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December 18, 2023

TO: All U.S. Ford and Lincoln Dealers

SUBJECT: NEW VEHICLE DEMONSTRATION / DELIVERY HOLD – Safety Recall 23S56
 Certain 2021-2022 Model Year Mustang Mach-E Vehicles
 High Voltage Battery Junction Box (HVBJB) Replacement and Powertrain Control
 Module (PCM), Battery Energy Control Module (BECM), and Secondary On-Board
 Diagnostic Control Module C (SOBDMC) Software Update

REF: NEW VEHICLE DEMONSTRATION / DELIVERY HOLD - Advance Notice –
 Safety Recall 23S56 - Dated: October 16, 2023

REF: NEW VEHICLE DEMONSTRATION / DELIVERY HOLD – Safety Recall 22S41-S1
 Dated: October 7, 2022

AFFECTED VEHICLES

Vehicle	Model Year	Assembly Plant	Build Dates
Mustang Mach-E	2021	Cuautitlan	May 27, 2020 through December 23, 2021
	2022		August 16, 2021 through May 24, 2022

US population of affected vehicles: 30,000. Affected vehicles are identified in OASIS and FSA VIN Lists.

Note: Some vehicles may be in the process of being repaired at the plant. Monitor OASIS before opening an RO and/or beginning a repair. Parts purchased for an FSA can be returned for credit if required. See the EXCESS STOCK RETURN details in Labor Allowances and Parts Ordering Information for more information.

Note: 23S56 includes the same parts and procedures as contained in TSB 23-2348. Therefore, 23S56 will be closed automatically when TSB 23-2348 is, or has been, claimed.

REASON FOR THIS SAFETY RECALL

In the affected vehicles, the high voltage battery main contactors may overheat, which can result in a contactor that remains open or a contactor that welds closed.

Some vehicles that have received the 22S41 software remedy will receive a malfunction indicator lamp (MIL) when resistance is measured higher than the threshold. Those vehicles will experience a reduction in vehicle power with an average of 50% of its rated power to prevent further damage to the contactors. The vehicle will still be able to accelerate to highway speeds safely with this power derate.

In some cases, the 22S41 remedy has not proactively detected damage to the contactors on Extended Range and GT vehicles. This can allow the contactor to weld closed or prevent the contactor from properly closing while driving.

If the contactors weld closed while driving, upon the next key cycle, a MIL will be illuminated, vehicle diagnostics will set a DTC, and vehicle will not start.

If the contactors are prevented from closing while driving, vehicle diagnostics will set a DTC, a MIL will be illuminated, the vehicle will display “Stop Safely Now” and the vehicle will immediately lose motive power. The vehicle will coast to a stop and all 12V systems including power brakes and steering will remain functional.

SERVICE ACTION

Before demonstrating or delivering any new in-stock vehicles involved in this recall, dealers are to replace the high voltage battery junction box (HVBJB) and reprogram the Powertrain Control Module (PCM), Battery Energy Control Module (BECM), and Secondary On-Board Diagnostic Control Module C (SOBDMC) using the Ford Diagnostic and Repair System (FDRS). These modules are coordinated with the PCM, BECM and SOBDMC and may also update: Antilock Braking System (ABS), Secondary On-Board Diagnostic Control Module (SOBDM) and Secondary On-Board Diagnostic Control Module B (SOBDMB). This service must be performed on all affected vehicles at no charge to the vehicle owner. For new vehicle storage guidelines, refer to EFC13033, Storage Guidelines for New Vehicles.

To assist vehicle owners to have this repair completed when parts are available, dealers should:

- Arrange to pick up the owner's vehicle and drive it to the dealership for repairs (rentals are authorized – see Rental Vehicles).
 - Re-deliver the owner's vehicle after repairs have been completed.
- Pick-Up & Delivery and towing should be made available for all customers. Refer to the Rental and Claiming sections for further details.
- Order parts through the Special Service Support Center (SSSC) five (5) days prior to the service appointment to ensure parts arrive in time.

ESSENTIAL SPECIAL SERVICE TOOLS

If you do not have the special tools needed, please contact 1-800 ROTUNDA and choose option 3 to place an order to purchase.

