



TECHNICAL SERVICE BULLETIN

Alarm Activation With Motion Sensor Function Disabled - Built On Or Before 29-May-2023

23-2388

01 December
2023

Model:

Ford 2021-2023 Mustang Mach-E	Built on or before 29-May-2023
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Issue: Some 2021-2023 Mach-E vehicles built on or before 29-May-2023 may experience an alarm activation even after the motion sensor function has been disabled through the pop-up menu at ignition off. This may be due to the software in the SYNC module (APIM). To correct the condition, follow the Service Procedure steps to reprogram the APIM.

NOTE: The APIM 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 APIM 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 steps to correct the condition on vehicles that meet all of the following criteria:

- 2021-2023 Mustang Mach-E
- Built on or before 29-May-2023
- Alarm activation even after the motion sensor function has been disabled through the pop-up menu at ignition off.

Parts

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
BAGM-H3	If Needed	Battery	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)/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 Mustang Mach-E: Reprogram The Appropriate Modules As Required By The Software Update And Service Procedure (Do Not Use With Any Other Labor Operations)	MT232388	Actual Time

Repair/Claim Coding

Causal Part:	14G670
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 varies 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. 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 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 gateway module (GWM)?
 - (1). Yes – proceed to Step 4.
 - (2). No – this article does not apply. Refer to WSM, Section 415-00.
4. Perform the Module Software Updating Procedures outlined below for the GWM, telematic control unit module (TCU), APIM and instrument panel cluster (IPC). Perform a network test after each software update using the latest software level of the FDRS scan tool. This refreshes the list of modules that have available software updates based current module software levels. Continue performing software updates to the GWM 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.
5. For 2021 vehicles only, perform the IPMA Software Updating Procedure. When performing the IPMA software update additional modules will receive software updates. Depending on vehicle features, the coordinated software update includes the IPMA, power steering control module (PSCM), cruise control module (CCM) and/or camera module - rear (CMR).
 - (1). Reprogram the IPMA using the latest FDRS software level. Follow all on-screen instructions carefully to complete all coordinated module software updates.
 - (2). Perform the FDRS Image Processing Module A (IPMA) Alignment procedure.
 - (3). Perform the appropriate FDRS camera alignment procedure.
 - (4). For vehicles equipped with 360 degree cameras, perform the IPMA - 360 Degree View Camera Alignment procedure.
 - (5). For vehicles not equipped with 360 degree cameras, perform the IPMA - Pro Trailer Backup Assist Camera Alignment procedure. This procedure should be performed on all vehicles without 360 degree cameras, even if the vehicle is not equipped with Pro Trailer Backing Assist™ (PTBA).
6. For 2021 vehicles only, perform the Module Software Updating Procedures outlined below for the GWM, TCU and APIM again.

Module Software Updating Procedures

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

- GWM
- TCU
- APIM
- IPC

NOTE: A 32GB or larger USB flash drive is required for software updates. 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. Download and run the application for the desired module. Follow all on-screen instructions carefully.
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 PC, turn the vehicle to key on engine running (KOER). Connect the USB flash drive to the media hub to install the software update. The update automatically starts and 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.

4. When center display screen prompts to restart the vehicle:
 - (1). Turn the vehicle OFF.
 - (2). Wait 10 minutes.
 - (3). Turn the vehicle to KOER.
 - (4). Leave the USB flash drive inserted into the vehicle, until the vehicle's center display screen states programming successful.

NOTE: It may take up to 5 minutes before the center display screen displays the Update Successful pop-up. After 5 minutes if Successful pop-up is not shown on the center display screen, remove the USB flash drive 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. Continue following the FDRS prompts to complete GWM, TCU, APIM and IPC software update.

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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.