

3 -- YEL	6.5786-6.5913	0.2590-0.2595
2 -- YEL	6.5278-6.5405	0.2570-0.2575
1 -- YEL	6.4770-6.4897	0.2550-0.2555
5 -- ORNG	6.4262-6.4389	0.2530-0.2535
4 -- ORNG	6.3754-6.3881	0.2510-0.2515
3 -- ORNG	6.3246-6.3373	0.2490-0.2495
2 -- ORNG	6.2738-6.2865	0.2470-0.2475
1 -- ORNG	6.2223-6.2357	0.2450-0.2455
2 -- RED	6.1722-6.1849	0.2430-0.2335
1 -- RED	6.1214-6.1341	0.2410-0.2415

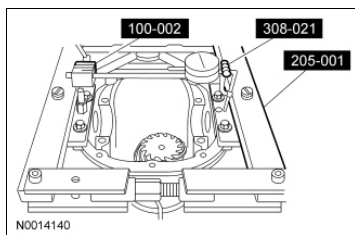
38. Remove the 4 differential bearing cap bolts.

- Remove the differential carrier.

39. Measure the thickness of the selected right and left bearing shims.

40. To establish differential bearing preload, increase both the left and right differential bearing shim thickness by 0.203 mm (0.008 in).

41. Install the Dial Indicator Gauge with Holding Fixture, Clutch Housing Gauge and Differential Carrier Spreader.

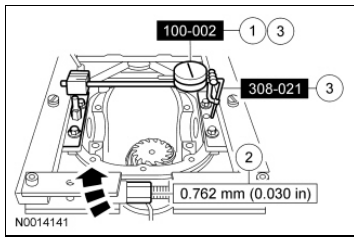


42. **NOTICE:** Overspreading may damage the differential housing.

NOTE: Tighten and loosen the differential carrier spreader adapters to normalize the housing adapters prior to taking the final Dial Indicator reading.

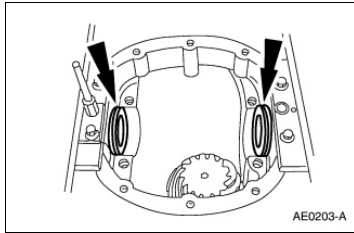
Spread the differential housing to the specification.

1. Adjust the Dial Indicator Gauge to zero.
2. Tighten the screw until spreading the differential housing to the specifications.
3. Remove the Dial Indicator Gauge with Holding Fixture and Clutch Housing Gauge.



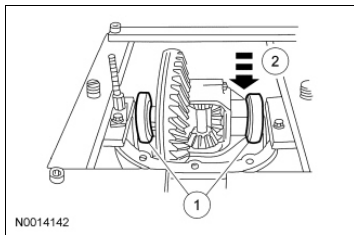
43. **NOTICE:** To avoid galling the case, insert the shims with a light coating of grease before installing the differential carrier.

Place the differential bearing shims in the differential housing.



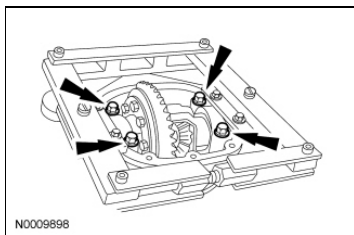
44. Install the differential carrier.

1. Position the 2 differential bearing cups on the differential bearings.
2. Lower the differential carrier in place between the differential bearing shims.

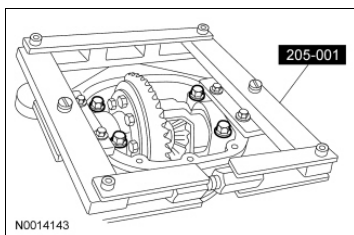


45. **NOTE:** Hand-tighten the differential bearing cap bolts prior to releasing the Differential Carrier Spreader.

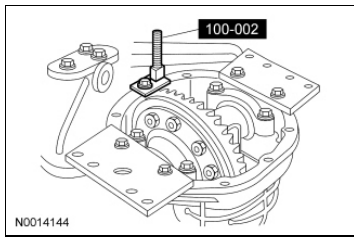
Install the 2 differential bearing caps and 4 bolts in their original location.