OWNER NOTIFICATION MAILING SCHEDULE

Parts to repair this condition are currently not available in sufficient quantities to service all of the affected vehicles. Therefore, to ensure an ample supply of parts is available, owners of affected vehicles will be notified in four separate mailings. The mailings are scheduled to begin by December 29, 2023, prioritized by risk of contactor failure (GT-AWD-RWD). Dealers should repair any affected vehicles that arrive at their dealerships, whether or not the customer has received a letter.

PLEASE NOTE:

Federal law requires dealers to complete this recall service before a new vehicle is delivered to the buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$26,315 per vehicle. Correct all vehicles in your new vehicle inventory before delivery.

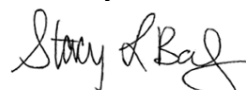
ATTACHMENTS

- Administrative Information
- Labor Allowances and Parts Ordering Information
- Technical Instructions
- Mobile Service Repair Assessment
- Mobile Repair/Vehicle Pick-Up & Delivery Record
- Owner Notification Letter

QUESTIONS & ASSISTANCE

For questions and assistance, contact the SSSC via the SSSC Web Contact Site. The SSSC Web Contact Site can be accessed through the Professional Technician System (PTS) website using the SSSC link listed at the bottom of the OASIS VIN report screen or listed under the SSSC tab.

Sincerely,



Stacy L. Balzer

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MOBILE SERVICE REPAIR ASSESSMENT LEVEL

🚫 - Not a Mobile Service Repair

OASIS ACTIVATION

OASIS was activated on October 16, 2023.

FSA VIN LISTS ACTIVATION

FSA VIN Lists were available through <https://web.fsavinlists.dealerconnection.com> on October 16, 2023. Owner names and addresses will be available by January 12, 2024.

NOTE: Your FSA VIN Lists may contain owner names and addresses obtained from motor vehicle registration records. The use of such motor vehicle registration data for any purpose other than in connection with this recall is a violation of law in several states, provinces, and countries. Accordingly, you must limit the use of this listing to the follow-up necessary to complete this recall.

SOLD VEHICLES

- Ford has not issued instructions to stop selling/delivering or driving used vehicles under this safety recall. Owners should contact their dealers for an appointment to have their vehicles remedied as soon as practicable.
- Immediately contact any of your affected customers whose vehicles are not on your VIN list but are identified in OASIS. Give the customer a copy of the Owner Notification Letter (when available) and schedule a service date.
- Correct other affected vehicles identified in OASIS which are brought to your dealership.
- Dealers are to prioritize repairs of customer vehicles over repairs of new and used vehicle inventory.

STOCK VEHICLES

- Correct all affected units in your new vehicle inventory before delivery.
- Use OASIS to identify any affected vehicles in your used vehicle inventory.

DEALER-OPERATED RENTAL VEHICLES

The Fixing America's Surface Transportation (FAST) Act law effective June 2016 prohibits a rental company from selling, renting, or leasing vehicles subject to a safety or compliance recall. Please consult your legal counsel for legal advice.

BRANDED / SALVAGED TITLE VEHICLES

Affected branded / salvaged title vehicles are eligible for this recall.

OWNER REFUNDS

- **This safety recall must still be performed, even if the owner has paid for a previous repair. Claiming a refund will not close the recall on the vehicle.**
- Ford Motor Company is offering a refund for owner-paid repairs covered by this recall if the repair was performed before the date indicated in the reimbursement plan, which is posted with this bulletin. Owners are directed to seek reimbursement through authorized dealers or, at their option, directly through Ford Motor Company at P.O. Box 6251, Dearborn, MI 48121-6251.

Safety Recall 23S56**OWNER REFUNDS** (continued)

- Dealers are also pre-approved to refund owner-paid emergency repairs that were performed away from an authorized servicing dealer after the end date specified in the reimbursement plan. Non-covered repairs, or those judged by Ford to be excessive, will not be reimbursed.
- Refunds will only be provided for the cost associated with replacement of the HVBJB and associated module reprogramming.

