



David J. Johnson
Director
Service Engineering Operations
Ford Customer Service Division

Ford Motor Company
P. O. Box 1904
Dearborn, Michigan 48121

September 13, 2021

TO: All U.S. Ford and Lincoln Dealers

SUBJECT: **Customer Satisfaction Program 21N08**
Certain 2017-2020 Model Year F-150, 2018-2020 Expedition, and 2018-2020 Navigator Vehicles Equipped with a 3.5L GTDI Engine
PCM Reprogram Due to Engine Shudder

REF: **Customer Satisfaction Program 21B10 - Supplement #3**
Dated September 13, 2021

PROGRAM TERMS

This program provides a no-cost, one-time repair (if needed) covering PCM reprogram due to camshaft induced engine shudder until January 1, 2023 provided the Powertrain Control Module has been reprogrammed under Customer Satisfaction Program 21B10.

This is a one-time repair program.

Coverage is automatically transferred to subsequent owners.

VEHICLES COVERED BY THIS PROGRAM

Vehicle	Model Year	Assembly Plant	Build Dates
F-150*	2017-2020	Dearborn	March 10, 2016 through November 30, 2019
		Kansas	April 15, 2016 through November 30, 2019
Expedition	2018-2020	Kentucky Truck	March 14, 2017 through November 30, 2019
Navigator	2018-2020	Kentucky Truck	March 16, 2017 through December 21, 2019

Note: This program includes the F-150 Raptor/Limited variants.

Affected vehicles are identified in OASIS.

REASON FOR PROVIDING A NO-COST, ONE-TIME REPAIR

In a very low percentage of the affected vehicles, an engine shudder may develop after receiving the PCM update provided in program 21B10. For peace of mind, Ford is providing a no-cost, one-time repair for customers who receive the PCM update under program 21B10 to revert the PCM calibration back to its original state before program 21B10.

SERVICE ACTION

If an affected vehicle exhibits this condition, dealers are to revert the PCM calibration back to the original level. This service must be performed at no charge to the vehicle owner.

OWNER NOTIFICATION MAILING SCHEDULE

Owner Letters are expected to be mailed the week of September 27, 2021. Dealers should repair any affected vehicles that experience undesirable cam phaser noise after field service action 21B10, whether or not the customer has received a letter.

ATTACHMENTS

Attachment I: Administrative Information
Attachment II: Labor Allowances and Parts Ordering Information
Attachment III: Technical Information
Owner Notification Letters

QUESTIONS & ASSISTANCE

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

Sincerely,



David J. Johnson

Customer Satisfaction Program 21N08

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Equipped with a 3.5L GTDI Engine
PCM Reprogram Due to Engine Shudder

OASIS ACTIVATION

OASIS will be activated on September 13, 2021.

FSA VIN LISTS ACTIVATION

FSA VIN Lists will not be activated for this service action.

SOLD VEHICLES

- Only owners with affected vehicles that exhibit the covered condition will be directed to dealers for repairs.
- Dealers are to prioritize repairs of customer vehicles over repairs of new and used vehicle inventory.

STOCK VEHICLES

- Do not perform this program unless the affected vehicle exhibits the covered condition.

TITLE BRANDED / SALVAGED VEHICLES

Vehicles with cancelled warranties are not eligible for this service action.

OWNER REFUNDS

Refunds are not approved for this program.

RENTAL VEHICLES

The use of rental vehicles is not approved for this program.

LINCOLN PICKUP AND DELIVERY

Owners of 2017 MY and newer Lincoln vehicles have the option of requesting pickup and delivery service with a Lincoln loaner (up to 2 days), from their dealership. For details, reference EFC08708, 2021 Lincoln Pickup & Delivery Updates.

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 FSA's / 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
 - Lincoln vehicles – 4 years or 50,000 miles
- For vehicles outside new vehicle bumper-to-bumper warranty coverage, submit an Approval Request to the SSSC Web Contact Site prior to completing the repair.

