



NUMBER: 21-012-13

GROUP: Transmission and Transfer Case

DATE: November 09, 2013

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SUBJECT:

Transmission Rattle Noise in Neutral

OVERVIEW:

This bulletin involves realigning the transmission to the engine.

MODELS:

2014

PF

Dart

NOTE: This bulletin applies to vehicles built on or before September 12, 2013 (MDH 0912XX) equipped with manual transmission (Sales Codes DE1) and the 2.0L engine (Sales Code ECK) or the 2.4L engine (Sales Code ED6).

SYMPTOM/CONDITION:

Customers may indicate that they hear a rattle noise coming from the transmission area while the transmission is in neutral.

DIAGNOSIS:

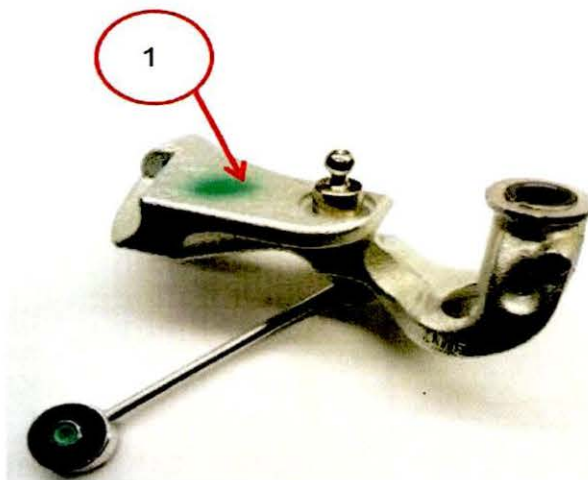
1. Engage the parking brake.
2. While holding the clutch pedal down, place the gearshift lever into the neutral position.
3. Hold the clutch pedal down and start the engine.
4. Release the clutch pedal.
5. Warm the engine in neutral until the idle RPM lowers to 700 RPM.
6. Depress and release the clutch pedal rapidly 3 - 4 times.
7. Wait one to two seconds after releasing the clutch pedal and listen for unusual loud rattles, clicking or knocking sound
8. With clutch pedal released (foot off pedal) increase engine speed to 3000 rpm then release accelerator allowing rpm to return to idle. Listening for unusual loud rattle, clicking and/or knocking sounds.
9. Were there any unusual loud rattle, clicking, and/or knocking noises detected?
 - a. YES>>>Perform the Repair Procedure.
 - b. NO>>>Further diagnostics are required. Refer to DealerCONNECT>Service>Service Information>21 - Transmission and Transfer Case>Manual, C635>Diagnosis and Testing>COMMON PROBLEM CAUSES for additional information.

PARTS REQUIRED:

Qty.	Part No.	Description
1 (AR)	68081823AD	Gasket, Exhaust Flange

REPAIR PROCEDURE:

1. Remove the battery. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>08 - Electrical>8F - Engine Systems>Battery Systems>BATTERY>Removal>Removal for additional information.
2. Release retainer from harness at the bottom of battery tray.
3. Remove the engine cover assembly.
4. Remove the air cleaner assembly. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>09 - Engine, 2.0L DOHC or 2.4L Multiair>Air Intake System>AIR CLEANER>Removal>Removal for additional information.
5. Remove the Powertrain Control Module. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>08 - Electrical>8E - Electronic Control Modules>MODULE, Powertrain Control>Removal>2.0L/2.4L for additional information.
6. Loosen upper starter fastener to transaxle housing bolt but do not remove. Back the bolt out at least 20 mm (0.79 inches).
7. Disconnect shift cables from transmission levers and transmission cable reaction bracket
8. Remove transmission shift damping mass & link (Fig. 1) from the transmission. Remove the dust boot retaining nut and washer.

**Fig. 1 Shift Dampening Mass and Link**

1 - Shift Dampening Mass and Link

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9. Lift the vehicle on a suitable hoist.
 10. Remove the belly pan/aero tray.

11. Remove the exhaust system. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>11 - Exhaust System for additional information.
12. Loosen but do not remove the bolts holding rear transaxle mount bracket to the transmission ([Fig. 2](#)). Back out the bolts at least 25 mm.



