

**TECHNICAL SERVICE BULLETIN****23-2115****Lack Of Heat Or Cooling From The Cabin Vents, Temperature Door Or Door Actuator Binding/Inoperative - DTC B1081:07**

14 April 2023

This bulletin supersedes 21-2199.

Model:

Ford
2015-2020 F-150
2017-2022 F-Super Duty

Summary

This article supersedes TSB 21-2199 to update the vehicle model years affected, Service Procedure, and the Part List.

Issue: Some 2015-2020 F-150 and 2017-2022 F-Super Duty vehicles may exhibit a lack of heat or cooling from the cabin vents when the climate control settings are adjusted between hot and cold. This may be due to a stuck/binding temperature door within the climate control housing or binding/inoperative temperature door actuator. Diagnostic trouble code (DTC) B1081:07 may be present in the front controls interface module (FCIM) or heating ventilation and air conditioning (HVAC) module. To correct the condition, follow the Service Procedure to remove the climate control housing and replace the temperature door cam(s), lubricate the temperature blend door bearing surface, and apply flock tape to the actuator to seal out debris.

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

- One of the following vehicles:
 - 2015-2020 F-150 vehicles equipped with dual automatic climate or manual climate control
 - 2017-2022 F-Super Duty vehicles equipped with dual automatic climate or manual climate control
- Lack of heat or cooling from the cabin vents when the climate control settings are adjusted between hot and cold
- Only DTC B1081:07 stored in the FCIM or HVAC module

Parts

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
FL3Z-19788-A	1	Lower Cam	1	1
FL3Z-19788-B	1	Upper Cam (Dual Auto Climate Control Only)	1	1
W714409-S439	1	Steering Column Bolt	1	1
DR3Z-19B596-A	1	A/C O-ring Kit (2017-2019 F-Super Duty)	1	1
DL3Z-19B596-B	1	A/C O-ring Kit (2020-2021 Super Duty 7.3L And 6.2L)	1	1
HL3Z-19B596-A	1	A/C O-ring Kit (2018-2020 F-150, 2020-2022 F-Super Duty 6.7L)	1	1
6E5Z-19E889-D	1	A/C O-ring Upper (2015-2017 F-150)	1	1
6E5Z-19E889-E	1	A/C O-ring Lower (2015-2017 F-150)	1	1
W717731-S451	2	Seat Bolts (2017-2022 Super Duty, F-150 Built On 20-Oct-2014 And Through 20-May-2015)	4	8
W718633-S451	2	Seat Bolts (F-150 Built On 20-May-2015 And Through 11-Oct-2020)	4	8
1531458	2	Right Upper And Lower Covers - Refer To The Parts Catalog For The VIN Specific Application	1	2

1531459	2	Left Upper And Lower Covers - Refer To The Parts Catalog For The VIN Specific Application	1	2
164-R4903	As Needed	Flock Tape (Rotunda Part Number)		
XG-17	As Needed	Motorcraft® HVAC Duct Component Grease		
YN-12-D	As Needed	Motorcraft® PAG Refrigerant Compressor Oil		
YN-35	As Needed	Motorcraft® R-1234yf Refrigerant PAG Oil		
YN-19	As Needed	Motorcraft® R-134a Refrigerant (All Markets Except Canada and Mexico)		
CYN-19-R	As Needed	R-134a Refrigerant (Canada Only)		
MYN-19	As Needed	R-134a Refrigerant (Mexico Only)		
YN-33-A	As Needed	R-1234yf Refrigerant (All Markets Except Canada)		
HS7Z-19B519-BA	As Needed	R-1234yf Refrigerant (Canada Only)		

Parts

One Of The Following

Service Part Number	Quantity	Description
VC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (All Markets Except Canada)
CVC-13-G	As Needed	Motorcraft® Yellow Concentrated Antifreeze/Coolant (Canada Only)
VC-13DL-G	As Needed	Motorcraft® Yellow Prediluted Antifreeze/Coolant (All Markets Except Canada)
CVC-13DL-G	As Needed	Motorcraft® Yellow Prediluted Antifreeze/Coolant (Canada Only)

Quantity refers to the amount of the service part number required to repair the vehicle.

