



TECHNICAL SERVICE BULLETIN

3.0L / 6.7L - Illuminated MIL With Various Reductant System Related DTCs

21-2336

27 September
2021

This bulletin supersedes 19-2315. Reason for update: New Part/Procedure For Same Condition

Model:

Ford 2018-2020 F-150	Engine: 3.0L
2017-2019 F-Super Duty	Engine: 6.7L
2016-2019 F-650/F-750	Engine: 6.7L

Summary

This article supersedes TSB 19-2315 to update the vehicles affected, Issue, Action, Service Procedure and Part List.

Issue: Some 2018-2020 F-150 vehicles built on or before 1-Apr-2020 equipped with a 3.0L diesel engine, 2017-2019 F-Super Duty vehicles built on or before 30-Oct-2019 equipped with a 6.7L engine and 2016-2019 F-650/F-750 vehicles built on or before 30-Oct-2019 equipped with a 6.7L engine may exhibit an illuminated malfunction indicator lamp (MIL) with diagnostic trouble codes (DTCs) P21DD, P20BA, P20B9, P204C, P208A, P208B, P208C, P203B, P205B, P21CD and/or U02A2 in the powertrain control module (PCM). This may be due to water intrusion within connectors C3613 and/or C4851/C3610 on the reductant harness going to the reductant pump/heater assembly and the reductant level sensor/quality module. To correct the condition, follow the Service Procedure steps to replace the reductant tank harness, the reductant pump/heater assembly and/or the reductant tank.

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

- One of the following vehicles:
 - 2018-2020 F-150 built on or before 1-Apr-2020
 - 2017-2019 F-Super Duty built on or before 30-Oct-2019
 - 2016-2019 F-650/F-750 built on or before 30-Oct-2019
- 3.0L diesel or 6.7L diesel engine
- DTCs P21DD, P20BA, P20B9, P204C, P208A, P208B, P208C, P203B, P205B, P21CD and/or U02A2 stored in the PCM

NOTE: Part quantity refers to the number of that service part number required, which may be different than the number of individual pieces. Service part numbers contain 1 piece unless otherwise stated. "As Needed" indicates the part is required but the number may vary or is not a whole number; parts can be billed out as non-whole numbers, including less than 1. "If Needed" indicates the part is not mandatory.

Parts

Part Number		Description	Quantity
KC3Z-5J250-A	-	Inboard Frame Mounted Reductant Tank (F-Super Duty Pickup)	1
HC3Z-14407-A	-	Inboard Frame Mounted Reductant Tank Harness (F-Super Duty Pickup)	1
KC3Z-5J250-B	-	Outboard Frame Mounted Reductant Tank (F-Super Duty Chassis Cab)	1
HC3Z-14407-B	-	Outboard Frame Mounted Reductant Tank Harness (F-Super Duty Chassis Cab)	1
JL3Z-5J250-A	-	Reductant Tank (F-150)	1
JL3Z-	-	Reductant Tank Harness (F-150)	1

14407-A			
FC4Z-5J250-H	-	Reductant Tank (F-650/F-750)	1
FC4Z-14407-C	-	Reductant Tank Harness (F-650/F-750)	1
HC3Z-5J229-B	-	Reductant Tank Pump/Heater Assembly (All Vehicles)	1
W520804-S439	Package Contains 4 Pieces, 1 Piece Required	Reductant Tank Retaining J-nut (F-Super Duty)	1
W719567-S439	Package Contains 4 Pieces, 2 Pieces Required	Reductant Tank Retaining J-nut (F-Super Duty)	1
W503300-S450	Package Contains 4 Pieces, 4 Pieces Required	Reductant Tank Retaining Strap Bolts (F-650/F-750)	1
W520803-S439	Package Contains 4 Pieces, 4 Pieces Required	Reductant Tank Retaining Strap J-nuts (F-650/F-750)	1
Parts To Inspect And Replace Only If Necessary			
W716694-S300	-	Lower Reductant Tank Cover Access Door Retainer (F-Super Duty, F-150)	If Needed
PM-27-GAL	1 Gallon	Diesel Exhaust Fluid (Only If The Reductant Tank Is Replaced)	If Needed
PM-27-JUG	2.5 Gallon	Diesel Exhaust Fluid (Only If The Reductant Tank Is Replaced)	If Needed

