



TECHNICAL SERVICE BULLETIN

Ambient Air Temperature Sensor Replacement

25-254506 January
2026**Model:**

Ford 2023-2025 F-Super Duty	Built on or before 14-Jun-2025
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Markets: North American markets only

Issue: Some 2023-2025 F-Super Duty vehicles built on or before 14-Jun-2025 may require the replacement of the ambient air temperature (AAT) sensor for various concerns. DTCs P0071, P0072, and/or P0073 may be present in the PCM.

Action: For vehicles that meet all of the criteria in the Issue and Model statements, follow the Service Procedure to replace the AAT sensor, wiring pigtail kit, AAT sensor bezel, and exterior mirror housing cover if WSM Pinpoint Test BN leads to replacement of the AAT sensor.

Parts

Service Part Number	Claim Quantity	Package Order Quantity	Number in Package	Description
HC3Z-12A647-A	1	1	1	Ambient Air Temp Sensor
PC3Z-14A411-D	1	1	1	Wiring Pigtail Kit
HC3Z-17K709-A	1	1	1	AAT Sensor Bezel
SC3Z-17D742-B	1	1	1	Mirror Cover (With Puddle Lamp)
SC3Z-17D742-A	1	1	1	Mirror Cover (Less Puddle Lamps)
3U2Z-14A088-AB	1	1	1	Heat Shrink Tube

Service part numbers and "number in package" quantity may change after publication, thus also affecting the "package order quantity". Refer to the parts catalog for the latest information.

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.

Number In Package refers to the number of individual pieces included in a service part number package, also known as unit of issue (UOI).

Warranty Status: Warranty coverage limits and policies are not altered by a TSB. Warranty coverage limits are determined by the identified causal part.

Labor Times

Description	Operation No.	Time
2023-2025 F-Super Duty: Retrieve DTCs, And Replace AAT Sensor, Wiring Pigtail, Bezel And Exterior Mirror Housing	252545A	0.7 Hrs.
2023-2025 F-Super Duty: Additional Time To Align 360 Degree Camera If Equipped. (Can Be Claimed With Operation A)	252545B	0.5 Hrs.