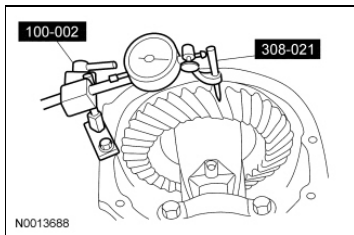
46. Loosen and remove the Differential Carrier Spreader.



47. Install the Dial Indicator Gauge with Holding Fixture at the 12 o'clock position.



48. Using the Dial Indicator Gauge with Holding Fixture and Clutch Housing Gauge, recheck the ring gear backlash.

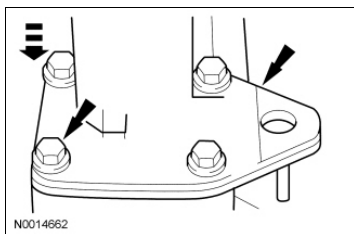


49. Apply marking compound and rotate the differential assembly 5 complete revolutions.

50. Verify an acceptable pattern check. For additional information, refer to [Diagnosis and Testing](#) in this section.

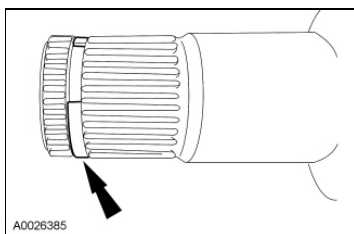
51. Assemble the axle housing tube.

- Align the bolt holes and position the axle tube.
- Position the axle identification tag.
- Install the 4 bolts.
 - ◆ Tighten to 73 Nm (54 lb-ft).



52. Install a new stub shaft seal. For additional information, refer to [Stub Shaft Pilot Bearing and Seal](#) in this section.

53. Install a new circlip on the intermediate shaft end.



54. Insert the intermediate shaft and engage the circlip with the side gears.

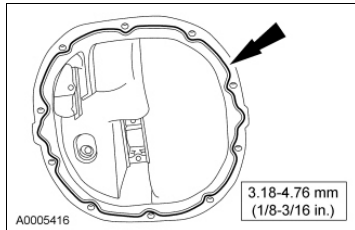
55. Remove the axle assembly from the Holding Fixture and place it on the bench.

56. **NOTE:** Remove all of the silicone gasket and make sure the surfaces are free of oil before applying the new silicone gasket.

NOTE: The differential housing cover must be installed within 15 minutes of application of the silicone, or new sealant must be applied. If possible, allow one hour before filling with lubricant to make sure the silicone sealant has correctly cured.

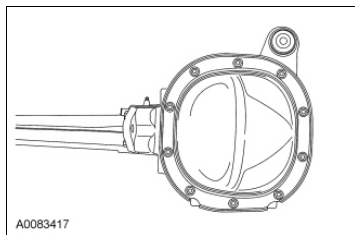
Apply a continuous bead of sealant, of the specified thickness, to the differential housing cover mounting surface as shown in the illustration.

- Use silicone gasket and sealant.



57. Install the differential housing cover and the 10 cover bolts.

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



58. Install the axle assembly. For additional information, refer to [Axle Assembly](#) in this section.

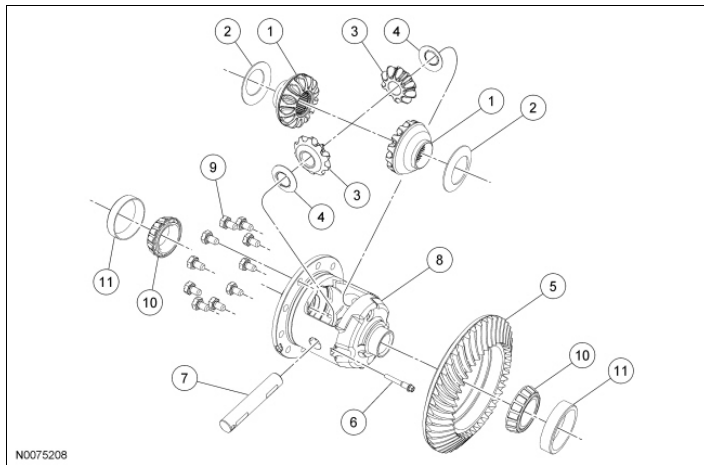
59. Remove the fill plug and fill the axle assembly with the specified type and amount of lubricant.

