



## TECHNICAL SERVICE BULLETIN

### HF35 Transmission - Thumping/Rubbing Or Grinding Noise - Built On Or Before 15-Aug-2015

**20-2219**  
29 June 2020

This bulletin supersedes 19-2391. Reason for update: New Part/Procedure For Same Condition

#### Model:

<b>Ford</b> 2013-2016 Fusion	Transmission/Transaxle: (HF35)
2013-2016 C-MAX	Transmission/Transaxle: (HF35)
<b>Lincoln</b> 2013-2016 MKZ	Transmission/Transaxle: (HF35)

#### Summary

This article supersedes TSB 19-2391 to update the Parts List.

**Issue:** Some 2013-2016 Fusion/MKZ/C-MAX vehicles equipped with an HF35 transmission and built on or before 15-Aug-2015 may exhibit a thumping/rubbing or grinding noise coming from the transmission. The noise may be present in all gear ranges including neutral when the vehicle is moving but will not be present when the vehicle is stationary or in park. This may be due to the differential side bearings and/or the transfer shaft and housing. To correct the condition, follow the Service Procedure to install either a transfer shaft kit or a remanufactured transmission assembly.

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

- 2013-2016-Fusion/MKZ/C-Max
- HF35 transmission
- Built on or before 15-Aug-2015
- Thumping/rubbing or grinding noise coming from the transmission

**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.

#### Parts

Part Number		Description	Quantity
JM5Z-7000-ARM	-	Remanufactured Transmission Assembly, 2.57 Gas/Electric (2013-2014 C-MAX/Fusion FHEV)	1
HG9Z-7000-BRM / FG9Z-7000-Q	-	Remanufactured/Original Equipment Transmission Assembly, 2.57 Gas/Electric (2015-2016 C-MAX/Fusion FHEV)	1
JM5Z-7000-BRM	-	Remanufactured Transmission Assembly, 2.91 Plug-In (2013-2014 C-MAX/Fusion PHEV)	1
HM5Z-7000-ARM / FM5Z-7000-D	-	Remanufactured/Original Equipment Transmission Assembly, 2.91 Plug-In (2015-2016 C-MAX/Fusion PHEV)	1

JG9Z-7000-ARM	-	Remanufactured Transmission Assembly, 2.57 (2013-2014 MKZ)	1
HG9Z-7000-CRM	-	Remanufactured Transmission Assembly, 2.57 (2015-2016 MKZ)	1
JG9Z-7000-BRM	-	Remanufactured Transmission Assembly, 2.91 (2013-2014 MKZ)	1
HG9Z-7000-DRM	-	Remanufactured Transmission Assembly, 2.91 (2015-2016 MKZ)	1
W520102-S442	Package Contains 4 Pieces, 2 Pieces Required	Axle Bearing Strap Nut, Right Side (All Vehicles)	1
YS4Z-3N324-AA	-	Center Shaft Clamp (C-MAX)	1
AE5Z-4B422-A	-	Axle Inner Circlip, Left Side (C-MAX)	1
CV6Z-9450-B	-	Exhaust Flange Gasket (C-MAX)	1
CV6Z-9448-A	-	Exhaust Manifold Gasket (C-MAX)	1
W520103-S442	Package Contains 4 Pieces, 2 Pieces Required	Exhaust To Pipe Nut (C-MAX)	1
CCPZ-3B477-G	Package Contains 1 Piece, 2 Pieces Required	Axle Nut (C-MAX)	2
W520415-S442	Package Contains 4 Pieces, 2 Pieces Required	Lower Ball Joint Nut (C-MAX)	1
W704474-S437	Package Contains 4 Pieces, 7 Pieces Required	Exhaust Manifold Stud (C-MAX)	2
W713095-S437	Package Contains 4 Pieces, 2 Pieces Required	Lower Ball Joint Bolt (C-MAX)	1
W715491-S442	Package Contains 4 Pieces, 2 Pieces Required	Lower Ball Joint Bolt (C-MAX)	1
BB5Z-4B422-B	-	Axle Inner Circlip, Left Side (Fusion/MKZ)	1
W500545-S439	Package Contains 4 Pieces, 1 Piece Required	Lower Ball Joint Bolt (Fusion/MKZ)	1
W520214-S440	Package Contains 2 Pieces, 2 Pieces Required	Lower Ball Joint Nut (Fusion/MKZ)	1
W520215-S440	Package Contains 4 Pieces, 2 Pieces Required	Tie Rod Nut (Fusion/MKZ)	1
W712503-S440	Package Contains 1 Piece, 2 Pieces Required	Lower Stabilizer Nut (Fusion/MKZ)	2
W714878-S439		Steering Shaft Bolt (Fusion/MKZ)	1

