



# TECHNICAL SERVICE BULLETIN

## Trailer Brake Gain Amount Not Displaying In The IPC

25-2069

04 March  
2025

**Model:**

<b>Ford</b> 2021-2023 F-150	Equipped with a 4-inch display IPC (minor feature code HKRAB)
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**Markets:** North American markets only

**Issue:** Some of the vehicles listed in the Model statement above may exhibit the trailer brake gain amount not displaying in the IPC when depressing the trailer brake control switch, but the trailer brakes still perform correctly and are adjusted when using the switch. This may be due to the software level of the IPC.

- To confirm a vehicle is built with a certain minor feature code, review the build information by double-clicking the VIN in the upper left corner in the PTS.

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

**Parts - Parts To Inspect And Replace Only If Necessary**

Service Part Number	Claim Quantity	Package Order Quantity	Description
BAGM-94RH7-800	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	Battery (800 Amp)
BAGM-48H6-760	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	Battery (760 Amp)
BAGM-49H8	Only If Necessary (1 Possible)	Only If Necessary (1 Possible)	Battery (850 Amp)

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

**Package Order Quantity** refers to the amount of the service part number package(s) required to repair the vehicle.

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

Service part numbers may change after publication. Refer to the parts catalog for the latest information.

**Warranty Status:** Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Service Part Warranty (SPW)/Service Part New Vehicle (SPNV)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/SPW/SPNV/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 With 4-Inch Display: Perform the software update for GWM, APIM, TCU, BCM, and IPC	252069A	3.2 Hrs.
Additional Time For Further Updates To GWM, APIM, TCU, and IPC "Refer To Warranty & Policy Manual, Section 1.3 For Time Recording Requirements And Procedures For Actual Time. Ford Monitors Module Reprogramming Vehicle History Session Data To Compare Against Warranty Claiming Activity" (Can Be Claimed With Operation A)	AP252069	Actual Time Up To 3.1 Hrs.

**Repair/Claim Coding**

Causal Part:	10849
Condition Code:	04

## Service Procedure

**NOTE:** The time required to complete this procedure varies depending on several factors including the number of module software updates required, available internet bandwidth, USB flash drive variability, and the potential that CAN flashing (software update via the DLC with FDRS) may be required. Connect to the internet with an ethernet cable, use a USB 3.2 Gen 2 or higher flash drive. When performing USB software updates, using high speed USB ports on the laptop is recommended for faster file transfer.

1. Start an FDRS session and navigate to Toolbox tab > Datalogger > body control module (BCM) and select the BATT\_SOC PID. Verify the PID reads 50% or higher.

**NOTE:** Connecting the battery charger negative clamp directly to the battery negative terminal might result in the SOC PID not immediately reflecting the improvement from charging.

(1). If SOC is less than 50%, charge the battery by attaching the battery charger's negative clamp to the engine or chassis ground and not the negative battery terminal. Refer to WSM, Section 414-01.

(2). If the battery is unable to achieve a 50% SOC, use the Rotunda GRX-3590 or DCA-8000 testers to verify if replacement is required.

- If the battery does not need to be replaced, disconnect the Rotunda charger and perform a BMS reset using the FDRS scan tool.
- If the battery is replaced, fully charge the new battery, 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 SOC 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. Is there a software update available for any of the following modules?

- GWM
- APIM
- TCU
- IPC
- BCM

(1). Yes - proceed to Step 4.

(2). No - this article does not apply.

4. Prepare to update the software for the GWM, APIM, TCU, and IPC.

(1). A 64GB or larger USB flash drive is required for GWM, APIM, TCU, and IPC software updates. USB2 Gen 2 or higher is recommended for faster file transfer on both the computer port and the USB drive.

(2). 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.

(3). 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.

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

5. Using the FDRS, begin module programming by selecting the "SW Updates" tab. Follow all on-screen instructions carefully.

6. When prompted, connect the USB flash drive to the FDRS.

7. When prompted by the FDRS, safely remove/eject the USB flash drive from the FDRS. Start the vehicle ( KOER) then connect the USB flash drive to the USB media hub to install the software into the module. When the USB software update begins, the 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 with software update.

8. When the vehicle's center display screen prompts to restart the vehicle:

- (1). Turn the vehicle OFF.
- (2). Wait 10 minutes.
- (3). Restart the vehicle (KOER). The update is still in process at this time.

9. Follow FDRS on-screen prompts to complete the update.

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

10. Perform the software update for the GWM. Follow all update screens. If there is no GWM software update available, proceed to Step 11.

- (1). Follow the center display screen prompts.
- (2). Follow FDRS prompts to complete the GWM programming.
  - Once the pop up stating "Update Successful" appears in the 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.
- (3). Proceed to Step 11.

11. Perform the software update for the APIM. Follow all update screens. If there is no APIM software update available, proceed to Step 12.

- (1). Follow the center display screen prompts.
- (2). Follow FDRS prompts to complete the APIM programming.
  - Once the pop up stating "Update Successful" appears in the 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.
- (3). Proceed to Step 12.

12. Perform the software update for the TCU. Follow all update screens. If there is no TCU software update available, proceed to Step 13.

- (1). Follow the center display screen prompts.
- (2). Follow FDRS prompts to complete the TCU programming.
  - Once the pop up stating "Update Successful" appears in the 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.
- (3). Proceed to Step 13.

13. Perform the software update for the IPC. Follow all update screens. If there is no IPC software update available, proceed to Step 13.

- (1). Follow the center display screen prompts.
- (2). Follow FDRS prompts to complete the IPC programming.
  - Once the pop up stating "Update Successful" appears in the 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.

14. Perform a network test using the FDRS scan tool.

- (1). Click on the envelope icon.
- (2). Select "Refresh FDRS Files" (this will close FDRS when completed)
- (3). Launch FDRS.
- (4). Start new FDRS session.

**15.** Are there any updates available for the GWM, APIM, TCU and/or IPC?

**NOTE: The option to update a module may not be available until other module(s) are updated to a certain level. The network test is a confirmation that all modules are at the latest available software. Some repairs may require multiple network tests to reveal all module dependant software.**

- (1). Yes - proceed to Step 10.
- (2). No - proceed to Step 16.

**16.** Reprogram the BCM using the latest software level of the FDRS scan tool.

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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.