- Tighten the fill plug to 25 Nm (18 lb-ft).

Differential Case

Material

Item	Specification
Motorcraft® SAE 80W-90 Premium Rear Axle Lubricant XY-80W90-QL (US); CXY-80W90-1L (Canada)	WSP-M2C197-A
Threadlock and Sealer TA-25	WSK-M2G351-A5

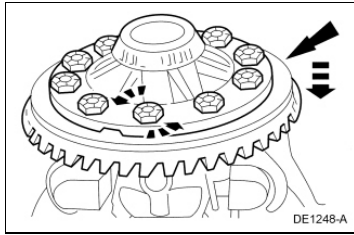


Item	Part Number	Description
1	4236	Differential side gears
2	4228	Differential side gear thrust washers
3	4215	Differential pinion gears
4	4230	Differential pinion thrust washers
5	4209	Differential ring gear
6	4241	Differential pinion shaft lock bolt
7	4211	Differential pinion shaft
8	4204	Differential case
9	4216	Differential ring gear bolt (10 required)
10	4221	Differential bearings (2 required)
11	4222	Differential bearing cups (2 required)

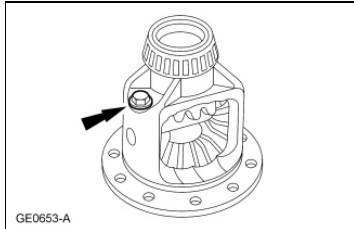
Disassembly

1. Remove the differential carrier. For additional information, refer to [Differential Carrier](#) in this section.
2. **NOTE:** Use a drift punch to separate the ring gear from the differential case.

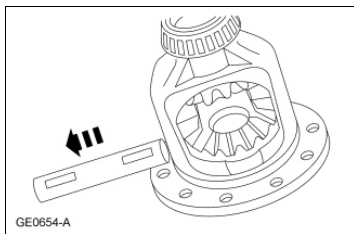
Remove and discard the 10 bolts. Remove the differential ring gear.



3. Remove the differential pinion shaft bolt.

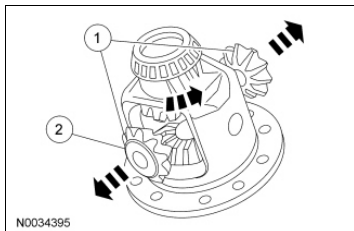


4. Remove the differential pinion shaft.

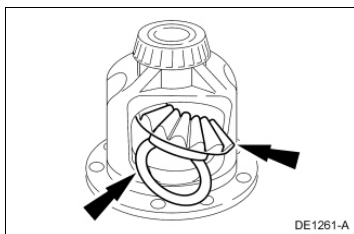


5. Remove the differential pinion thrust washers and the differential pinion gears.

1. Rotate the differential pinion gears to the differential case window, and remove them.
2. Separate the thrust washers from the gears.

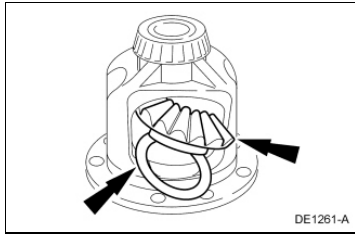


6. Remove the differential side gears and the differential side gear thrust washers.

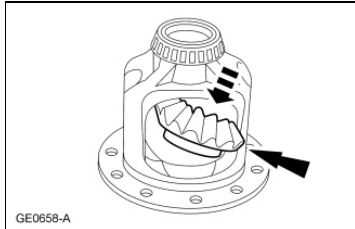


Assembly

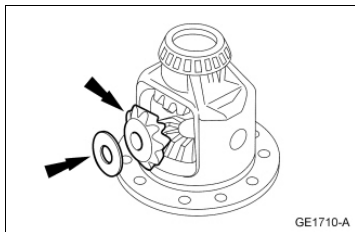
1. Lubricate the differential side gear thrust washers and the differential side gear journals with axle lubricant.
2. Position the differential side gear thrust washers on the differential side gears.