	Package Contains 4 Pieces, 1 Piece Required		
W716457-S439	Package Contains 4 Pieces, 2 Pieces Required	Large Frame To Body Rear Bolt (Fusion/MKZ)	1
4S4Z-3N324-AA	-	Center Shaft Clamp (Fusion/MKZ)	1
1S7G-8255-BD	-	Coolant Outlet Gasket (Fusion/MKZ)	1
FG9Z-7H348-J	-	Transfer Shaft Kit, Front Wheel Drive 2.57 Axle Ratio (C-MAX/Fusion FHEV)	1
FG9Z-7H348-H	-	Transfer Shaft Kit, Front Wheel Drive 2.91 Axle Ratio (C-MAX/Fusion PHEV/MKZ)	1
W714358-S442	Package Contains 4 Pieces	Under Body Shield Nut (Fusion/MKZ)	As Needed
ZC-31-B	-	Motorcraft® Metal Surface Prep Wipes	As Needed
ZC-30-A	-	Motorcraft® Silicone Gasket Remover	As Needed
TA-26	-	Motorcraft® Threadlock 262	As Needed
TA-29	-	Motorcraft® Ultra Silicone Sealant	As Needed
PM-4-A	-	Motorcraft® Metal Brake Parts Cleaner (Compliant With Low Volatile Organic Compound Requirements As Required In Some USA States)	As Needed
PM-4-B	-	Motorcraft® Metal Brake Parts Cleaner (Not Compliant With Volatile Organic Compound Requirements)	As Needed
XT-10-QLVC	-	Motorcraft® Mercon LV Automatic Transmission Fluid (All Markets Except Canada)	As Needed
CXT-10-LV6	-	Motorcraft® Mercon LV Automatic Transmission Fluid (Canada Only)	As Needed
VC-3DIL-B	-	Motorcraft® Orange Prediluted Antifreeze/Coolant (All Markets Except Canada)	As Needed
CVC-3DIL-B	-	Motorcraft® Orange Prediluted Antifreeze/Coolant (Canada Only)	As Needed

**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. For repairs covered by the NVLW, completion of the procedure outlined in this TSB does not require obtaining Prior Approval or completion of a Cost Cap.

#### Labor Times

Description	Operation No.	Time
2013-2016 C-MAX Hybrid: Diagnose, Inspect And Repair Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations)	DR202219A	12.2 Hrs.

2013-2016 C-MAX Hybrid: Diagnose, Inspect And Replace Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations)	DR202219B	10.6 Hrs.
2013-2016 C-MAX Energi: Diagnose, Inspect And Repair Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations)	DR202219C	12.5 Hrs.
2013-2016 C-MAX Energi: Diagnose, Inspect And Replace Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations)	DR202219D	10.9 Hrs.
2013-2016 Fusion Hybrid: Diagnose, Inspect And Repair Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations Except L Or M)	DR202219E	10.8 Hrs.
2013-2016 Fusion Hybrid: Diagnose, Inspect And Replace Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations Except L Or M)	DR202219F	9.2 Hrs.
2013-2016 MKZ Hybrid: Diagnose, Inspect And Repair Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations Except L Or M)	DR202219G	11.1 Hrs.
2013-2016 MKZ Hybrid: Diagnose, Inspect And Replace Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations Except L Or M)	DR202219H	9.5 Hrs.
2013-2016 Fusion Energi: Diagnose, Inspect And Repair Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations Except L Or M)	DR202219J	11.0 Hrs.
2013-2016 Fusion Energi: Diagnose, Inspect And Replace Transmission Includes Time For Road Tests And Flushing (Do Not Use With Any Other Labor Operations Except L Or M)	DR202219K	9.3 Hrs.
2013-2016 Fusion/MKZ Hybrid/Energi Without Lane Departure Warning System: Check And Set Front End Toe (Do Not Use With Any Other Labor Operations Except E, F, G, H, J Or K)	DR202219L	0.6 Hrs.
2013-2016 Fusion/MKZ Hybrid/Energi With Lane Departure Warning System: Check And Set Front End Toe (Do Not Use With Any Other Labor Operations Except E, F, G, H, J Or K)	DR202219M	0.8 Hrs.