Fig. 2 Rear Transaxle Mount Bracket

1 - Loosen (3) Rear Transaxle Mount Bracket Bolts

13. Loosen but do not remove the lower starter motor fastener to transmission ([Fig. 3](#)). Back out the fastener approximately 15 mm (0.59 inches).

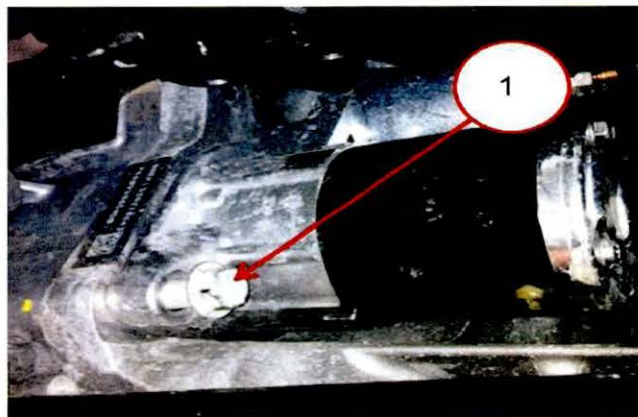


Fig. 3 Starter

1 - Loosen Lower Starter Motor Bolt

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14. Lower hoist enough so the engine compartment is accessible.
 15. Using a suitable hydraulic floor jack, lift and support the transaxle in a stable position.
 16. Loosen but do not remove the upper transaxle to the engine block bolts. Back out bolts approximately 15mm (0.59 inches).
 17. Remove bolts holding transaxle upper mount spacer to transmission housing
 18. Lower the hydraulic floor jack until the transaxle rests on the support cradle load beam.
 19. Raise the vehicle to gain access to the lower engine supports.
 20. Using a suitable high jack stand, support the engine in a stable position (Fig. 4).

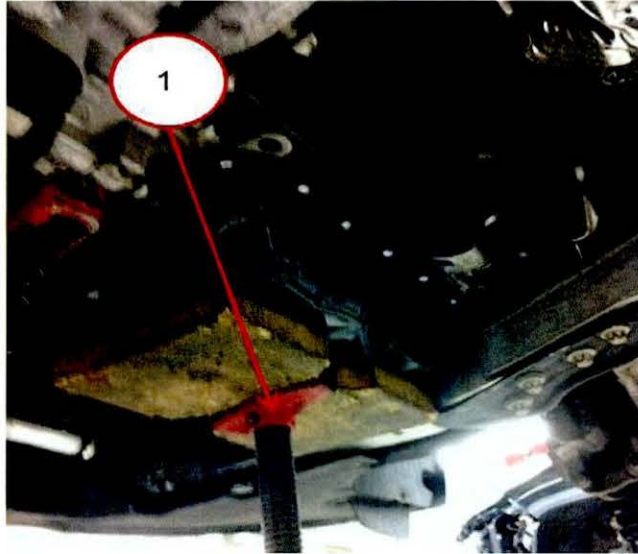


Fig. 4 High Jack Stand

1 - High Jack Stand

21. Using a suitable transmission jack, support the transaxle in a stable position ([Fig. 5](#)).



Fig. 5 Transmission Jack

1 - High Jack Stand

2 - Transmission Jack

22. Loosen but do not remove the lower transaxle to engine block bolts ([Fig. 6](#)). Back out bolts approximately 15mm (0.59 inches).

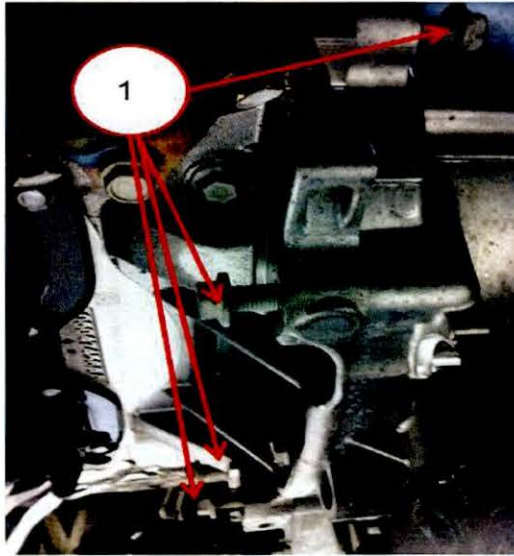


Fig. 6 Lower Transaxle to Engine Fasteners

1 - Loosen (4) Lower Transaxle to Engine Block Bolts

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23. While supporting the transmission to provide a consistent gap to the engine, separate the transaxle from the engine approximately 5 - 10 mm (0.20 - 0.59 inches) until the doweled locations are separated (Fig. 7) and (Fig. 8).