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CLAIMS PREPARATION AND SUBMISSION

- **Claim Entry:** Enter claims using Dealer Management System (DMS) or One Warranty Solution (OWS) online.
 - When entering claims:
 - Claim type 31: Field Service Action. The FSA number 21N08 is the sub code.
 - Customer Concern Code (CCC): N09
 - Condition Code (CC): 42
 - Causal Part Number: 6256
 - Part Quantity: 0
 - 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 same claim type and sub code as described in Claim Entry above.
- **IMPORTANT:** Click the Related Damage Indicator radio button.
- **Lincoln Pickup & Delivery:** Claims for Lincoln Pickup & Delivery with a Lincoln loaner (up to 2 days) should be submitted on a separate line from the FSA. Refer to EFC08708, 2021 Lincoln Pickup & Delivery Updates for details.

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LABOR ALLOWANCES

Description	Labor Operation	Labor Time
Test drive to verify engine shudder and reprogram PCM to last revision.	21N08B	1.2 Hours

PARTS REQUIREMENTS / ORDERING INFORMATION

Parts are not required to complete this repair.

CERTAIN 2017-2020 MODEL YEAR F-150, 2018-2020 EXPEDITION, AND 2018-2020 NAVIGATOR VEHICLES EQUIPPED WITH A 3.5L GTDI ENGINE — POWERTRAIN CONTROL MODULE REPROGRAM DUE TO ENGINE SHUDDER

SERVICE PROCEDURE

1. Warm up the engine.
2. Test drive the vehicle. The engine shudder/vibration may be evident during low RPM (1000-1500) and light throttle tip in between 25-55 MPH (40-89 Km/H).
3. Was a shudder noticed?

Yes – Fails inspection. Proceed to Step 4.
No – Passes inspection, this Field Service Action does not apply.
4. Disconnect the oil pump electrical connector from the engine and secure to wire harness or coolant tube with a zip tie to prevent movement. See Figure 1.

