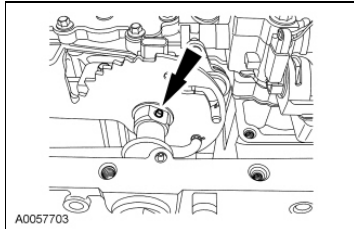
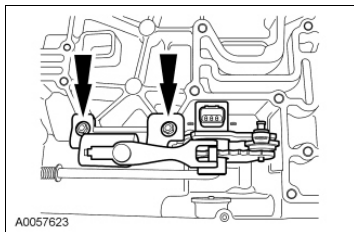


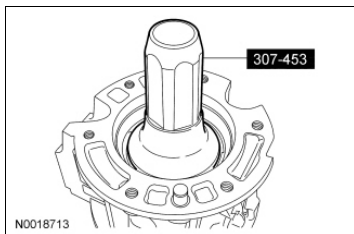
20. Install a new roll pin. Leave 2 mm (0.08 in) of the pin exposed.



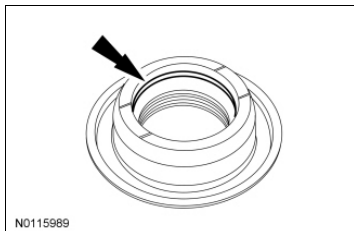
21. Tighten the TR sensor bolts.
• Tighten to 10 Nm (89 lb-in).



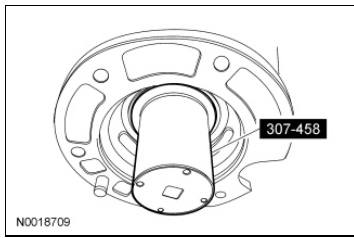
22. Use the Transmission Extension Housing Seal Installer and install a new extension housing seal.



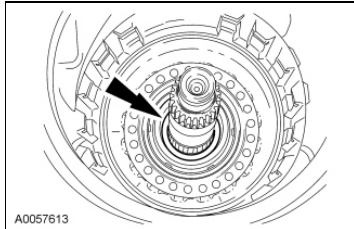
23. Inspect the new output shaft nut O-ring for cuts. A new nut must be installed.



24. Using the Output Shaft Locknut Socket, install a new output shaft nut.
• Tighten to 200 Nm (148 lb-ft).

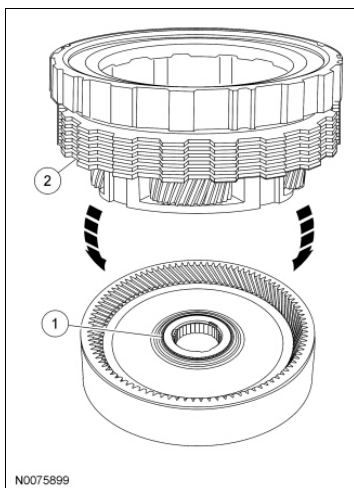


25. Install the No. 16 bearing and race.

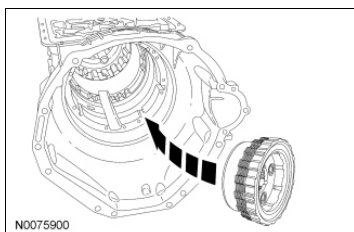


26. Assemble the rocker clutch and ring gear assembly.

1. Install the No. 15 hub bearing onto the ring gear hub.
2. Install the rocker clutch, low/reverse clutch pack, carrier and hub assembly into the output hub and ring gear assembly.



27. Install the rocker clutch and ring gear assembly into the transmission case.



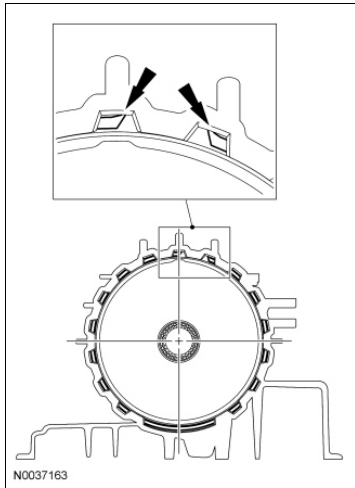
28. **NOTICE: Do not apply air pressure to move the low/reverse piston without first installing the rocker clutch snap ring, or damage to the snap ring spring retainer will occur.**

Install a new flat snap ring and make sure that the snap ring is fully seated in the case snap ring groove.

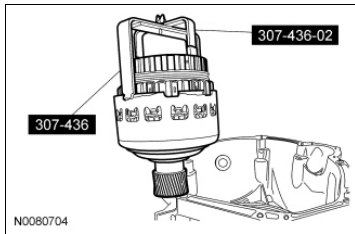
Install a new flat snap ring so the tang ends are in the gaps to the right and to the left of the case spline as shown.