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Emissions Warranty/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/Emissions Warranty/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
2017-2019 F-250 - F-550 6.7L DIT Pick Up: Retrieve DTCs, Inspect Connectors And Replace Harness (Do Not Use With Any Other Labor Operations)	212336A	0.6 Hrs.
2017-2019 F-250 - F-550 6.7L DIT Pick Up: Retrieve DTCs, Inspect Connectors And Replace Harness And The Reductant Pump /Heater Assembly Do Not Use With Any Other Labor Operations)	212336B	1.5 Hrs.
2017-2019 F-250 - F-550 6.7L DIT Pick Up: Retrieve DTCs, Inspect Connectors And Replace Harness And The Reductant Tank Assembly (Do Not Use With Any Other Labor Operations)	212336C	1.3 Hrs.
2017-2019 F-350 - F-550 Chassis Cab 6.7L DIT: Retrieve DTCs, Inspect Connectors And Replace Harness (Do Not Use With Any Other Labor Operations)	212336D	0.6 Hrs.
2017-2019 F-350 - F-550 Chassis Cab 6.7L DIT: Retrieve DTCs, Inspect Connectors And Replace Harness And The Reductant Pump /Heater Assembly Do Not Use With Any Other Labor Operations)	212336E	1.6 Hrs.
2017-2019 F-350-F-550 Chassis Cab 6.7L DIT: Retrieve DTCs, Inspect Connectors And Replace Harness And The Reductant Tank Assembly (Do Not Use With Any Other Labor Operations)	212336F	1.4 Hrs.
2016-2019 F-650/F-750 6.7L DIT: Retrieve DTCs, Inspect Connectors And Replace Harness (Do Not Use With Any Other Labor Operations)	212336G	0.5 Hrs.
2016-2019 F-650/F-750 6.7L DIT: Retrieve DTCs, Inspect Connectors And Replace Harness And The Reductant Pump /Heater Assembly Do Not Use With Any Other Labor Operations)	212336H	1.6 Hrs.
2016-2019 F-650/F-750 6.7L DIT: Retrieve DTCs, Inspect Connectors And Replace Harness And The Reductant Tank Assembly (Do Not Use With Any Other Labor Operations)	212336J	1.4 Hrs.
2018-2020 F-150 3.0L Diesel: Retrieve DTCs, Inspect Connectors And Replace Harness (Do	212336K	0.6

Not Use With Any Other Labor Operations)		Hrs.
2018-2020 F-150 3.0L Diesel: Retrieve DTCs, Inspect Connectors And Replace Harness And The Reductant Pump /Heater Assembly Do Not Use With Any Other Labor Operations)	212336L	1.4 Hrs.
2018-2020 F-150 3.0L Diesel: Retrieve DTCs, Inspect Connectors And Replace Harness And The Reductant Tank Assembly (Do Not Use With Any Other Labor Operations)	212336M	1.4 Hrs.