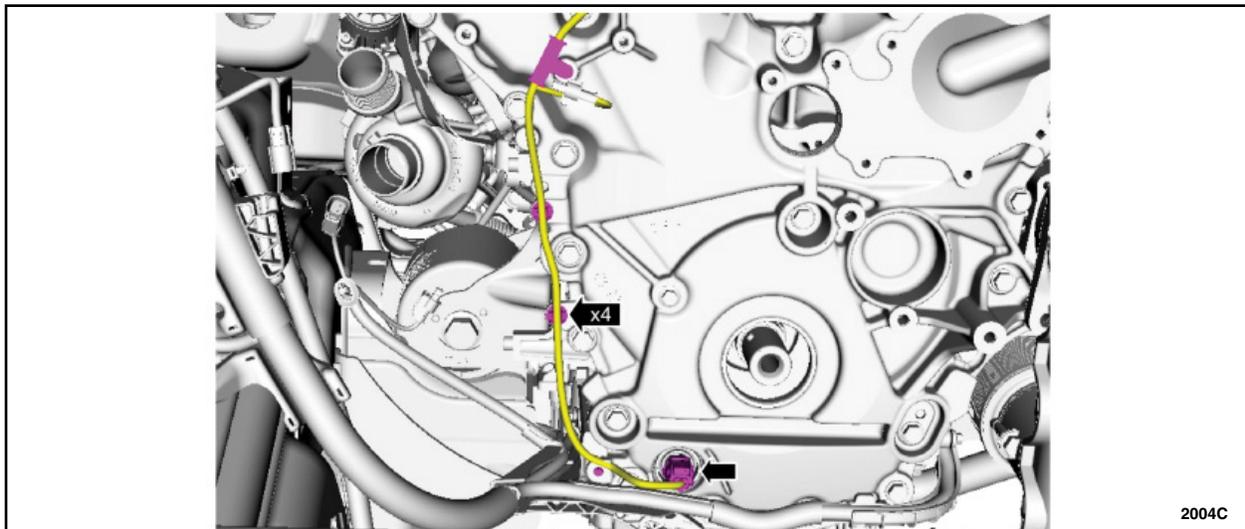


FIGURE 1

5. Test drive the vehicle again to determine if the shudder is still present. Is the shudder still present?

Yes – This shudder is not caused by the 21B10 programming and normal diagnostics should be followed. This Field Service Action does not apply.
No – This shudder is caused by the engine. Proceed to Step 6.
6. Remove the zip tie and connect the oil pump electrical connector.



Module Reprogramming

NOTE: All vehicles are to have the Powertrain Control Module (PCM) reprogrammed regardless of symptoms.

NOTE: If any other Diagnostic Trouble Codes (DTC's) are present in the PCM and the engine light is illuminated, record them on the repair order and advise the customer that this update will not repair these issues and that the DTC's will be cleared but will return again after this update.

F-150 VEHICLES - see below

EXPEDITION AND NAVIGATOR VEHICLES - see page 3

7. Connect a battery charger to the 12 volt battery.

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: Make sure the Integrated Diagnostic Software (IDS) computer does not enter sleep mode during programming.

8. Reprogram the PCM using the latest IDS release. Make sure you are connected to the Internet prior to reprogramming. Make sure to select "Yes" at the beginning of the procedure when asked if programming the vehicle is due to an engine shudder.

NOTE: Calibration files may also be obtained at www.motorcraftservice.com.

NOTE: Follow the IDS on-screen instructions to complete the reprogramming procedure.

9. Clear all DTC's.

10. Disconnect the battery charger from the 12 volt battery once the reprogramming has completed.

NOTE: 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.



EXPEDITION AND NAVIGATOR VEHICLES

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

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 VCM is properly connected to the DLC.

12. 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.

13. 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.

14. Select Toolbox tab.

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

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

17. Click RUN. Follow all on-screen instructions carefully. Make sure to select "Yes" at the beginning of the procedure when asked if programming the vehicle is due to an engine shudder.

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

19. Click the Run Selected Tests button in the lower right.

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

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

NOTE: 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 when using IDS

NOTE: When programming or reprogramming 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 IDS/scan tool to a power source.
- Inspect Vehicle Communication Module (VCM) 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.
- Disconnect/depower any aftermarket accessories (remote start, alarm, power inverter, CB radio, etc.).
- Follow all scan tool on-screen instructions carefully.
- Disable IDS/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: **NEVER DELETE THE ORIGINAL SESSION!**

- a. Obtain the original IDS that was used when the programming error occurred during module reprogramming (MR) or programmable module installation (PMI).
- b. Disconnect the VCM from the data link connector (DLC) and the IDS.
- c. Reconnect the VCM to IDS and then connect to the DLC. Once reconnected, the VCM icon should appear in the corner of the IDS screen. If it does not, troubleshoot the IDS to VCM connection.
- d. Locate the original vehicle session when programming failed. This should be the last session used in most cases. If not, use the session created on the date that the programming failed.

NOTE: If the original session is not listed in the previous session list, click the Recycle Bin icon at the lower right of the previous session screen. This loads any deleted sessions and allows you to look through them. Double-click the session to restore it.

- e. Once the session is loaded, the failed process should resume automatically.
- f. If programming does not resume automatically, proceed to the Module Programming menu and select the previously attempted process, PMI or MR.
- g. Follow all on-screen prompts/instructions.
- h. The last screen on the IDS may list additional steps required to complete the programming process. Make sure all applicable steps listed on the screen are followed in order.



Important Information for Module Programming when using FDRS

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 (VCM II)/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.
- 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 VCMII or VCMM from the data link connector (DLC) and your PC.
- b. After ten seconds, reconnect the VCMII/VCMM to the DLC and the PC. Launch FDRS. The VCMII/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.