RENTAL VEHICLES

Dealers are pre-approved for up to 2 days for a comparable rental vehicle. Follow Extended Service Plan (ESP) guidelines for dollar amounts. Rentals will only be reimbursed for the days the vehicle is at the dealership for part replacement. Prior approval for more than 2 rental days is required from the SSSC. Contact the SSSC via the SSSC Web Contact Site for consideration and approval if appropriate.

TOWING

If towing is required, dealers are authorized to claim up to a maximum value of \$250 to provide towing services for this program.

PICK-UP & DELIVERY- Participating Dealers

Dealers participating in the Remote Experience Program:

- Ford Dealers - Refer to EFC12071, 2023 Remote Experience Program, Pick-Up & Delivery Offset section for additional details.

PICK-UP & DELIVERY- Non-participating Dealers

Ford Dealers not participating in the 2023 Remote Experience Program for Pick-Up & Delivery are authorized to claim unique services for completing this program.

- Dealers are authorized to claim one-half labor hour per repair for vehicle Pick-Up & Delivery services. Refer to Labor Allowances for details.
- Dealers must retain a Vehicle Pick-Up & Delivery Record with the repair order documentation.

ADDITIONAL REPAIR (LABOR TIME AND/OR PARTS)

Additional repairs identified as necessary to complete the FSA should be managed as follows:

- For related damage and access time requirements, refer to the Warranty and Policy Manual / Section 6 – Ford & Lincoln Program Policies / General Information & Special Circumstances for FSAs / Related Damage.
- For vehicles within new vehicle bumper-to-bumper warranty coverage, no SSSC approval is required, although related damage must be on a separate repair line with the “Related Damage” radio button checked.
 - Ford vehicles – 3 years or 36,000 miles
- For vehicles outside new vehicle bumper-to-bumper warranty coverage, submit an Approval Request to the SSSC Web Contact Site before completing the repair.

CLAIMS PREPARATION AND SUBMISSION

- **Claim Entry:** Enter claims using Dealer Management System (DMS) or One Warranty Solution (OWS) online.
 - When entering claims, select claim type 31: Field Service Action. The FSA number 23S56 is the subcode.

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CLAIMS PREPARATION AND SUBMISSION (continued)

- For additional claims preparation and submission information, refer to the Recall and Customer Satisfaction Program (CSP) Repairs in the OWS User Guide.
- **Related Damage/Additional labor and/or parts:** Must be claimed as Related Damage on a separate repair line from the FSA with the same claim type and subcode as described in Claim Entry above.
IMPORTANT: Click the Related Damage Indicator radio button.
- **Rentals:** For rental vehicle claiming, follow Extended Service Plan (ESP) guidelines for dollar amounts. Enter the total amount of the rental expense under the Miscellaneous Expense code RENTAL.
- **Refunds:** Submit refunds on a separate repair line.
 - Program Code: 23S56 - Misc. Expense: ADMIN
 - Misc. Expense: REFUND - Misc. Expense: 0.2 Hrs.
- Multiple refunds should be submitted on one repair line and the invoice details for each repair should be detailed in the comments section of the claim.
- **Pick-Up & Delivery:**
 - Dealers participating in the Remote Experience Program –
 - Refer to EFC12071, 2023 Remote Experience Program, Pick-Up & Delivery (PDL) Offset section for additional details.
 - Dealers NOT participating in the Remote Experience Program –
 - Dealers may claim one-half labor hour per repair for vehicle Pick-Up & Delivery services.
 - Dealers must retain a Vehicle Pick-Up & Delivery Record with the repair order documentation.
- **Provision for Towing:** Dealers are authorized to claim up to a maximum value of \$250 to provide towing services for completing this program. Submit on the same line as the repair.
 - Program Code: 23S56
 - Misc. Expense: OTHER
 - Misc. Expense: Claim up to \$250.00