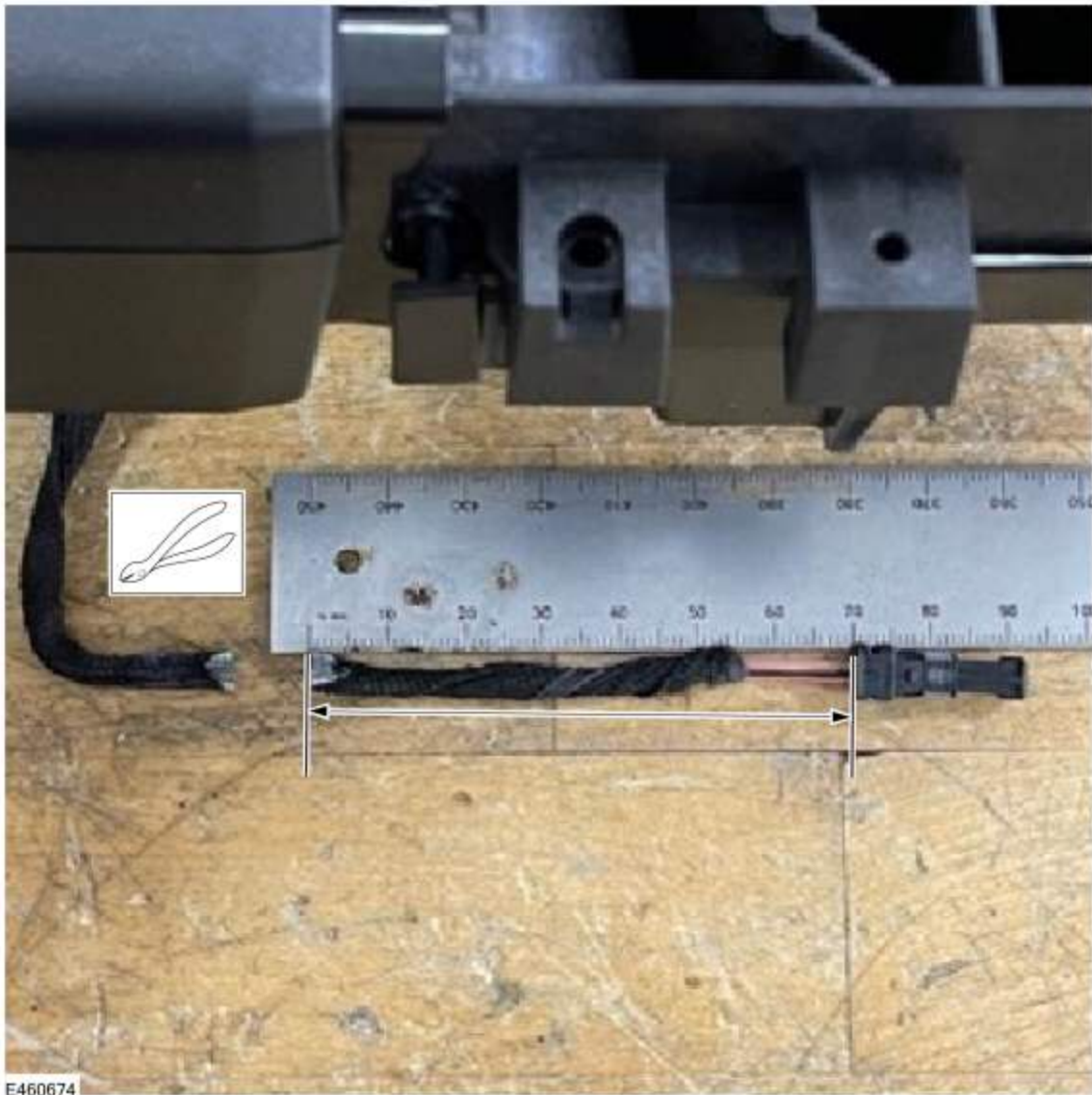
Repair/Claim Coding

Causal Part:	12A647
Condition Code:	42

Service Procedure

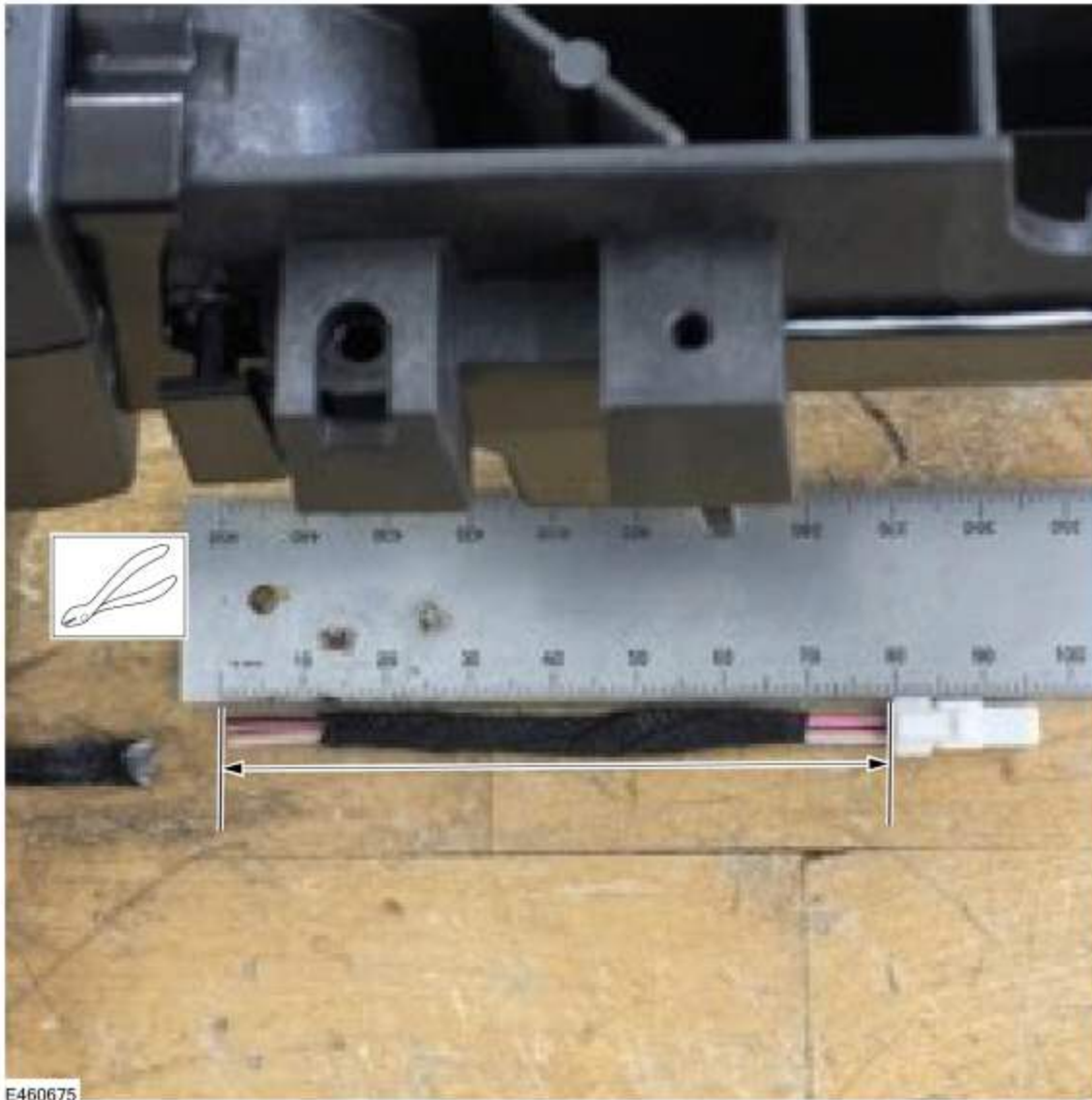
1. Perform Pinpoint Test BN in WSM, Section 413-01 outside of this article. Did Pinpoint Test BN lead to the replacement of the AAT Sensor?
 - (1). Yes - proceed to Step 2.
 - (2). No - this article does not apply. Refer to normal diagnostics in WSM, Section 413-01.
2. Remove the right exterior mirror. Refer to WSM, Section 501-09 Rear View Mirrors > Removal and Installation > Exterior Mirror.
3. Using the procedure steps in WSM, Section 501-09 Rear View Mirrors > Removal and Installation > Exterior Mirror, remove the right exterior mirror cover.
4. Cut the AAT sensor wiring harness 2 3/4 in. (70 mm) from connector C650. (Figure 1)

Figure 1



5. Cut the new AAT sensor wiring pigtail kit 3 5/32 in. (80 mm) back from the connector. (Figure 2)

Figure 2



6. Splice the new AAT sensor wiring pigtail kit to the harness using the solder method. Refer to Wiring Diagram, Cell 005, Pages 5-6.
7. Using the procedure steps in WSM, Section 501-09 Rear View Mirrors > Removal and Installation > Exterior Mirror, install the new exterior mirror cover, AAT sensor and bezel, and reinstall the exterior mirror.
8. Reset the outside air temperature sensor learned values. Refer to WSM, Section 412-00 > General Procedures.
9. If equipped, align the 360° cameras. Refer to WSM, Section 413-13 > Parking Aid - Vehicles With: 360 Degree Camera/Analog Rear View Camera > General Procedures.

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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.