



TECHNICAL SERVICE BULLETIN

Illuminated MIL With DTCs P0300/P0316 Stored In The PCM During A Cold Start

Model:		
Ford	Engine: 2.3L EcoBoost	
2025 Bronco	Built on 31-Mar-2025 and through 31-Jan-2026	
2025-2026 Explorer	Engine: 2.3L EcoBoost	
	Built on 10-Oct-2024 and through 31-Jan-2026	
2025 Ranger	Engine: 2.3L EcoBoost	
	Built on 31-Mar-2025 and through 31-Jan-2026	

Markets: North American markets only

Issue: Some of the vehicles listed in the Model statement above may exhibit an illuminated MIL with DTCs P0300 and/or P0316 stored in the PCM (with no other relevant DTCs present) during a cold start after a 3 to 8 hours cold soak. This may be due to the machining surface of the intake ports in the cylinder head.

Action: For vehicles that meet all of the criteria in the Issue and Model statements above, follow the Service Procedure to inspect and replace the cylinder head if needed.

Parts - All Vehicles

Service Part Number	Claim Quantity	Description	Note
P2GZ-6049-B	1	Cylinder Head	
P2GZ-6051-C	1	Cylinder Head Gasket	
P2GZ-6A340-A	1	Crankshaft Pulley Bolt	
P2GZ-6065-A	10	Cylinder Head Bolts	
P2GZ-6584-A	1	Valve Cover Gasket	
P2GZ-6584-B	4	Valve Cover Gaskets	
P2GZ-6584-C	1	Valve Cover Gasket	
W503279-S450	5	Valve Cover Bolts (M6 x 30 MM)	
W720726-S450	1	Valve Cover Bolts (M6 x 81.5 MM)	
P2GZ-6C519-A	2	Valve Cover Bolts	Includes Grommet
W721273-S450	8	Valve Cover Bolts (Stud M6 x 30, M6 x 10MM)	
W721336-S450	1	Valve Cover Bolt (Stud And Washer M6 x 57.5 MM, M6 x 13MM)	
W716736-S437	3	Crankshaft Center Assembly Bolts	
M03Z-6700-A	1	Crankshaft Front Seal	
W715277-S437	17	Engine Front Cover Bolts	
W717551-S437	1	Engine Front Cover Stud	
P2GZ-6N652-A	2	Coolant Tube Seal/Turbocharger Coolant Line Seal	One Piece Required Per Line
P2GZ-8448-A	1	Turbocharger Gasket	
W716060-S437	1	Turbocharger Heat Shield Bolt	
W704474-S437	2	Turbocharger Stud	
P2GZ-6D476-A	1	EGR Cooler Gasket	
P2GZ-6D476-B	1	EGR Cooler Gasket	
P2GZ-9E464-B	1	EGR Valve Gasket	
P2GZ-9U496-B	1	EGR Temperature Sensor	
P2GZ-6G004-B	1	Cylinder Head Temperature 2 (CHT2) Sensor	
W716591-S437	2	High Pressure Fuel Pump Bolts	
ML3Z-9E533-A	1	High Pressure Fuel Pump O-Ring Seal	
P2GZ-6J023-A	1	High Pressure Fuel Tube	
P2GZ-9Z29-A	1 Kit	High Pressure Fuel Injector Kit	Kit Includes Parts To Service 4 Injectors
W719113-S450	3	Direct Injection Fuel Rail Bolts	
W716205-S437	2	Port Injection Fuel Rail Bolts	
7C2Z-9Z29-A	1 Kit	Low Pressure Fuel Injector O-Ring Kit	Kit Includes 16 Seal O-Rings
P2GZ-9C995-A	4	Low Pressure Fuel Injector O-Ring Clips	
AC3Z-8527-A	1	Heater Water Inlet Tube Seal	
P2GZ-9Z05-B	1	Water Outlet Gasket	
MJ2Z-6731-F	1	Oil Filter	
XO-SW30-Q1SP	As Needed	Motorcraft® SAE SW-30 Synthetic Blend Motor Oil (All Markets Except Canada)	
XO-SW30-LSP6	As Needed	Motorcraft® SAE SW-30 Super Premium Motor Oil (Canada Only)	
PM-4-A	As Needed	Motorcraft® Brake Parts Cleaner - VOC Compliant (All Markets Except Canada)	
PM-4-B	As Needed	Motorcraft® Metal Brake Parts Cleaner (Not Compliant With Low Volatile Organic Compound Requirements) (All Markets Except Canada)	
CPM-4-A	As Needed	Motorcraft® Brake Parts Cleaner - VOC Compliant (Canada Only)	
VC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (All Markets Except Canada)	
CVC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (Canada Only)	
TA-357	As Needed	Motorcraft® High Performance Engine RTV Silicone	
XL-2	As Needed	Motorcraft® High Temperature Nickel Anti-Seize Lubricant	
XL-1	As Needed	Motorcraft® Penetrating and Lock Lubricant	