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LABOR ALLOWANCES

Description	Labor Operation	Labor Time
Replace the HVBJB Must be claimed with 23S56C.	23S56B	5.7 Hours
Reprogram the SOBDM and BECM using FDRS. These modules are coordinated with the PCM and may include other modules listed in the bulletin. Therefore, the PCM software should be selected as the primary module to install. NOTE: Integrated Diagnostic Software (IDS) cannot be used for programming on Mustang Mach-E vehicles. Must be claimed with 23S56B.	23S56C	0.6 Hour
Vehicle Pick-Up & Delivery Allowance: This allowance is only for <u>non-eligible</u> 2023 Remote Experience Program Dealers. NOTE: This allowance is for dealer-performed vehicle Pick-Up & Delivery for dealership repairs only. Can only be claimed once, regardless of outstanding FSAs repaired. Can be claimed with 23S56B and 23S56C.	23S56PP	0.5 Hours

PARTS REQUIREMENTS / ORDERING INFORMATION

Special Program Part Ordering:

To place an order for the HVBJB and required hardware, submit a VIN-specific Part Order contact via the SSSC Web Contact Site five (5) days prior to the service appointment to ensure parts arrive in time. Due to limited part availability a signed sales agreement for unsold vehicles and open repair order for sold vehicles will be required.

Part Number	Description	Order Quantity	Claim Quantity
LK9Z-10C666-C	HVBJB – GT vehicles only	1	1
NK4Z-10C666-E	HVBJB – All Wheel Drive vehicles only		
NK4Z-10C666-F	HVBJB – Rear Wheel Drive vehicles only		
W717859-S439	Battery mounting bracket bolts (2 req/pkg of 4)	1	2
W720404-S450	BECM mounting bracket bolts (4 req/pkg of 4)	1	4

Dealers will be notified via a DOES II communication if circumstances warrant a change in part supply strategy and when open ordering resumes.

Order the parts below through normal order processing channels:

Part Number	Description	Order Quantity	Claim Quantity
VC-13-G	Concentrated coolant/anti-freeze	up to 1 gallon	

To guarantee the shortest delivery time, an emergency order for parts must be placed.

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DEALER PRICE

For the latest prices, refer to DOES II.

PARTS RETENTION, RETURN, & SCRAPPING

Follow the provisions of the Warranty and Policy Manual, Section 1 - WARRANTY PARTS RETENTION AND RETURN POLICIES. If a replaced part receives a scrap disposition, the part must be scrapped by all applicable local, state, and federal environmental protection and hazardous material regulations. Federal law prohibits selling motor vehicle parts or components that are under safety, compliance, or emissions recall.

EXCESS STOCK RETURN

The excess stock returned for credit must have been purchased from Ford Customer Service Division by Policy Procedure Bulletin 4000.

REPLACED FSA PARTS INSPECTION AND SIGN OFF

Effective March 1st, 2021, all parts replaced as part of an FSA repair with a repair order open date of March 1st, 2021, or later must be inspected and signed off on the repair order by a member of your dealer fixed operations management team or an employee of the task has been delegated to. If the task is to be delegated to a non-management employee, the employee needs to be someone other than the technician who completed the repair and needs to understand the importance of completing this task consistently and accurately.

- All parts replaced as part of an FSA repair should be returned to the parts department following the Warranty Parts Retention and Return Policies.
- Inspect the replaced parts to verify the FSA repair was completed.
- If the FSA repair is found to be complete, the designated employee signs the repair order line or parts return stamp area (electronic or hand signed) for the FSA repair indicating the parts were inspected and validated to have been replaced.
- After the parts have been inspected, they should be handled based on the guidance in the parts status report in the Online Warranty System (Hold, Return, CORE, Scrap, etc.). Please visit FMCDEALER > PARTS & SERVICE > WARRANTY ADMINISTRATION & WARRANTY PARTS RETURN for the latest [Immediate Scrap List](#) information.
- This process is subject to review during warranty audits for FSA repairs with a repair order open date of March 1st, 2021, or later. Any eligible FSA claims requiring parts replacement found not to have been inspected and signed off during a warranty audit will be subject to chargeback and consideration for enrollment into the Dealer Incomplete Recall Repair Process.

Note: Other approvals (electronic or handwritten) for add-on repair lines, dealer-owned vehicle repairs, and repeat repairs do not qualify as FSA parts inspection approvals. The post-repair FSA parts inspection process (electronic or handwritten) is independent of other warranty approval requirements. The approval by the designated employee implies that the FSA parts were found to be replaced and must be able to be identified on the Repair Order. If multiple FSAs require approval on a single Repair Order, each applicable occurrence will require individual post-repair approval by the designated employee.