Repair/Claim Coding

Causal Part:	14407
Condition Code:	49

Service Procedure

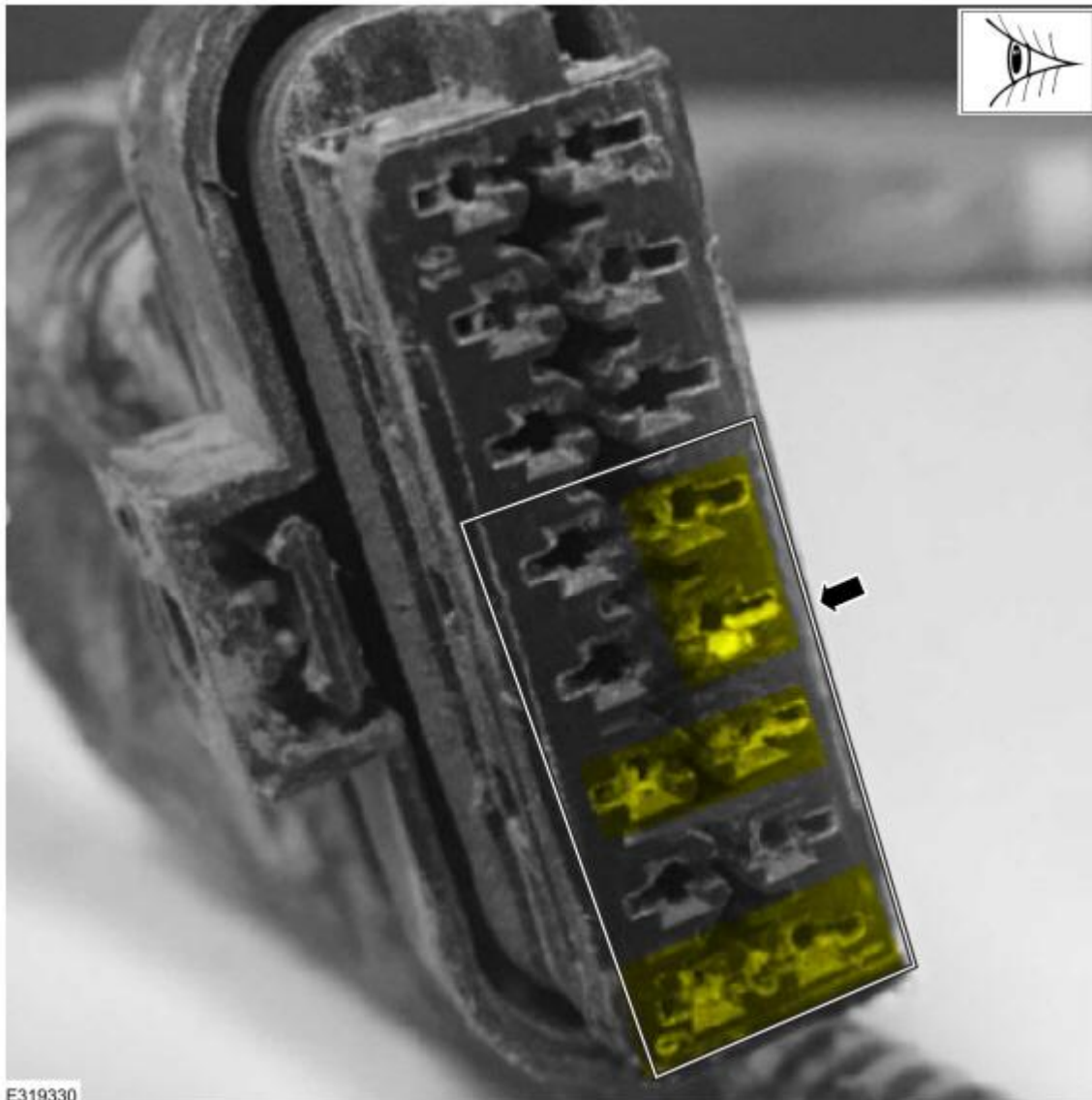
NOTE: For DTCs P21DD, P20BA, P20B9, P204C, P208A, P208B, P208C this can indicate a concern with connector C3613. For DTCs P21CD, P203B, P205B and/or U02A2 this can indicate a concern with connector C4851 (F-Super Duty) or connector C3610 (F-150, F-650/F-750).

1. Disconnect and inspect C3613 (16 pin connector) at the reductant pump/heater assembly and C4851/C3610 (4 pin connector) at the reductant level sensor/quality module for signs of corrosion. Refer to the Workshop Manual (WSM), Section 303-08 and the Wiring Diagram.

(1). Inspect both the harness side and component side of both connectors for signs of water intrusion. Focus on all pins at connector C3613 and pins 1 and 4 at connector C4851/C3610. Inspect for signs of:

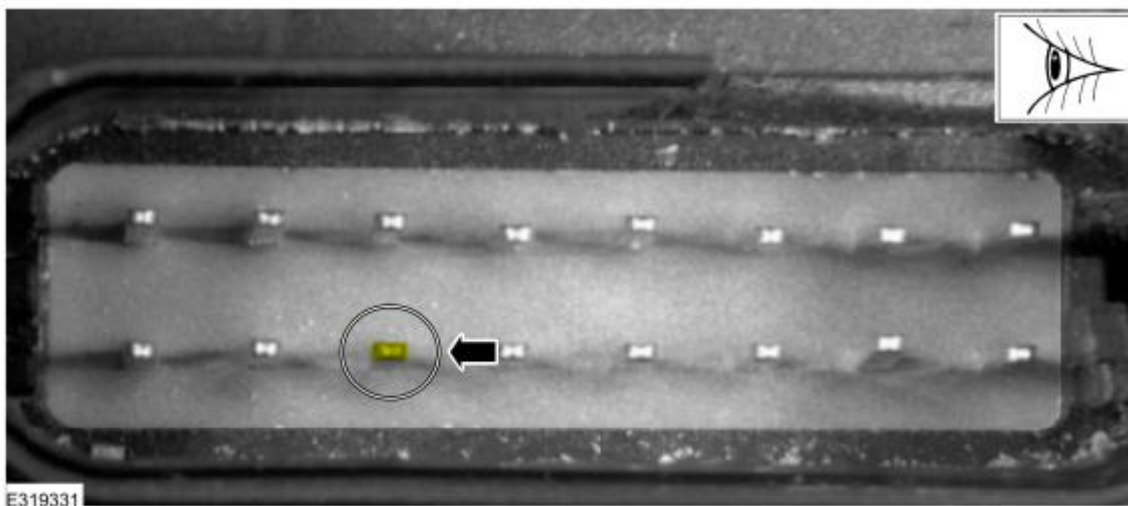
- Visible green corrosion on multiple terminals on the harness side of connector C3613. (Figure 1)