Parts - Bronco Only

Service Part Number	Claim Quantity	Description	Note
W717376-S439B	6 Possible	Underbody Shield Bolts	If Equipped
W505444-S439	6 Possible	Underbody Shield Bolts	If Equipped
Obtain Locally	As Needed	Bosch Never-Seiz Regular Grade (nickel free) Anti-Seize and Lubricating Compound	

Parts - Ranger Only

Service Part Number	Claim Quantity	Description	Note
W717376-S439B	4 Possible	Underbody Shield Bolts	If Equipped

Parts - Parts To Inspect And Replace As Necessary

Service Part Number	Claim Quantity	Description
BR3Z-6500-A	Only If Necessary (16 Possible)	Hydraulic Lash Adjuster
P2GZ-6564-A	Only If Necessary (16 Possible)	Rocker Arm
P2GZ-13029-A	Only If Necessary (4 Possible)	Ignition Coil-On-Plug
P2GZ-9H466-A	Only If Necessary (1 Possible)	Intake Manifold Gasket
P2GZ-9439-A	Only If Necessary (4 Possible)	Intake Manifold Gaskets
K06Z-9C587-A	Only If Necessary (1 Possible)	High Pressure Fuel Pump Roller Tipper

NOTE: All Other Parts Instructed By **W55M** To Inspect And Replace As Necessary Should Be Claimed Outside Of This Article

Claim Quantity Claim Quantity refers to the total number of individual pieces required to repair the vehicle. This may differ from the number of service part number packages due to the unit of issue (UOI).

As Needed indicates the part is necessary but amount of the part may vary and/or is not a whole number. Parts can be billed out as non-whole numbers, including less than 1.

Only If Necessary indicates the part is not mandatory. Refer to the Service Procedure to determine the inspection/inclusion criteria.

Warranty Status: Warranty coverage limits and policies are not altered by a TSB. Warranty coverage limits are determined by the identified causal part.

Labor Times

Description	Operation No.	Time
2025 Bronco 2.3L: Retrieve DTCs, Inspect And Replace Cylinder Head Includes Time To Submit GCR With Screenshots And A Picture Of Manufacturing Code	262269A	12.4 Hrs
2025 Ranger 2.3L: Retrieve DTCs, Inspect And Replace Cylinder Head Includes Time To Submit GCR With Screenshots And A Picture Of Manufacturing Code	262269B	12.7 Hrs
2025-2026 Explorer 2.3L: Retrieve DTCs, Inspect And Replace Cylinder Head Includes Time To Submit GCR With Screenshots And A Picture Of Manufacturing Code	262269C	13.7 Hrs
2025-2026 Explorer Extra Time To Perform 360 Camera If Equipped (Can Be Claimed With Operation C)	262269D	0.5 Hrs

Repair/Claim Coding

Causal Part:	6049
Condition Code:	91

Service Procedure

1. Are there any other powertrain DTCs present in the PCM in addition to P0300 and/or P0316, that may contribute to a misfire DTC and/or drivability concern?

(1) Yes - this article does not apply. Refer to **W55M** for normal diagnostics to address other DTCs.

(2) No - proceed to Step 2.

2. Inspect the cylinder head for the "EBN7A" manufacturing code stamped on the cylinder head located under the driver side factory engine lift eye as shown in Figure 1. Does the cylinder head have the "EBN7A" manufacturing code? (Figures 1-2).

Figure 1



Figure 2



(1) Yes - proceed to Step 3.

(2) No - this article does not apply. Refer to [WSM](#) for normal diagnostics.

3. Remove the cylinder head. Refer to [WSM](#), Section 303-01 > Engine > 2.3L EcoBoost > Removal and Installation > Cylinder head.

4. Remove the required parts from the old cylinder head. Refer to [WSM](#), Section 303-01 > Disassembly and Assembly of Subassemblies > Cylinder Head and perform disassembly Steps 1-22.

5. Transfer the parts to the new cylinder head. Refer to [WSM](#), Section 303-01 > Disassembly and Assembly of Subassemblies > Cylinder Head and perform assembly Steps 4-25.

6. Install the new cylinder head. Refer to [WSM](#), Section 303-01 > Engine > 2.3L EcoBoost > Removal and Installation > Cylinder Head.

7. Prior to Submitting a claim, submit a [GCR](#) and include screenshot(s) of the [JLIDA](#) that were present in connected vehicle data prior to the repair and an image of the manufacturing code stamped on the cylinder head. To submit a report, click on the "Submit Global Concern Report (GCR)" link at the upper right of the [ETS](#) Vehicle ID screen ([LW](#) required) and fill out the form. Do not use the "Report a Problem" link to submit a report for this condition.

NOTE: Ford warranty assessing will review all claims submitted for supporting documentation. Claims without supporting documentation are subject to chargeback.

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