2010 Fusion, Milan, MKZ, Fusion Hybrid, Milan Hybrid Workshop Manual Procedure revision date: 12/07/2009

Turbine Shaft Speed (TSS) Sensor

Removal

- 1. Remove the main control valve body. For additional information, refer to <u>Main Control Valve Body</u> in this section.
- 2. Remove the bolt and the Turbine Shaft Speed (TSS) sensor.



Installation

Lubricate the O-ring with clean automatic transmission fluid and install the TSS sensor.
Tighten to 12 Nm (106 lb-in).



2. Install the main control valve body. For additional information, refer to <u>Main Control Valve Body</u> in this section.

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Differential Seals - LH

Special Tool(s)

| 512959-A | Installer, Output Shaft Seal 307-567 |
|----------|--|
| ST2834-A | Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool |

Material

| Item | Specification |
|-------------------------------|---------------|
| Motorcraft® Premium Automatic | WSS-M2C924-A |
| Transmission Fluid | |
| XT-8-QAW (US); CXT-8-LAW12 | |
| (Canada) | |
| Removal | |

Removal

NOTICE: The use of any transmission fluid other than what is recommended for this transaxle will cause transaxle damage.

1. Remove the LH halfshaft. For additional information, refer to Section 205-04.

2. NOTICE: Be careful not to damage the case while removing the seal.

Using a suitable awl, poke a small hole in the seal.



3. Using a suitable dent puller, remove the LH differential fluid seal.



Installation

1. Position the new differential fluid seal in place.



2. Using the Output Shaft Seal Installer, install the outer differential fluid seal.



- 3. Install the LH halfshaft. For additional information, refer to $\underline{Section \ 205-04}$.
- 4. With the transaxle in PARK, the vehicle on a level surface, the engine at idle (680-780 rpm) and foot pressed on the brake, move the selector lever through each gear and allow engagement of each gear. Place the selector lever back in the PARK position.
- 5. Wipe the transmission fluid level indicator cap and remove the transmission fluid level indicator.
- 6. Wipe the transmission fluid level indicator with a clean cloth.
- 7. **NOTE:** In order to get an accurate transmission fluid level reading, the vehicle should be on a level surface. Idle the engine to reach the normal operating temperature. Using the scan tool, verify that the transaxle is at normal operating temperature 60°C-70°C (140°F-158°F), prior to adjusting the transmission fluid level.

If transmission fluid needs to be added, add transmission fluid in 0.25L (1/2 pt) increments through the transmission fluid fill plug located on the top of the transaxle near the transmission fluid level indicator. Do not overfill the transmission fluid. Install the transmission fluid level indicator back in the transmission fluid filler tube until it is fully seated, then remove the transmission fluid level indicator. The transmission fluid level should be at the uppermost mark on the transmission fluid level indicator. Do not overfill. Damage to the transaxle will occur.



8. **NOTE:** The correct transmission fluid level at normal operating temperature of 60°C-70°C (140°F-158°F) is between the top 2 marks on the transmission fluid level indicator.

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Fill the transaxle to the correct transmission fluid level.



9. **NOTE:** The correct transmission fluid level at cold operating temperature of 15°C-25°C (59°F-77°F) is at the bottom mark on the transmission fluid level indicator.

If the Transmission Fluid Temperature (TFT) is low, fill the transaxle with transmission fluid to the cold range on the transmission fluid level indicator. Recheck the transmission fluid level when the transaxle has reached the normal operating temperature.



10. Remove the transmission fluid fill plug.



- 11. Fill the transaxle with clean transmission fluid.
- 12. Install the transmission fluid fill plug.Tighten to 39 Nm (29 lb-ft).



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Differential Seals - RH, Front Wheel Drive (FWD)

Special Tool(s)

| ST2960-A | Installer, Output Shaft Seal 307-568 |
|----------|--|
| ST2834-A | Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool |

Material

| Item | Specification |
|-------------------------------|---------------|
| Motorcraft® Premium Automatic | WSS-M2C924-A |
| Transmission Fluid | |
| XT-8-QAW (US); CXT-8-LAW12 | |
| (Canada) | |
| Removal | |

NOTICE: The use of any transmission fluid other than what is recommended for this transaxle will

1. Remove the RH halfshaft. For additional information, refer to Section 205-04.

2. NOTICE: Be careful not to damage the case while removing the seal.

Using a suitable dent puller, remove the differential fluid seal.



cause transaxle damage.

Installation

1. Position the new differential fluid seal on the Output Shaft Seal Installer.



2. Using the Output Shaft Seal Installer, install the outer differential fluid seal.



- 3. Install the RH halfshaft. For additional information, refer to Section 205-04.
- 4. With the transaxle in PARK, the vehicle on a level surface, the engine at idle (680-780 rpm) and foot pressed on the brake, move the selector lever through each gear and allow engagement of each gear. Place the selector lever back in the PARK position.
- 5. Wipe the transmission fluid level indicator cap and remove the transmission fluid level indicator.
- 6. Wipe the transmission fluid level indicator with a clean cloth.
- 7. **NOTE:** In order to get an accurate transmission fluid level reading, the vehicle should be on a level surface. Idle the engine to reach the normal operating temperature. Using the scan tool, verify that the transaxle is at normal operating temperature 60°C-70°C (140°F-158°F), prior to adjusting the transmission fluid level.

If transmission fluid needs to be added, add transmission fluid in 0.25L (1/2 pt) increments through the transmission fluid fill plug located on the top of the transaxle near the transmission fluid level indicator. Do not overfill the transmission fluid. Install the transmission fluid level indicator back in the transmission fluid filler tube until it is fully seated, then remove the transmission fluid lever indicator. The transmission fluid level should be at the uppermost mark on the transmission fluid level indicator. Do not overfill. Damage to the transaxle will occur.



8. **NOTE:** The correct transmission fluid level at normal operating temperature of 60°C-70°C (140°F-158°F) is between the top 2 marks on the transmission fluid level indicator.

Fill the transaxle to the correct transmission fluid level.



9. **NOTE:** The correct transmission fluid level at cold operating temperature of 15°C-25°C (59°F-77°F) is at the bottom mark on the transmission fluid level indicator.

If the Transmission Fluid Temperature (TFT) is low, fill the transaxle with transmission fluid to the cold range on the transmission fluid level indicator. Recheck the transmission fluid level when the transaxle has reached the normal operating temperature.



10. Remove the transmission fluid fill plug.



11. Fill the transaxle with clean transmission fluid.

12. Install the transmission fluid fill plug.Tighten to 39 Nm (29 lb-ft).



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Differential Seals - RH, All Wheel Drive (AWD)

Special Tool(s)

| ST297BA | Axle Seal Installer 307-593 |
|-----------------|--|
| E[] ST1255-A | Handle 205-153 (T80T-4000-W) |
| ST2624-A | Remover, Input Shaft Oil Seal 308-375 |
| ST1187-A | Slide Hammer 307-005 (T59L-100-B) |
| ST2834-A | Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool |

Material

| Item | Specification |
|-------------------------------|---------------|
| Motorcraft® Premium Automatic | WSS-M2C924-A |
| Transmission Fluid | |
| XT-8-QAW (US); CXT-8-LAW12 | |
| (Canada) | |

Removal

NOTICE: The use of any transmission fluid other than what is recommended for this transaxle will cause transaxle damage.

- 1. Remove the Power Transfer Unit (PTU). For additional information, refer to Section 308-07B.
- 2. NOTE: Transaxle removed for clarity.

Using the Input Shaft Oil Seal Remover and Slide Hammer, remove the differential fluid seals.