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- Check the function of the reverse clutch by applying air to the correct passage (through the case valve body worm trail) for the reverse clutch.

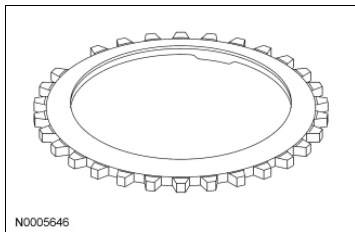


29. Using the Transmission Forward Clutch Assembly Installer and Adapter, install the forward geartrain as an assembly.

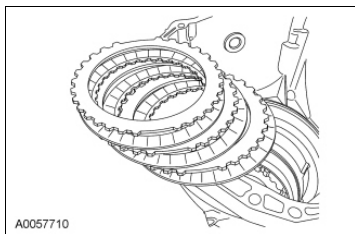


30. Install the intermediate clutch pressure plate.

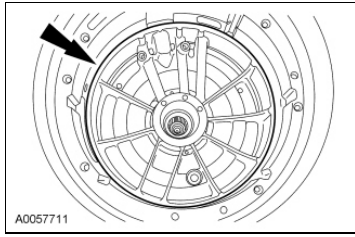
- Position the intermediate clutch pressure plate in the case with the 3 tabs facing downward.



31. Install the intermediate clutch plates, starting with a friction plate.

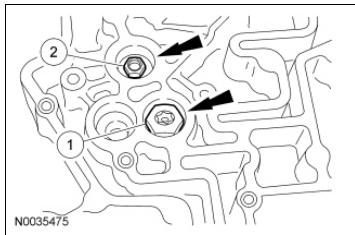


32. Install the center support with the transmission in a vertical position to avoid damage to the center support Teflon® seals.



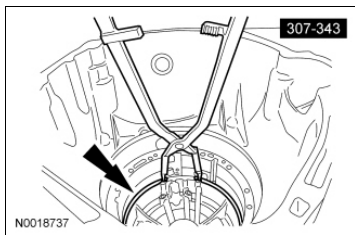
33. Loosely install the center support feed bolts.

1. Loosely install the Torx-head forward clutch feed bolt into the case toward the rear of the case.
2. Loosely install the hex-head intermediate clutch feed bolt into the case toward the front of the case.



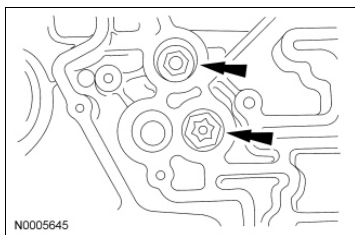
34. Using the Retaining Ring Pliers, install the center support snap ring.

- The snap ring should be installed with the flat edge facing downward. The gap in the snap ring should be facing in the 6 o'clock position. Tap the snap ring securely into the case.

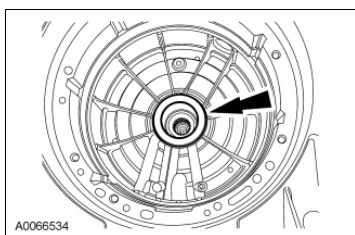


35. Tighten the center support feed bolts.

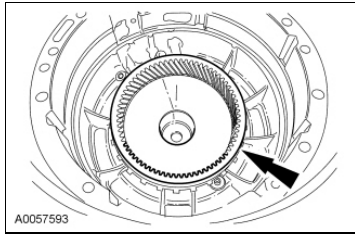
- Tighten to 32 Nm (24 lb-ft).



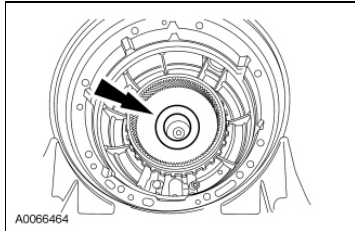
36. Install the No. 5 thrust bearing onto the center support.



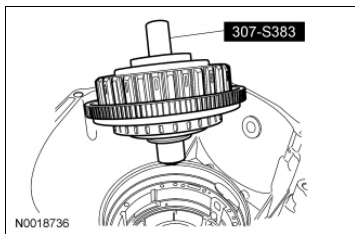
37. Install the center shaft and ring gear.



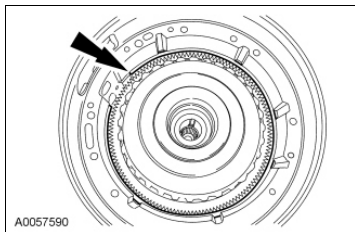
38. Install the No. 4 thrust bearing onto the center shaft.