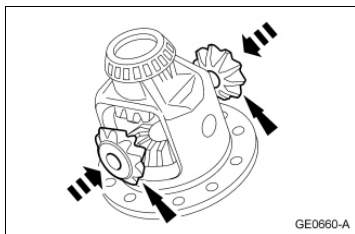
3. Position the differential side gears.



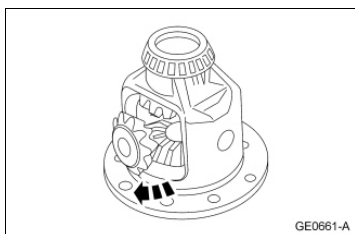
4. Lubricate the differential pinion thrust washers and the differential pinion gears with axle lubricant and assemble them.



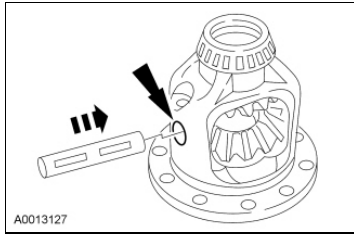
5. Engage the differential pinion gears opposite the differential side gears.



6. Rotate the differential pinion gears to align with the differential pinion shaft bore.



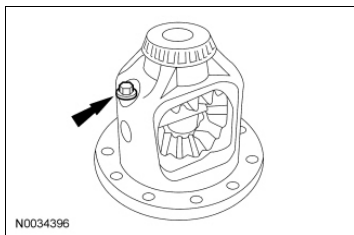
7. Insert the differential pinion shaft.



8. **NOTE:** If a new pinion shaft bolt is unavailable, coat the threads with sealer.

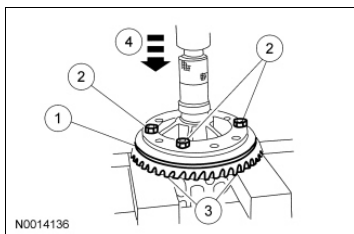
Install a new differential pinion shaft bolt.

- Tighten to 30 Nm (22 lb-ft).



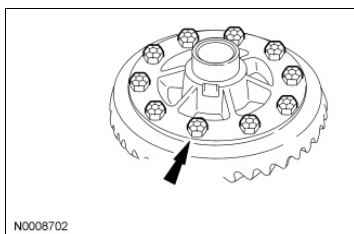
9. Install the differential ring gear.

1. Place the differential ring gear on the differential assembly.
2. Hand-start 3 ring gear bolts to align the holes in the differential ring gear and the differential assembly.
3. Place the differential carrier and differential ring gear onto the press bed blocks with the differential ring gear teeth facing downward.
4. Press the differential ring gear into place.



10. Install the 7 remaining new bolts.

- Tighten all 10 bolts to 128 Nm (95 lb-ft).



11. Install the differential carrier. For additional information, refer to [Differential Carrier](#) in this section.

Material

Item	Specification	Fill Capacity
Constant Velocity Joint Grease (High Temperature) XG-5	WSS-M1C258-A1	--

General Specifications

Item	Specification
Left halfshaft assembled length	406.45 mm (16.00 in)
Right halfshaft assembled length	411.85 mm (16.21 in)

Torque Specifications

Description	Nm	lb-ft	lb-in
Brake flexible hose bracket bolt	30	22	--
Integrated Wheel End (IWE) bolts	12	--	106
Tie-rod end nut	115	85	--
Upper ball joint nut	150	111	--
Wheel hub nut	27	20	--
Wheel speed sensor harness bracket bolt	12	--	106