Figure 1



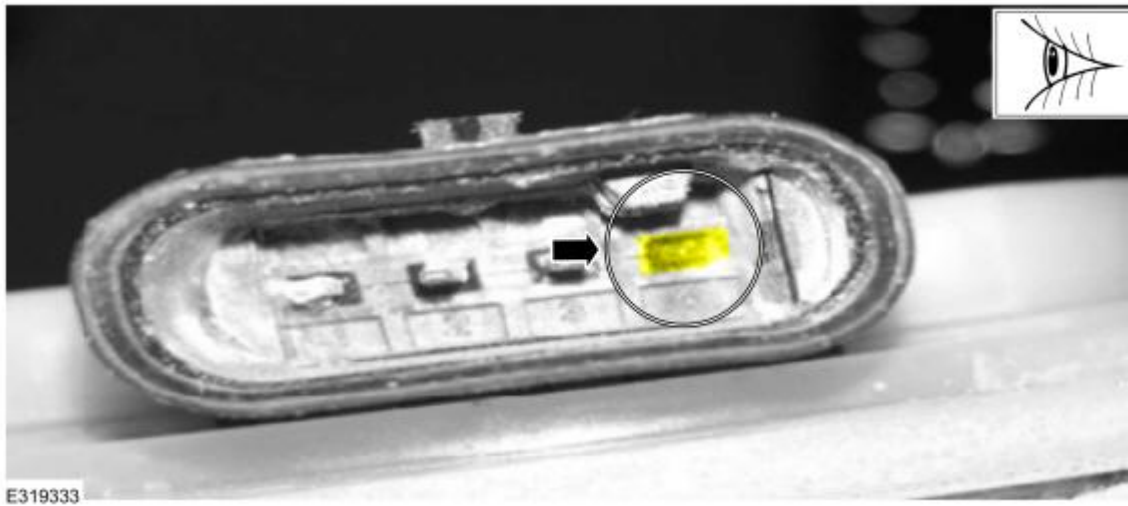
- Corroded pins on the reductant pump/heater assembly at connector C3613. (Figure 2)

Figure 2



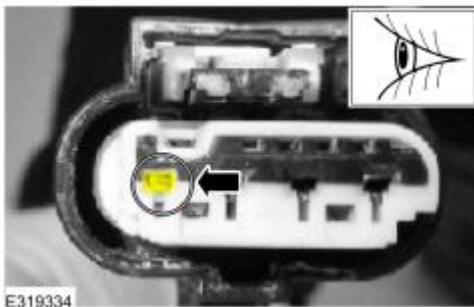
- Visible green corrosion on the reductant level sensor/quality module side of connector C4851/C3610. (Figure 3)

Figure 3



- Visible green corrosion on the harness side of connector C4851/C3610. (Figure 4)

Figure 4



2. Follow the appropriate procedure:

- (1). If no signs of corrosion or water intrusion are present on either connector or component, replace the redemptant tank harness only.
- (2). If signs of corrosion or discoloration are present on the redemptant tank harness connector C3613 or redemptant pump/heater assembly perform the following:
 - If there is corrosion or discoloration on the redemptant tank harness connector only and not on the redemptant pump/heater assembly, only replace the redemptant tank harness.
 - If there are signs of corrosion or discoloration on the redemptant pump/heater assembly, replace both the redemptant tank harness and the redemptant pump/heater assembly. Refer to WSM, Section 303-08.
- (3). If signs of corrosion or discoloration are present on the redemptant tank harness connector C4851/C3610 or the redemptant level sensor/quality module perform the following:
 - If there is corrosion or discoloration on the redemptant tank harness connector only and not the redemptant level sensor/quality module, only replace the redemptant tank harness.
 - If there are signs of corrosion or discoloration on the redemptant level sensor/quality module, replace both the redemptant tank harness and the redemptant tank (redemptant level sensor/quality module built in).

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