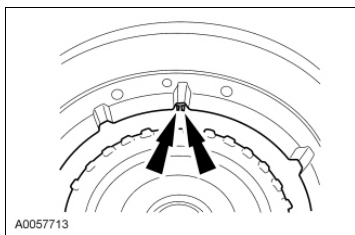
39. Using the Clutch Loading Fixture, install the coast clutch assembly and overdrive carrier.



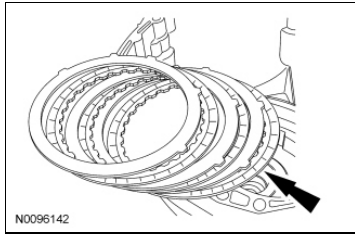
40. Install the overdrive clutch assembly snap ring with the gap in the 6 o'clock position.



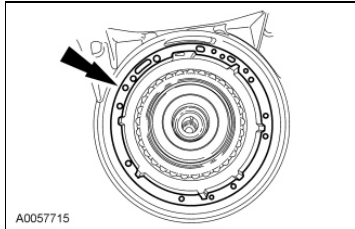
41. Install the overdrive pressure plate with the notches facing up.



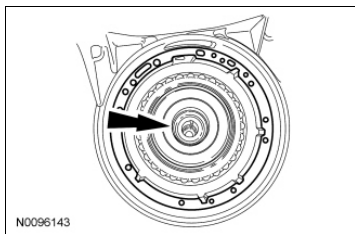
42. Install the overdrive clutch.
• Start with a friction plate, alternating with a steel plate.



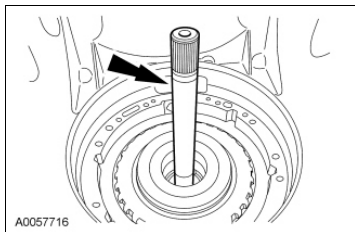
43. Install a new transmission fluid pump gasket.



44. Install the No. 2 thrust bearing.

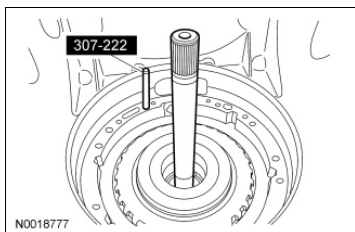


45. Install the input shaft into the case.



46. **NOTE:** Two Transmission Fluid Pump Aligners is used in case holes located at the 5 o'clock and 11 o'clock positions.

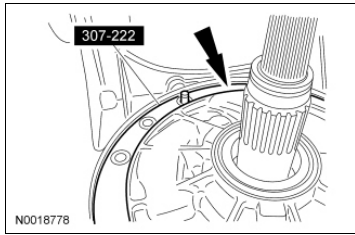
Install the Transmission Fluid Pump Aligner into the case in order to install the pump.



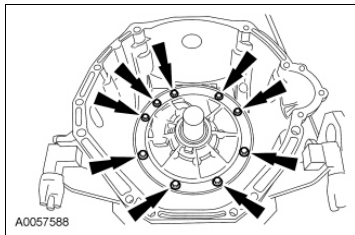
47. Check to make sure that the No. 1 thrust washer is installed on the pump stator, and make sure that the No. 2A bearing is installed onto the pump support.

48. **NOTE:** Two Transmission Fluid Pump Aligners are used in case holes located at the 11 o'clock and 5 o'clock positions.

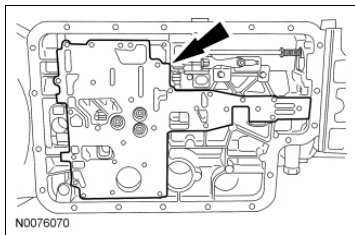
Using the Transmission Fluid Pump Aligner, install the pump assembly with the transmission in a vertical position to avoid damage to the pump stator support Teflon® seals.