Unit of Issue refers to the number of individual pieces included in a service part number package.

Piece Quantity refers to the total number of individual pieces required to repair the vehicle.

As Needed indicates the amount of the part may vary and/or is not a whole number. Parts can be billed out as non-whole numbers, including less than 1.

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
2015-2020 F-150, 2017-2021 F-Super Duty: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Pass) Install Flock Tape (Do Not Use With Any Other Labor Operation)	232115A	0.5 Hrs.
2017-2022 F-Super Duty 40/20/40 Seat: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Fail) Lubricate	232115B	5.7 Hrs.

The Temperature Door Bearing Surfaces Includes Time To Remove And Install Climate Control Housing And Install Flock Tape (Do Not Use With Any Other Labor Operation)		
2017-2022 F-Super Duty With Console: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Fail) Lubricate The Temperature Door Bearing Surfaces Includes Time To Remove And Install Climate Control Housing And Install Flock Tape (Do Not Use With Any Other Labor Operation)	232115C	5.8 Hrs.
2017-2022 F-Super Duty 6.7L DI T 40/20/40 Seat: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Fail) Lubricate The Temperature Door Bearing Surfaces Includes Time To Remove And Install Climate Control Housing And Install Flock Tape (Do Not Use With Any Other Labor Operation)	232115D	5.3 Hrs.
2017-2022 F-Super Duty 6.7L DI T With Console: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Fail) Lubricate The Temperature Door Bearing Surfaces Includes Time To Remove And Install Climate Control Housing (Do Not Use With Any Other Labor Operation)	232115E	5.5 Hrs.
2015-2020 F-150 40/40 Seat: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Fail) Lubricate The Temperature Door Bearing Surfaces Includes Time To Remove And Install Climate Control Housing And Install Flock Tape (Do Not Use With Any Other Labor Operation)	232115F	5.0 Hrs.
2015-2020 F-150 Console: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Fail) Lubricate The Temperature Door Bearing Surfaces Includes Time To Remove And Install Climate Control Housing And Install Flock Tape (Do Not Use With Any Other Labor Operation)	232115G	5.5 Hrs.
2015-2020 F-150 40/20/40: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Fail) Lubricate The Temperature Door Bearing Surfaces Includes Time To Remove And Install Climate Control Housing And Install Flock Tape (Do Not Use With Any Other Labor Operation)	232115H	5.2 Hrs.
2015-2020 F-150 Floor Shift: Retrieve DTCs, Clean Actuator Cam And Test Blend Door Movement Replace Cam If Required Reinstall Actuator Retest Function (Fail) Lubricate The Temperature Door Bearing Surfaces Includes Time To Remove And Install Climate Control Housing And Install Flock Tape (Do Not Use With Any Other Labor Operation)	232115J	5.7 Hrs.

Repair/Claim Coding

Causal Part:	19E616
Condition Code:	01

Service Procedure

- Using the appropriate Ford diagnostic scan tool, retrieve parameter identifications (PIDs) LEFT_BLEND# and RIGHT_BLEND# to monitor temperature door operation. The LEFT_BLEND# PID is for the driver side and the RIGHT_BLEND# is for the passenger side. Using the temperature knobs in the vehicle, change the temperature from LOW to HIGH and back to LOW and monitor the percentage for both PIDs. Do the PID percentages change from 0-1% up to 99-100%?