### Repair/Claim Coding

Causal Part:	7H348
Condition Code:	30

### Service Procedure

**For repairs covered by the New Vehicle Limited Warranty, completion of the procedure outlined in this TSB does not require obtaining Prior Approval or completion of a Cost Cap.**

1. With the vehicle at operating temperature, road test the vehicle and lightly apply the brakes from 48-16 km/h (30-10 mph).
  - (1). The engine will shut-off on deceleration when the vehicle is at operating temperature.
2. Is a thumping/rubbing or grinding noise present?
  - (1). Yes - proceed to Step 3.
  - (2). No - this article does not apply. Refer to Workshop Manual (WSM), Section 307-01 for normal diagnostics.

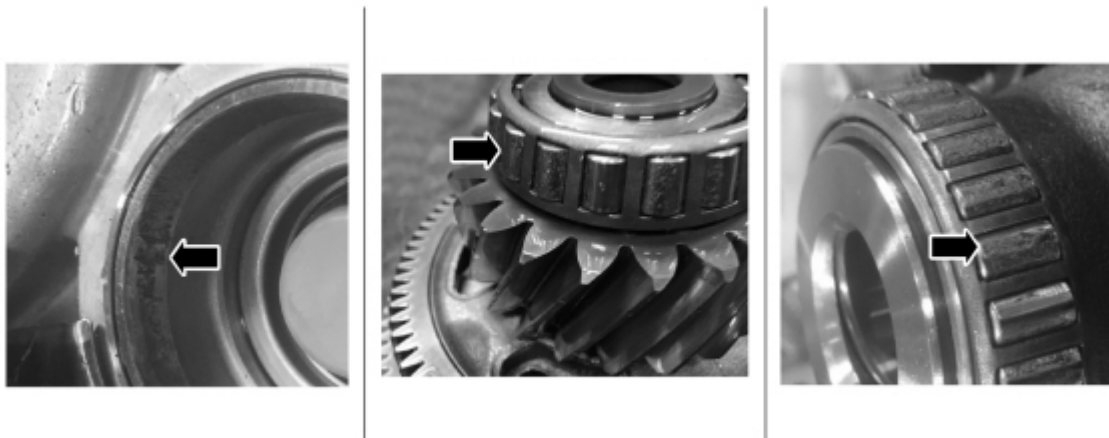
3. Remove the transmission assembly. Refer to WSM, Section 307-01.
4. Remove the damper housing and transfer shaft assembly. Refer to WSM, Section 307-01.
5. Inspect the differential bearings. Is there any noticeable roller bearing damage? (Figures 1-2)
  - (1). Yes - proceed to Step 9.
  - (2). No - proceed to Step 6.

Figure 1



E293906

Figure 2



E293907

6. Inspect the damper housing for transfer shaft to housing contact. Is damage present on the damper housing from the transfer shaft?
  - (1). Yes - proceed to Step 9.
  - (2). No - proceed to Step 7.
7. Install the transfer shaft kit. Follow the kit repair and assembly procedure.
8. Reinstall the transmission assembly. Refer to WSM, Section 307-01. Proceed to Step 10.
9. Install a remanufactured transmission assembly. Refer to WSM, Section 307-01.
10. Flush the transmission fluid cooling system. Refer to WSM, Section 307-01.

**NOTE: Remanufactured HF35 transmissions will only have an 11-digit transmission identification code on the transmission identification tag and will not include a 13-digit transmission strategy code. When performing the Transmission Characterization/Solenoid IDN procedure with the scan tool, the scan tool will ask "Is the transmission that you just installed a remanufactured HF35?" When YES is selected, only the 11-digit transmission identification code will be needed.**

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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.