



# TECHNICAL SERVICE BULLETIN

22-2109

## Various Driver Assistance Feature Concerns And/Or IPMA DTCs B1578:78, U3000:49, U3000:89, U2107:68, C1001:54 And/Or C1001:78

22 March  
2022

This bulletin supersedes 22-2069.

### Model:

|                     |
|---------------------|
| Ford                |
| 2021 F-150          |
| 2021 Mustang Mach-E |

### Summary

This article supersedes TSB 22-2069 to update the Service Procedure.

**Issue:** Some 2021 F-150 and Mustang Mach-E vehicles may exhibit various driver assistance system warning messages or inoperative features and/or diagnostic trouble codes (DTC) U3000:49, U3000:89, U2107:68, C1001:54 and/or C1001:78. DTC B1578:78 may also set after an image processing module A (IPMA) on-demand self test is performed. This may be due to software in the IPMA. To correct the condition, follow the Service Procedure to reprogram the IPMA to the latest level.

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

- One of the following vehicles:
  - 2021 F-150
  - 2021 Mustang Mach-E
- At least one of the following concerns:
  - Front Camera Fault Service Required message
  - Pre-Collision Assist Not Available message
  - Reverse Brake Assist Not Available message
  - Lane-Keeping System Fault Service Required message
  - Collision Warning Not Available message
  - Check Front Park Aid message
  - Check Rear Park Aid message
  - Blind Spot System Fault message
  - Adaptive cruise control inoperative
  - Auto high beams inoperative
  - Traffic sign recognition inoperative
  - Front windshield camera alignment routine fails to complete
  - DTC B1578:78, U3000:49, U3000:89, U2107:68, C1001:54 and/or C1001:78

**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 F-150: Retrieve DTCs, Reprogram The IPMA And PSCM, Perform IPMA Alignment Procedure Includes Time To Perform The Appropriate Camera Alignment (Do Not Use With Any Other Labor Operations)      | 222109A       | 2.4 Hrs. |
| 2021 F-150: Retrieve DTCs, Reprogram The IPMA, PSCM And CCM, Perform IPMA Alignment Procedure Includes Time To Perform The Appropriate Camera Alignment (Do Not Use With Any Other Labor Operations) | 222109B       | 2.5 Hrs. |

|  |         |          |
|--|---------|----------|
| 2021 F-150: Retrieve DTCs, Reprogram The IPMA, PSCM, CCM And CMR, Perform IPMA Alignment Procedure Includes Time To Perform The Appropriate Camera Alignment (Do Not Use With Any Other Labor Operations)          | 222109C | 3.0 Hrs. |
| 2021 Mustang Mach E: Retrieve DTCs, Reprogram The IPMA And PSCM, Perform IPMA Alignment Procedure Includes Time To Perform The Appropriate Camera Alignment (Do Not Use With Any Other Labor Operations)           | 222109D | 2.5 Hrs. |
| 2021 Mustang Mach E: Retrieve DTCs, Reprogram The IPMA, PSCM And CCM, Perform IPMA Alignment Procedure Includes Time To Perform The Appropriate Camera Alignment (Do Not Use With Any Other Labor Operations)      | 222109E | 2.7 Hrs. |
| 2021 Mustang Mach E: Retrieve DTCs, Reprogram The IPMA, PSCM, CCM And CMR, Perform IPMA Alignment Procedure Includes Time To Perform The Appropriate Camera Alignment (Do Not Use With Any Other Labor Operations) | 222109F | 3.2 Hrs. |

### Repair/Claim Coding

|                 |        |
|-----------------|--------|
| Causal Part:    | 14G647 |
| Condition Code: | 04     |

### Service Procedure

1. Is only DTC U3000:49 present in the IPMA and does the vehicle also exhibit indications of a low battery voltage condition such as DTC U3003 present in other modules or an engine no crank/no start concern?

(1). Yes - this article does not apply. To clear the DTC, download and run the Reset the Image Processing Module A (IPMA) Learned Values application in Ford Diagnosis and Repair System (FDRS). Then run the Image Processing Module A (IPMA) Alignment application immediately after. The IPMA should not be replaced for this condition. Check for OASIS messages for low battery voltage and continue with diagnostics for low battery voltage.

(2). No - proceed to Step 2.

2. Are DTCs U2107:68 and/or U3000:89 present, and only after performing an IPMA self-test?

(1). Yes - this article does not apply. Clear the DTC and only perform diagnostics for U2107:68 and/or U3000:89 if these DTCs set outside of an IPMA self-test.

(2). No - proceed to Step 3.

**NOTE: 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).**

3. Reprogram the IPMA using the latest FDRS software level. Follow all on-screen instructions carefully to complete all coordinated module software updates.

4. Perform the FDRS Image Processing Module A (IPMA) Alignment procedure.

5. Perform the appropriate FDRS camera alignment procedure.

(1). For vehicles equipped with 360 degree cameras, perform the IPMA - 360 Degree View Camera Alignment procedure.

(2). For all other vehicles, 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).

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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.