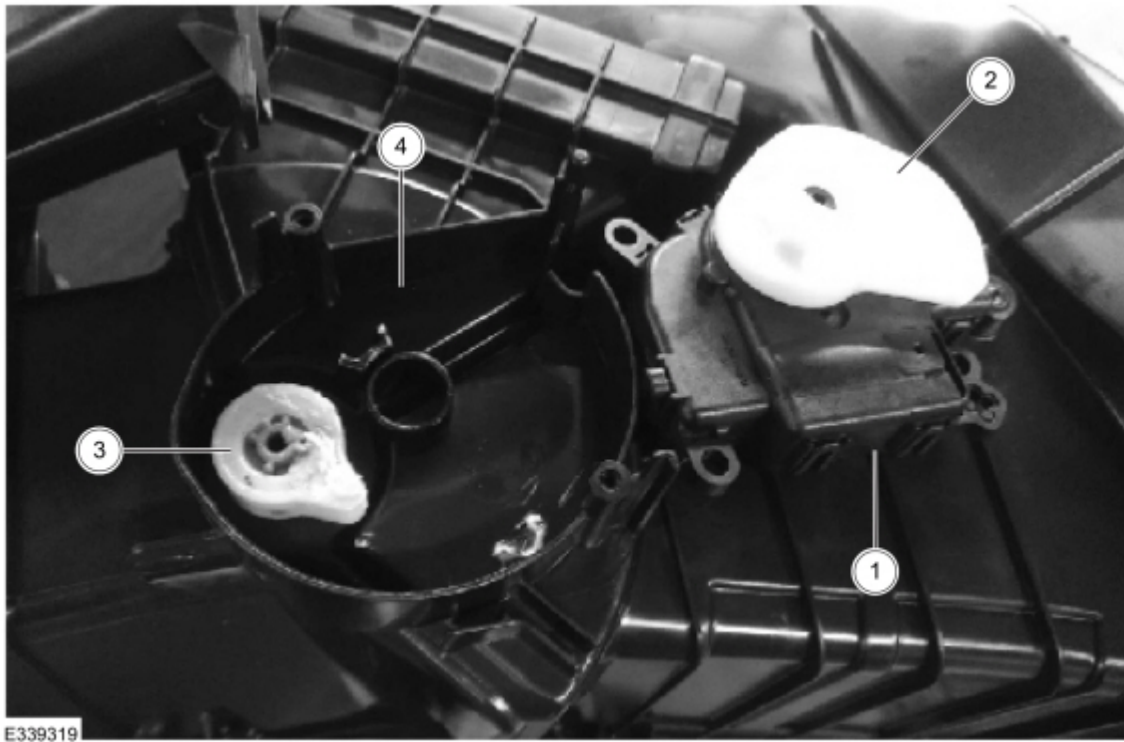
NOTE: For vehicles with manual climate control, both PIDs may not be present.

- (1). Yes - this article does not apply, refer to Workshop Manual (WSM), Section 412-00.
- (2). No - proceed to Step 2.

- Remove the driver side temperature blend door actuator.
- Gently wipe the driver side temperature blend door actuator, cam, and cam follower attached to the climate control housing blend door to remove any debris and existing lubricant.

NOTE: Do not remove the cam follower from the climate control housing blend door. It is critical to be gentle when cleaning the cam follower as damaging the temperature blend door shaft will require replacement of the climate control housing. (Figure 1)