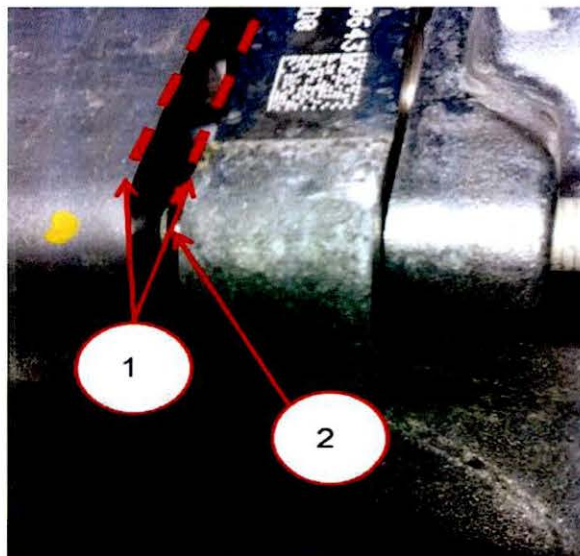


Fig. 7 Transaxle to Engine Gap

1 - 5 - 10 mm (0.20 - 0.59 inches) gap

2 - Transaxle Dowel

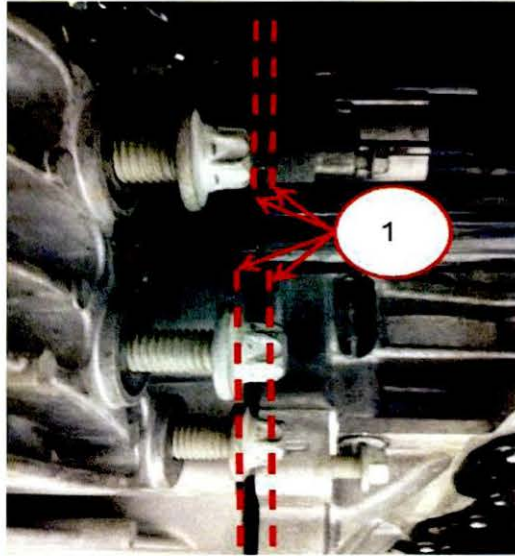


Fig. 8 Transaxle to Engine Gap (2)

1 - 5 - 10 (0.20 - 0.59 inches) mm gap

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24. Evenly secure the two fasteners at two doweled locations (identified by arrows in diagram below (Fig. 9) - one is the lower starter bolt) to close the gap between engine & transmission, alternating tightening at each of the two fasteners as required to assure gap closes evenly. Torque the bolts to 50 NM (37 ft. lbs.).

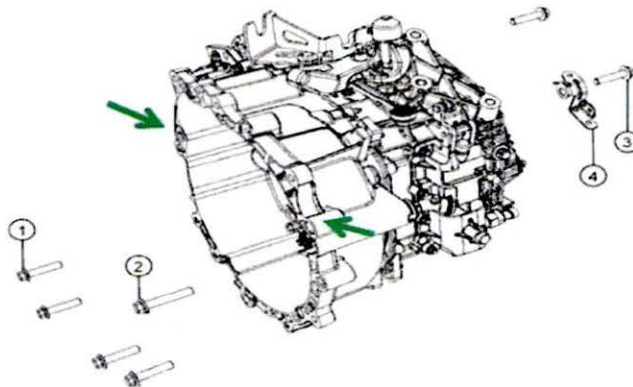


Fig. 9 C635 Transaxle

25. Secure the remaining lower transmission to engine fasteners. Torque the bolts to 50 NM (37 ft. lbs.).
26. Lower and remove the transmission jack and high jack stand from under the transaxle and engine.