49. Install new pump body-to-pump control body bolts.
- Tighten to 29 Nm (21 lb-ft).

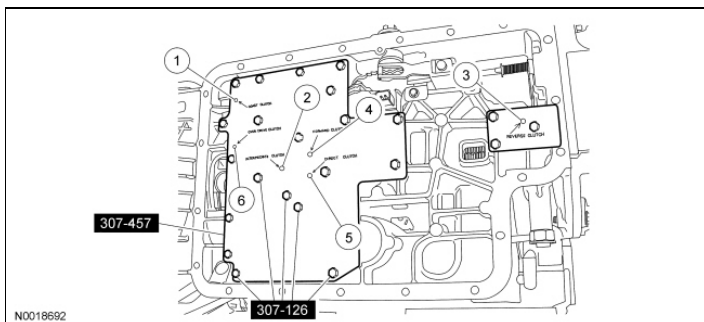


50. Install a new main control body gasket.



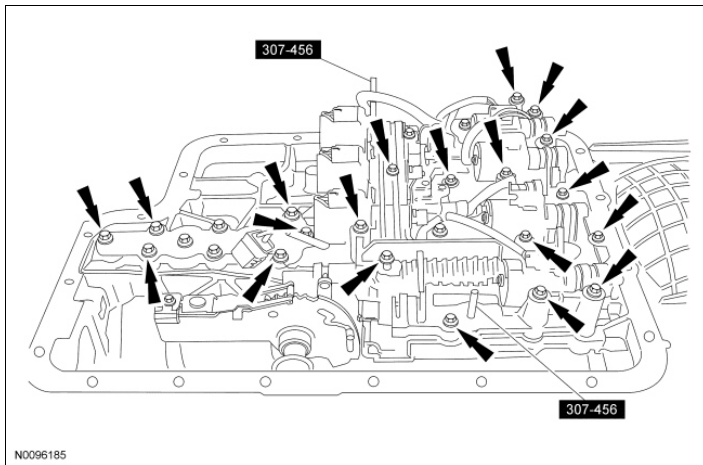
51. Using the Transmission Air Test Plate along with the Transmission Test Plate Screw Set, check the function of each clutch. Apply 20 psi (137.9 kPa) of air to each port. Tighten to 10 Nm (89 lb-In).

Item	Description
1	Coast clutch
2	Intermediate clutch
3	Reverse clutch
4	Forward clutch
5	Direct clutch
6	Overdrive clutch



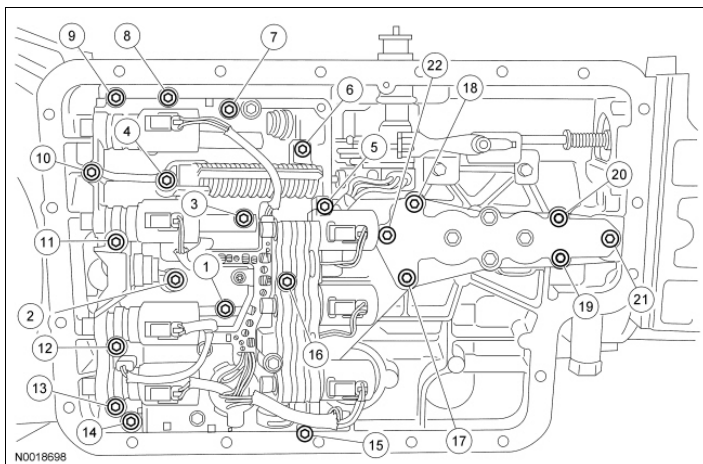
52. Using the Valve Body Aligner, install the solenoid body and loosely install the solenoid body and backing plate-to-case bolts.

- While installing the solenoid body, align the manual valve.

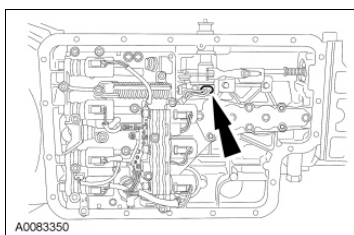


53. Remove the Valve Body Aligner and install the 2 remaining bolts. Tighten all the solenoid body and backing plate-to-case bolts in the sequence shown.

- Tighten to 13 Nm (115 lb-in).

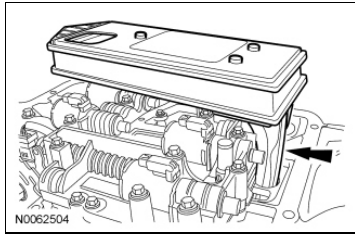


54. Connect the TR sensor connector.



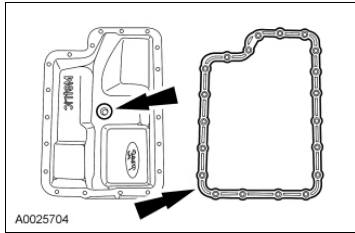
55. **NOTE:** Prior to installing the transmission fluid filter, make sure that the old seal is not stuck in the case.

Install a new transmission fluid filter.



56. **NOTE:** Reuse the transmission fluid pan gasket unless it is damaged.