Figure 1



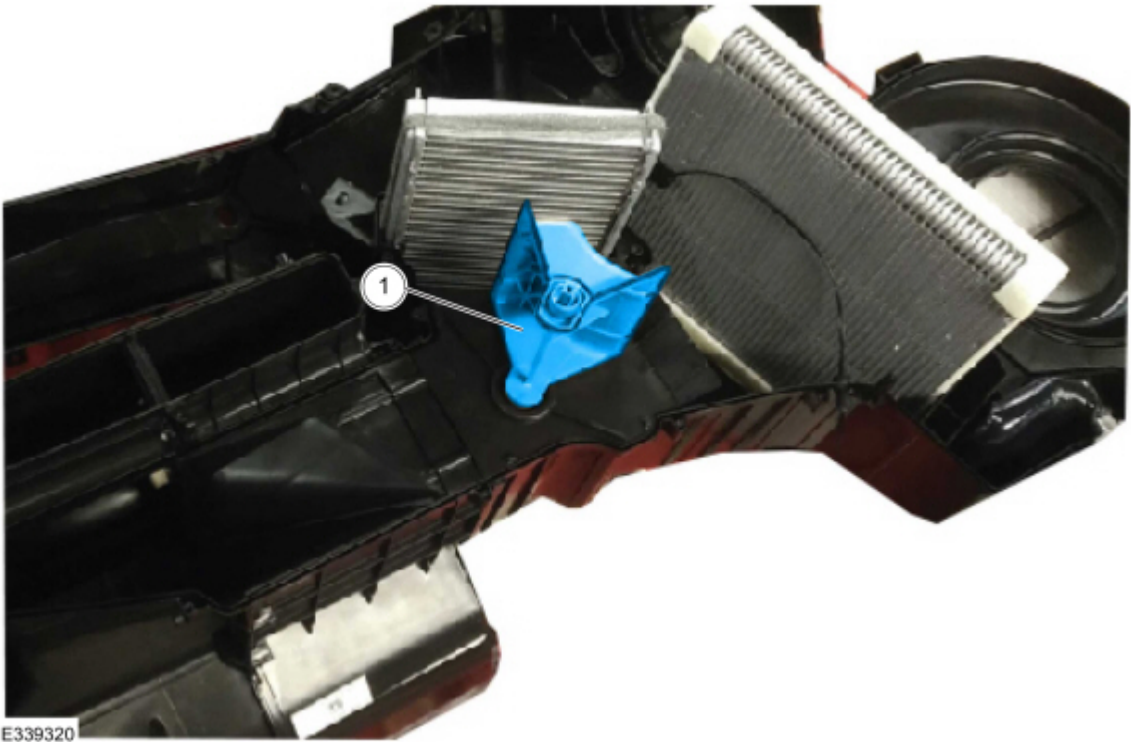
Item	Description
1	Temperature door actuator
2	Cam
3	Cam follower
4	Climate control housing

4. Rotate the climate control housing blend door arm. The arm should travel with light, but smooth resistance from full open to full close. Does the climate control housing blend door travel freely without binding?
- (1). Yes - proceed to Step 5.
(2). No - proceed to Step 7.
5. Discard and replace the cam(s). Install the original driver side temperature door actuator. Refer to WSM, Section 412-00. Lubricate the new cam(s) and cam follower pin using Motorcraft® HVAC Duct Component Grease.
6. Test the temperature blend door operation. Does the system operate properly?
- (1). Yes - proceed to Step 14.
(2). No - proceed to Step 7.
7. Remove the climate control housing. Refer to WSM, Section 412-00.
8. Follow the evaporator removal procedure in WSM, Section 412-00 to separate the climate control housing for blend door lubrication. Only perform Steps 1-7 of the removal procedure. It is not necessary to remove the evaporator core.

NOTE: Remove the top and bottom (if equipped) temperature door actuators from the climate control housing to allow the temperature blend doors to be removed for lubrication.

9. Remove the temperature blend door. (Figures 2-4)

Figure 2



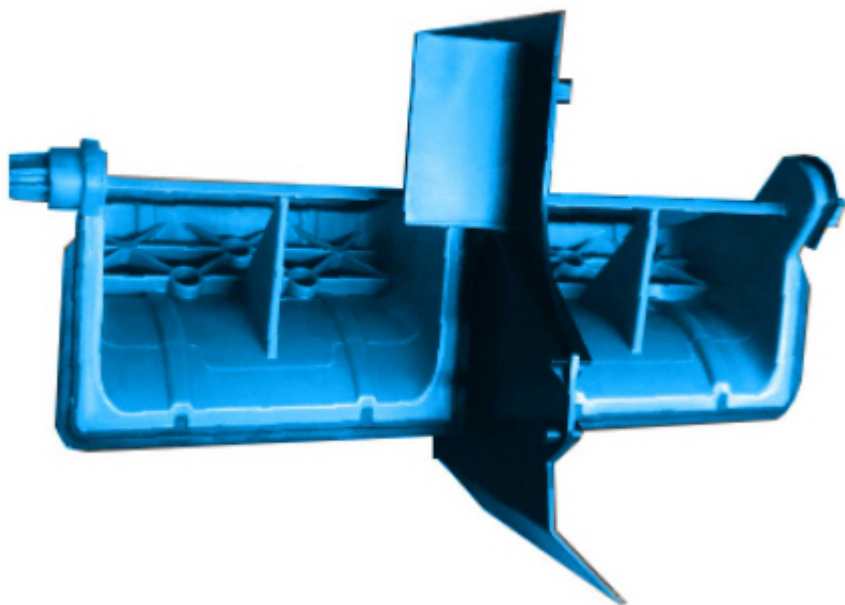
Item	Description
1	Temperature blend door assembly

