



TECHNICAL SERVICE BULLETIN

No Crank/No Start With A Battery Draw And A/C Clutch Engaged At All Times

23-2240

01 August
2023

This bulletin supersedes 23-2130.

Model:

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|--------------------------------|---------------------------------|
| Ford 2021-2023 F-150 | Non-Lightning Non-PowerBoost |
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Summary

This article supersedes TSB 23-2130 to update the parts list and vehicle lines.

Issue: Some 2021-2023 F-150 vehicles may exhibit a no crank/no start with a battery draw and air conditioning (A/C) clutch engaged at all times. This may be due to an opened diode in the A/C clutch field coil damaging the output driver (field effect transistor [FET]) in the body control module C (BCMC). To correct the condition, follow the Service Procedure to replace the BCMC and A/C clutch field coil assembly.

Action: Follow the Service Procedure to correct the condition on vehicles that meet all of the following criteria:

- 2021-2023 F-150
- Non-Lightning, non-PowerBoost
- No crank/no start
- Excessive battery draw
- A/C clutch engaged at all times

Parts

| Service Part Number | Quantity | Description | Unit of Issue | Piece Quantity |
|---------------------|-----------|------------------------------------------------------------------------------------------------|---------------|----------------|
| 19D786 | 1 | A/C Clutch Field Coil - Refer To The Parts Catalog For The VIN The Specific Application | | |
| 14A068 | 1 | Body Control Module C (BCMC) - Refer To The Parts Catalog For The VIN The Specific Application | | |
| DL3Z-19B596-B | 1 | Compressor A/C Line O-Ring And Gasket | 1 | 1 |
| DS7Z-19B596-A | 1 | Compressor A/C Line Gasket | 1 | 1 |
| 5L7Z-7D285-A | 2 | Transmission Case Fluid Warmer Line O-Ring | 2 | 4 |
| 5L7Z-7J324-A | 2 | Transmission Fluid Warmer Line Side O-Ring | 2 | 4 |
| ML3Z-6758-B | 1 | Evaporative Emissions Tube Assembly | 1 | 1 |
| W716638-S439 | 1 | Power Steering Rack Bolt | 4 | 1 |
| W716639-S439 | 1 | Power Steering Rack Bolt | 4 | 1 |
| N808684-S101 | 1 | Steering Shaft Bolt | 1 | 1 |
| W520215-S440 | 1 | Steering Tie Rod End Nut | 4 | 2 |
| XT-12-QULV | As Needed | Motorcraft® MERCON® ULV Automatic Transmission Fluid | | |
| 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) | | |

Parts

Parts To Inspect And Replace Only If Necessary

| Service Part Number | Quantity | Description | Unit of Issue |
|---------------------|-----------|---------------------------------------------------------------------------------------|---------------|
| 8620 | If Needed | A/C Compressor Belt - Refer To The Parts Catalog For The VIN The Specific Application | 1 |

Quantity refers to the amount of the service part number required to repair the vehicle.

Unit of Issue refers to the number of individual pieces included in a service part number package.

Piece Quantity refers to the total number of individual pieces required to repair the vehicle.

As Needed indicates the 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.

If Needed indicates the part is not mandatory.

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/SPW/SSP/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

Labor Times

| Description | Operation No. | Time |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| 2021-2023 F-150 2.7L EcoBoost: Diagnose And Replace The BCMC And A/C Clutch Disc And Hub Assembly Following The Service Procedure (Do Not Use With Any Other Labor Operations) | 232240A | 2.7 Hrs. |
| 2021-2023 F-150 3.3L TiVCT: Diagnose And Replace The BCMC And A/C Clutch Disc And Hub Assembly Following The Service Procedure (Do Not Use With Any Other Labor Operations) | 232240B | 2.2 Hrs. |
| 2021-2023 F-150 3.5L EcoBoost: Diagnose And Replace The BCMC And A/C Clutch Disc And Hub Assembly Following The Service Procedure (Do Not Use With Any Other Labor Operations) | 232240C | 2.7 Hrs. |
| 2021 F-150 3.0L Diesel: Diagnose And Replace The BCMC And A/C Clutch Disc And Hub Assembly Following The Service Procedure (Do Not Use With Any Other Labor Operations) | 232240D | 3.4 Hrs. |
| 2021-2023 F-150 5.0L TiVCT: Diagnose And Replace The BCMC And A/C Clutch Disc And Hub Assembly Following The Service Procedure (Do Not Use With Any Other Labor Operations) | 232240E | 2.4 Hrs. |
| 2023 F-150 5.2L Predator: Diagnose And Replace The BCMC And A/C Clutch Disc And Hub Assembly Following The Service Procedure (Do Not Use With Any Other Labor Operations) | 232240F | 3.4 Hrs. |
| 2021-2023 F-150 2.7L EcoBoost Dual Alternator: Diagnose And Replace The BCMC And A/C Clutch Disc And Hub Assembly Following The Service Procedure (Do Not Use With Any Other Labor Operations) | 232240G | 3.6 Hrs. |

Repair/Claim Coding

| | |
|-----------------|--------|
| Causal Part: | 19D786 |
| Condition Code: | 42 |

Service Procedure

1. Install battery charger and fully charge the battery.
2. Turn ignition off, exit vehicle and shut the doors to allow the vehicle to go into sleep mode. This will take approximately 15 minutes.
3. Check for voltage on circuit CH401 (VT-WH) pin 1 at the A/C compressor clutch connector C100. Is voltage present?
 - (1). Yes - proceed to Step 4.

(2). No - this article does not apply. Refer to the Workshop Manual (WSM), Section 412-00.

4. Disconnect the battery.

5. Replace both the BCMC and the A/C clutch field coil assembly. Refer to the WSM, Sections 412-00 and 419-10.

6. Connect the battery.

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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.