27. Lower the vehicle to gain access to the engine compartment.
28. Using a suitable hydraulic floor jack lift the transaxle above the support cradle load beam, aligning the transmission housing to the upper mount spacer bracket.
29. Install the upper mount spacer to transmission housing (Fig. 10). Torque the bolts to 80 NM (59 ft. lbs.).

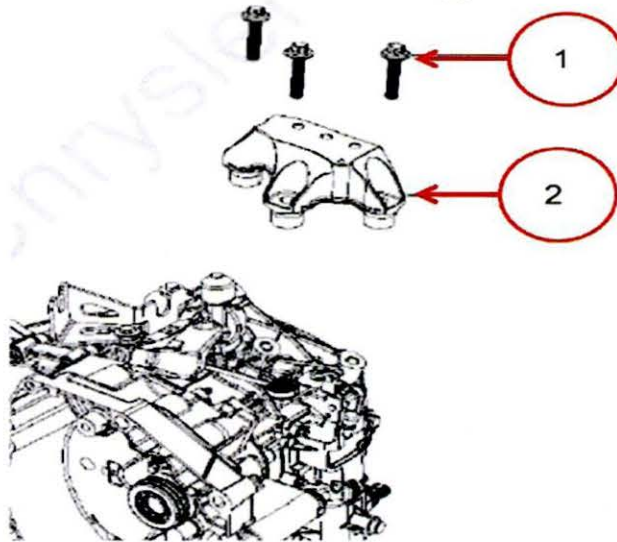


Fig. 10 Upper Transaxle Mount

1 - Transaxle Upper Mount Spacer Bolts

2 - Transaxle Upper Mount Spacer

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30. Secure bolts to hold upper transaxle to the engine block. Torque the bolts to 50 NM (37 ft. lbs.).
 31. Install upper starter bolt to secure starter to transaxle housing.
 32. Lower hydraulic floor jack and move it from under vehicle.
 33. Install Powertrain Control Module. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>08 - Electrical>8E - Electronic Control Modules>MODULE, Powertrain Control>Installation>2.0L/2.4L for additional information.
 34. Lift hoist so under side of vehicle is accessible.
 35. Secure rear mount bracket bolts to transaxle (Fig. 11). Torque the bolts to 110 NM (81 ft. lbs.).

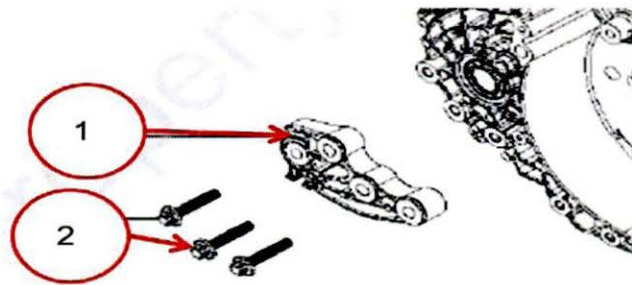


Fig. 11 Rear Transaxle Mount

- 1 - Transaxle Rear Mount Bracket
- 2 - Transaxle Rear Mount Bracket Bolts

36. Install the exhaust system. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>11 - Exhaust System for additional information.

NOTE: If necessary, install a new exhaust flange gasket (p/n 68081823AD) before installing the exhaust system.

- 37. Connect retainer/harness at the bottom of battery tray
- 38. Install the belly pan/lower aero tray.
- 39. Lower vehicle to gain access to engine compartment.
- 40. Install the air cleaner assembly. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>09 - Engine, 2.0L DOHC or 2.4L Multiair>Air Intake System>AIR CLEANER>Installation>Installation for additional information.
- 41. Install engine cover.
- 42. Install shift mass damper and link to transmission with nut & washer. Torque shift mass pivot nut to 25 NM (18 ft. lbs). Install the dust boot over pivot nut. Reattach shift link end to transmission lever.
- 43. Secure shift cables to reaction bracket and transmission levers
- 44. Install the battery. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>08 - Electrical>8F - Engine Systems>Battery Systems>BATTERY>Installation>Installation for additional information.
- 45. Reevaluate vehicle for noise to confirm issue is resolved. Refer to the Diagnostic section of this Service Bulletin.

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Skill Category	Amount
21-00-04-93	Transaxle Centering Procedure (3 - Highly Skilled)	3 - Driveline	1.5 Hrs.

FAILURE CODE:

ZZ	Service Action
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