skirt Inspection and repair as necessary. For cylinder head removal, refer to the [WSM](#), Section 303-01.
 - (2). No - perform a compression test and cylinder leakage test following [WSM](#), Section 303-00 and repair as necessary.
5. Replace all damaged spark plugs. Do not discard the damaged spark plugs so Ford can retrieve them following the warranty parts return process.
 6. Submit a [GCR](#) and include photos of damaged components, images from the borescope analysis and anything else of interest that was found during the repair. These images will help improve engine quality for future model vehicles.
 - (1). Do not use the Report A Problem link to submit the [GCR](#).

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NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford or Lincoln dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.