CERTAIN 2021-2022 MODEL YEAR MUSTANG MACH-E VEHICLES — HIGH VOLTAGE BATTERY JUNCTION BOX (HVBJB) REPLACEMENT AND POWERTRAIN CONTROL MODULE (PCM), BATTERY ENERGY CONTROL MODULE (BECM), AND SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE C (SOBDMC) SOFTWARE UPDATE

SERVICE PROCEDURE

1. Replace the High Voltage Battery Junction Box (HVBJB). Follow the Workshop Manual (WSM) procedures in Section 414-03A.

2. Connect a battery charger to the 12V battery.

- Use of a heavy-duty charger is recommended to maintain proper battery voltage during this procedure.

NOTE: Verify that the negative cable of the charger is installed on a chassis or engine ground, and not the 12 volt battery negative terminal to prevent the battery saver mode from activating on the vehicle.

NOTE: If the diagnostic software does not load or if the vehicle cannot be identified properly, make sure there is a good internet connection and the Vehicle Communication Module (VCM) is properly connected to the Data Link Connector (DLC.)

3. Log into Ford Diagnostic and Repair System (FDRS).

NOTE: Vehicle information is automatically retrieved by the diagnostic software and a Network Test is run. Vehicle identification data appears on the screen when this is complete.

4. Click 'Read VIN from Vehicle' or manually enter the VIN.

NOTE: Available modules are shown on the LH side of the screen, and available procedures are listed on the RH side of the screen. Modules that are communicating are highlighted in green.

5. Select **Toolbox** tab.

6. From the list on the LH side of the screen, select the **PCM**.

7. From the list on the RH side of the screen, select **PCM - Powertrain Control Module (PCM) Software Update**.

8. Click **RUN**. Follow all on-screen instructions carefully.



NOTE: The following modules will also be programmed during the PCM update:

- Hybrid Powertrain Control Module (SOBDMC)
- Battery Energy Control Module (BECM)

NOTE: The following modules may also be programmed during the PCM update:

- Anti-Lock Brake System (ABS) Module
- Secondary On-Board Diagnostic Control Module A (SOBDM)
- Secondary On-Board Diagnostic Control Module B (SOBDMB)

9. Once PCM Update has completed, check the software tab to make sure that the above listed modules do not have any available software updates.

10. From the list on the RH side of the screen, select **Self-Test** and click **RUN**.

11. Click the **Run Selected Tests** button in the lower right.

12. Click the **Clear & Retest** button at the top of the screen to clear DTCs in all modules.

13. Disconnect the battery charger from the 12V battery once the programming has completed.

NOTE: If applicable, advise the customer that this vehicle is equipped with an adaptive transmission shift strategy which allows the vehicle's computer to learn the transmission's unique parameters and improve shift quality. When the adaptive strategy is reset, the computer will begin a re-learning process. This re-learning process may result in firmer than normal upshifts and downshifts for several days.

Important Information for Module Programming

NOTE: When programming a module, use the following basic checks to ensure programming completes without errors.

- Make sure the 12V battery is fully charged before carrying out the programming steps and connect FDRS/scan tool to a power source.

NOTE: A good internet connection is necessary to identify the vehicle and to load the diagnostic software.

- Inspect Vehicle Communication Module II/III (VCM II/III)/Vehicle Communication and Measurement Module (VCMM) and cables for any damage. Make sure scan tool connections are not interrupted during programming.
- A hardwired connection is strongly recommended.
- Turn off all unnecessary accessories (radio, heated/cooled seats, headlamps, interior lamps, HVAC system, etc.) and close doors.
- Turn the accessories back on after programming has completed.
- Disconnect/depower any aftermarket accessories (remote start, alarm, power inverter, CB radio, etc.).
- Follow all scan tool on-screen instructions carefully.
- Disable FDRS/scan tool sleep mode, screensaver, hibernation modes.
- Create all sessions key on engine off (KOEO). Starting the vehicle before creating a session will cause errors within the programming inhale process.



