



TECHNICAL SERVICE BULLETIN

6.7L - Engine Coolant Temperature Gauge Reads High

23-2426
19 December
2023

Model:

Ford 2023 F-Super Duty	Engine: 6.7L Diesel
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Issue: Some 2023 F-Super Duty chassis cab vehicles equipped with a 6.7L engine may exhibit an engine coolant temperature gauge reading at the high end of the normal range while towing in high ambient temperatures with no diagnostic trouble codes (DTC) stored in the powertrain control module (PCM) or warning messages present in the instrument panel cluster (IPC). This may be due to the software in the IPC. To correct the condition, follow the Service Procedure to reprogram the IPC.

NOTE: The IPC software update that addresses the symptom listed in this bulletin may have been sent via Ford Power-Up software updates delivered over-the-air (OTA) to connected vehicles that have automatic updates enabled through the center display screen. Enter the vehicle identification number (VIN) in Professional Technician System (PTS) and check the OTA Dashboard under the Connected Vehicle tab for OTA update history. If an update to the IPC has successfully completed recently and the customer is reporting the symptoms are no longer present, this article may not apply.

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

- 2023 F-Super Duty chassis cab
- 6.7L diesel engine
- Engine coolant temperature gauge reads at the high end of normal while towing
- No DTCs or overheat warning messages present

Parts - Parts To Inspect And Replace As Necessary

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
BXT-65-750	If Needed	Battery (750 Amp) - Refer To The Parts Catalog For The VIN Specific Application	1	1
BAGM-65-A	If Needed	Battery (750 Amp) - Refer To The Parts Catalog For The VIN Specific Application	1	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.

If Needed indicates the part is not mandatory.

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Emissions Warranty/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/Emissions Warranty/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
2023 F-Super Duty 6.7L chassis cab: Reprogram The Appropriate Modules As Required By The Software Update And Service Procedure (Do Not Use With Any Other Labor Operations)	MT232426	Actual Time

Repair/Claim Coding

Causal Part:	10849
Condition Code:	04

Service Procedure

NOTE: Ask the customer to bring their spare key fob to assist in the Ford Diagnosis and Repair System (FDRS) programming. The time required to complete this procedure will vary depending on several factors including the number of module software updates required, available internet bandwidth, universal serial bus (USB) flash drive variability, and the potential that controller area network (CAN) flashing (software update via the data link connector [DLC] with FDRS) may be required. It is recommended to connect to the internet with an ethernet cable and use a USB 3.0/3.1 capable flash drive when performing software updates.

1. Start an FDRS session and navigate to Toolbox tab > Datalogger > body control module (BCM) and select the BATT_SOC parameter identification (PID). Verify the PID reads 50% or higher. If state of charge (SOC) is less than 50%, charge the battery then navigate back to Toolbox tab > BCM > Reset Battery Monitor Sensor Learned Values application. Perform the battery monitor sensor (BMS) reset.
 - (1). If the battery is unable to achieve a 50% SOC then a new battery may be required. Use the Rotunda GRX-3590 or DCA-8000 testers to verify if replacement is required. If the battery is replaced, fully charge the new battery. Then disconnect the Rotunda charger and perform a BMS reset using the FDRS scan tool.
2. Reconnect the battery charger and set it to maintain a vehicle voltage of 12.6 – 13.6 volts. A low battery state of charge while performing a software update to any module may result in a repeat Restart Required message in the vehicle's center display screen or a message on the FDRS saying Part Number Validation Failed or DID Validation Failed.
3. Are there any updates available for the IPC, gateway module A (GWM), SYNC module (APIM), or telematic control unit module (TCU)?
 - (1). Yes - proceed to Step 4.
 - (2). No - this article does not apply. Refer to Workshop Manual (WSM), Section 303-03.
4. Perform the Module Software Updating Procedures outlined below for the IPC, GWM, APIM, and TCU. Perform a network test after each software update using the latest software level of the FDRS scan tool. This will refresh the list of modules that have available software updates based current module software levels. Continue performing software updates until all available software updates for those modules are complete. If any error conditions are experienced during programming, refer to WSM Section 418-01A > General Procedures > Module Programming for the Error Condition Table.

Module Software Updating Procedure

NOTE: Depending on the current software level of the modules, all the following updates may not be required.

The following instructions apply when performing a software update on any of the following modules:

- IPC
- GWM
- APIM
- TCU

NOTE: If the next update is not showing available, perform a network test and recheck availability.

NOTE: A 32GB or larger universal serial bus (USB) flash drive is required for the GWM, TCU and APIM software updates. USB 3.0 or higher is recommended for faster file transfer.

Make sure the USB flash drive being used is formatted correctly. To see the available drives, hold down the Windows icon keyboard key and press the E keyboard key. Right click on the USB flash drive and select Properties. If File System under the General tab is not exFAT, the drive must be formatted.

To format the USB flash drive:

- Right click on the USB flash drive.

- Select Format, select exFAT for the File System.
- Select Default Allocation Size for the Allocation Unit Size.

De-selecting Quick Format is not necessary and results in a lengthier operation.

1. Using the FDRS, begin module programming by selecting the SW Updates tab. Follow all on-screen instructions carefully. Perform the next available update.
2. When prompted, connect the USB flash drive to the FDRS.
3. When prompted by the FDRS, safely remove/eject the USB flash drive from the FDRS and connect it to the USB media hub to install the software into the module. When the USB software update begins, the vehicle's center display screen displays a message stating Do Not Remove USB. The update may take 10 minutes or longer to complete.

NOTE: It may take up to 5 minutes for the vehicle to recognize the USB flash drive.

4. When the pop-up stating Restart Required appears on the center display screen:
 - (1). Turn the ignition off.
 - (2). Wait for 10 minutes.
 - (3). Restart the vehicle (key-on vehicle running). The update is still in progress at this time.

NOTE: It may take up to 5 minutes before the vehicle's center display screen displays Update Successful pop-up. After 5 minutes if Update Successful pop-up is not shown on the vehicle's center display screen, remove the USB and select yes on the FDRS Was the USB Update Successful prompt (FDRS verifies if the module software update was successfully installed on the module).

5. Once the pop-up stating Update Successful appears in the vehicle's center display screen, select Close, remove the USB flash drive from the USB media hub, and select Yes on FDRS indicating the update installed successfully. This initiates the remaining automated configuration steps and reports the module software part numbers and application software levels to the Ford online database. Failure to follow this step results in an inaccurate database as well as omitted, improperly installed, or improperly configured applications (features) such as navigation (if equipped). It is normal for the module to reset during this step.