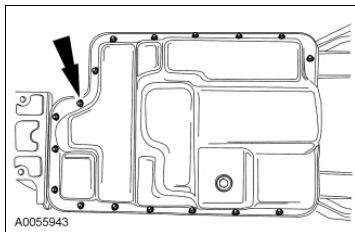
Install the transmission fluid pan gasket to the transmission fluid pan. Make sure the magnet is positioned over the dimple in the transmission fluid pan.



57. **NOTE:** Tighten all the transmission fluid pan bolts in a crisscross pattern.

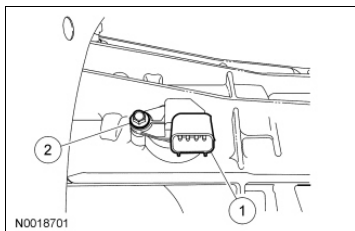
Install the transmission fluid pan gasket and transmission fluid pan.

- Tighten to 20 Nm (177 lb-in).



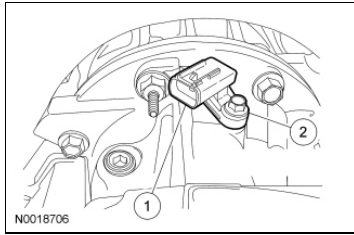
58. Install the Turbine Shaft Speed (TSS)/intermediate shaft speed sensor.

1. Lubricate the O-ring and install the TSS /intermediate shaft speed sensor.
 2. Install the TSS /intermediate shaft speed sensor bolt.
- ◆ Tighten to 9 Nm (80 lb-in).



59. Install the Output Shaft Speed (OSS) sensor.

1. Lubricate the O-ring and install the OSS sensor.
 2. Install the OSS sensor bolt.
- ◆ Tighten to 9 Nm (80 lb-in).

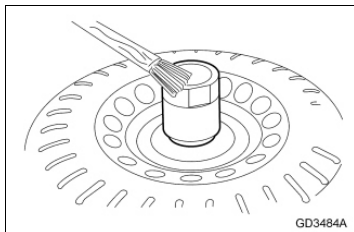


60. **NOTICE:** Do not damage the fluid pump stator support seal when installing the torque converter.

NOTICE: Make sure the converter hub is fully engaged in the transmission fluid pump support and the gear rotates freely. Do not damage the hub seal.

NOTICE: If the torque converter slides out, the hub seal may be damaged.

Lubricate the converter hub with transmission fluid.



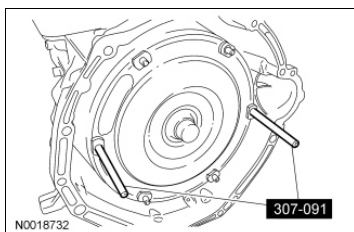
61. If a new case was installed, wipe the transmission fluid cooler tube case fittings dry. Install new O-rings onto the transmission fluid cooler tube case fittings, apply threadlock and sealer onto the threads and install the transmission fluid cooler tube case fittings into the new case.

- Tighten to 51 Nm (38 lb-ft).

62. **NOTICE:** Use care when installing the torque converter to avoid damage to the transmission fluid pump stator support seal.

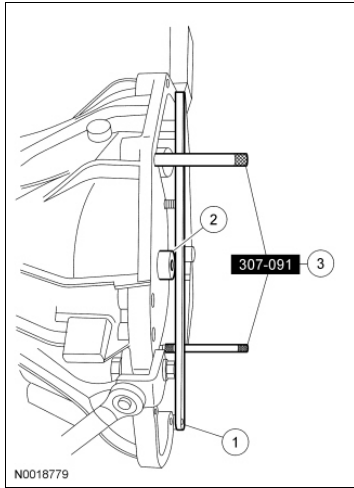
NOTE: Check the converter crankshaft pilot for nicks or damaged surfaces that can cause interference when installing the transmission to the engine. Check the converter impeller hub for nicks or sharp edges that can damage the pump seal.

Using the Torque Converter Handles, install the torque converter. Push and rotate the converter onto the transmission fluid pump assembly until it bottoms out.

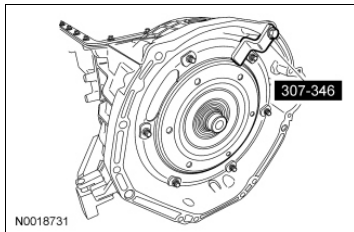


63. Check the seating of the torque converter.

1. Place the straightedge across the converter housing.
2. Make sure there is a gap between the converter pilot face and the straightedge.
3. Remove the Torque Converter Handles.



64. Use the Torque Converter Retainer to hold the torque converter in place when installing the transmission.



65. If the Power Take-Off (PTO) cover was removed, install a new PTO gasket and install the PTO cover.
- Tighten to 41 Nm (30 lb-ft).
-