Recovering a module when programming has resulted in a blank module

- a. Disconnect the VCM II/III or VCMM from the data link connector (DLC) and your PC.
- b. After ten seconds, reconnect the VCM II/III or VCMM to the DLC and the PC. Launch FDRS. The VCM II/III or VCMM icon should turn green in the bottom right corner of the screen. If it does not, troubleshoot the FDRS to VCM connection.
- c. If you are using the same FDRS as the initial programming attempt, select the appropriate VIN from the Vehicle Identification menu. If you are using a different FDRS, select "Read VIN from Vehicle" and proceed through the Network Test.
- d. In the Toolbox menu, navigate to the failed module and Download/Run Programmable Module Installation (PMI). Follow the on-screen prompts. When asked if the original module is installed, select "No" and continue through the installation application.
- e. Once programming has completed, a screen may list additional steps required to complete the programming process. Make sure all applicable steps are followed in order.

IMPORTANT NOTE: Federal law prohibits selling motor vehicle parts or components that are under safety, compliance, or emissions recall. Unless a part is requested to be returned to Ford, all parts replaced under this FSA must be scrapped in accordance with all applicable local, state and federal environmental protection and hazardous material regulations. Refer to the Parts Retention, Return, & Scrapping section of the FSA dealer bulletin for further information.



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Mobile Service Repair Assessment

Assessment levels have been identified to help determine the ease of performing eligible mobile service repairs for a Field Service Action (FSA) outside of the dealership service facility.

Dealer Bulletin

Within the Administrative Information Attachment of the dealer bulletin a mobile service repair assessment level(s) will be provided. These assessment levels have been determined using the amount of time, equipment and labor identified to perform the intended service action.

Assessment Levels

  - Light Mobile Service

Description of each level that is used to determine the overall assessment.

 – Mobile Reprogramming

- Module Programming or similar type services
- Minimum tools maybe required other than an **IDS/FDRS** setup
- FDRS programming that requires internet connection (wi-fi or mobile hotspot)
- Make sure vehicle has a charge port to ensure battery voltage is maintained during flashing of the module(s)
- Repairs not greater than 1 hour in length (including time to wait for programming)

Note: The location will need a charging station or wall box to maintain the 12-volt battery.

  – Light Mobile Service

- Interior repair procedures that do not require seat, dash, or headliner removal
- Under hood repairs that do not require large component removal
- Exterior repairs that do not require large component/panel removal
- Repairs may require standard hand tools (Access to a Technician starter kit or similar)


   – Enhanced Mobile Service

- ***A two-person process is required anytime a procedure requires work under the vehicle***
- Brake Inspection and Brake Repair/Replacement
- Limited Suspension Component replacement (no alignment)
- Under Vehicle access for limited repairs (no large component removal)
- Vehicle Check Up - VCU
- Pre-Delivery Inspection - PDI
- Used Car Inspection/Presale Inspection
- May require floor jack, jack stands, and impact tools

Note: Wheel lock may be required.

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Mobile Service Repair Assessment

 – Advanced Mobile Service

- Fluid Exchange/Oil Change
- Light Repairs
- Brake Hydraulic Repairs

 – Wheel and Tire Mobile Service

- Tire Removal from Wheel
- Tire Balancing
- Tire Repair

Note: Specialized Mobile Service unit and equipment including Tire balancer and Tire Changer required.

 – Not a Mobile Service Repair

- Large component removal
- BEV Battery Replacement
- Requires a vehicle hoist – to complete the repair (more than inspection)
- Required vehicle alignment
- Requires significant vehicle disassembly
- Repairs greater than 2-3 hours
- Any repairs that require M-Time
- Includes a service procedure where the vehicle owner may be distressed about the state of their vehicle

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Mobile Repair / Vehicle Pick-Up and Delivery Record

VIN _____ received (check one):

- Mobile Repair
- Pick-up and/or delivery service

As outlined below for Safety Recall 23S56 Field Service Action program.

Mobile Repair – Date: _____

OR

Pick-up – Date: _____

Delivery – Date: _____

Repair Order #

Repair Order Date

Service Manager Signature

Date