Figure 3



Item	Description
1	Temperature blend door assembly removed from climate control housing

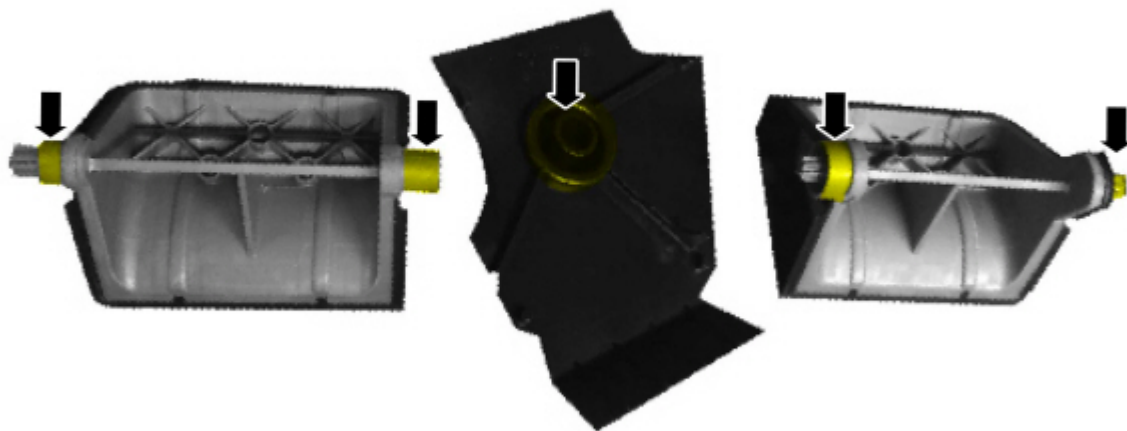
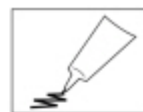
Figure 4 - Temperature blend door assembly



E339322

10. Lubricate the climate control housing and temperature blend door bearing surfaces with Motorcraft® HVAC Duct Component Grease. (Figures 5-7)

Figure 5 - Arrows indicate where to lubricate the temperature blend door bearing



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Figure 6 - Arrow indicates where to lubricate the climate control housing surface for the temperature blend door

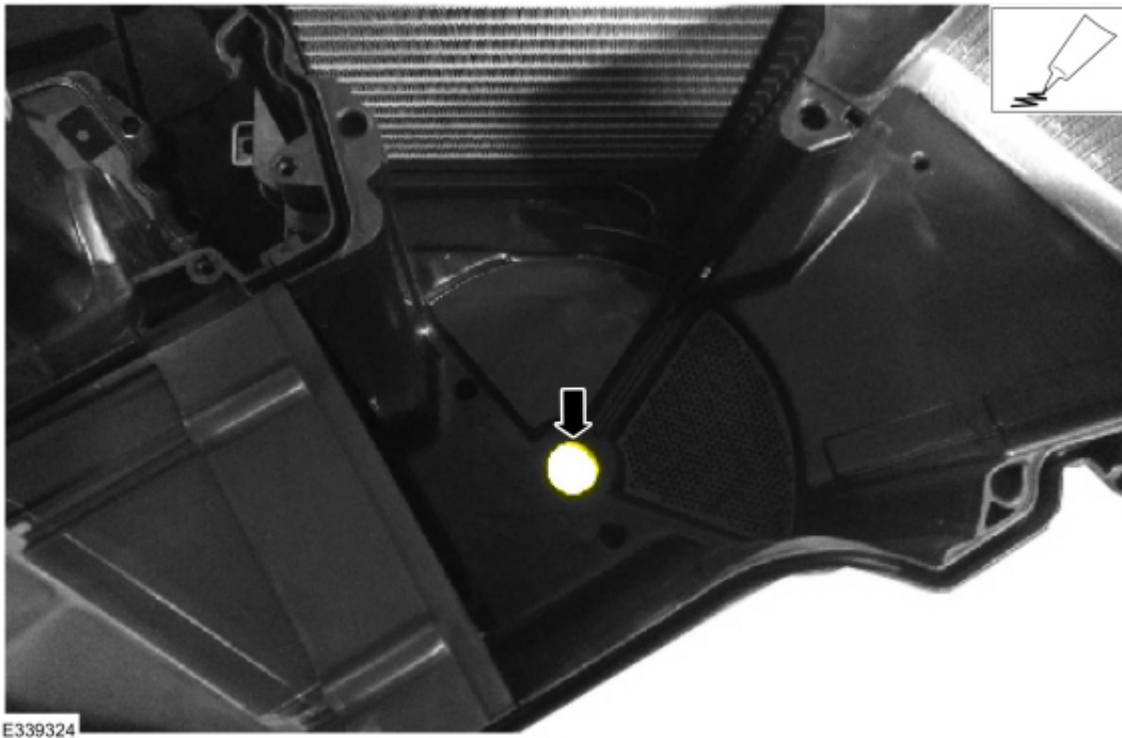
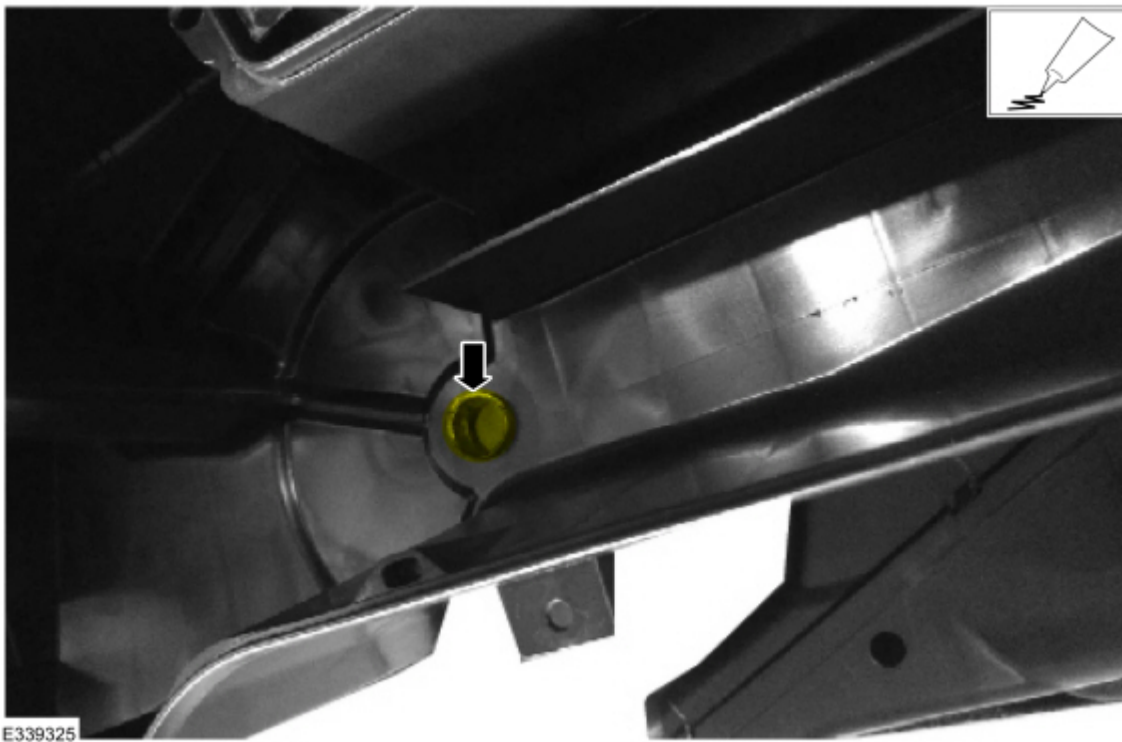
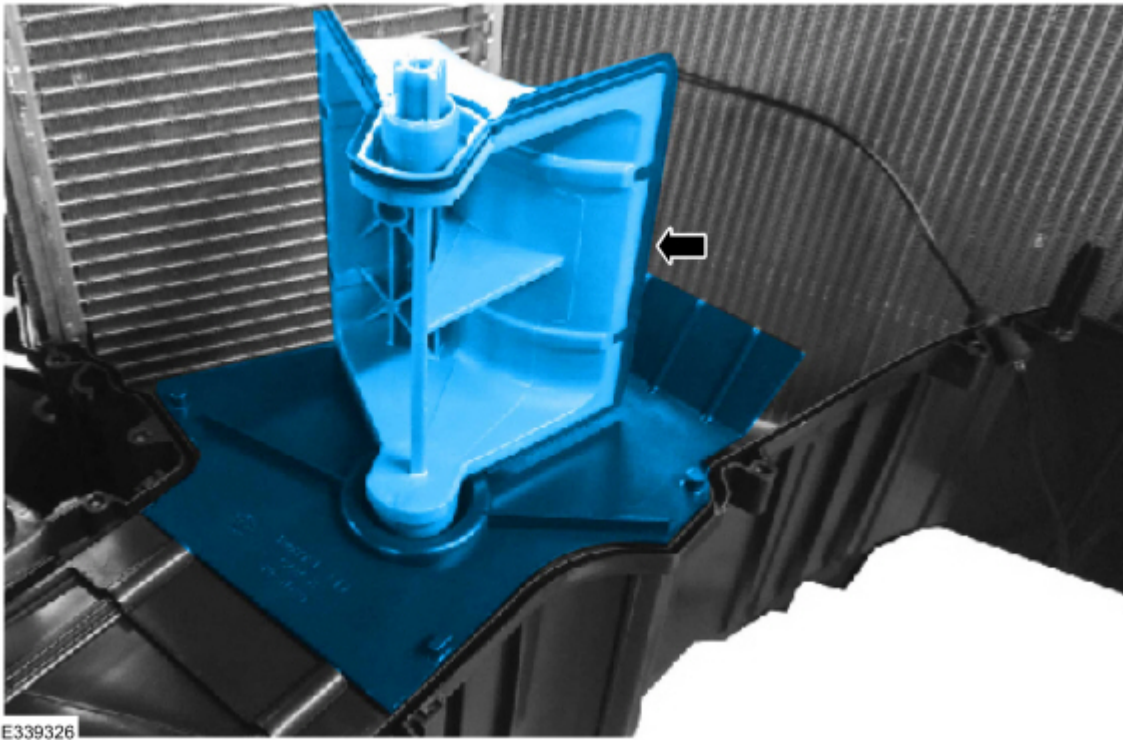


Figure 7 - Arrow indicates where to lubricate the climate control housing surface for the temperature blend door



11. Reassemble the temperature blend door halves and install back into the climate control housing. Align the temperature blend door support half using the dowel pins. (Figure 8)

Figure 8 - Highlighted area shows temperature blend door assembly properly installed back into the climate control housing



12. Reassemble the lower half of the climate control housing. Refer to WSM, Section 412-00, Installation procedure.

NOTE: F-150 vehicles have a seal near the thermal expansion valve (TXV) that may be damaged/crushed if the climate control housing is assembled improperly.

13. Reinstall the climate control housing. Refer to WSM, Section 412-00.

14. Place 2 strips of Rotunda flock tape around the outside of the driver side temperature door actuator to prevent debris intrusion. (Figure 9)

Figure 9



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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.