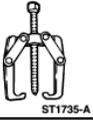
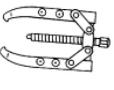
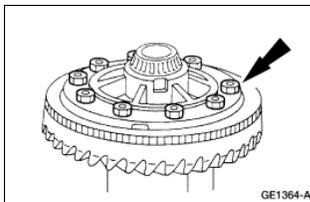


Case, Differential**Special Service Tool(s)**

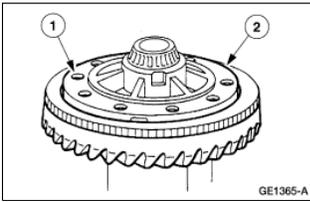
| | |
|---|---|
|  ST1735-A | 2-Jaw Puller for Differential Case Bearing or equivalent D97L-4221-A |
|  ST1356-A | 2-Jaw Puller or equivalent D80L-1002-L (8.8 Axle) |
|  ST1357-A | Differential Bearing Core Replacer or equivalent D81T-4221-A (9.75 and 10.25 Axle) |
|  ST1375-A | Differential Side Bearing Replacer T57L-4221-A2 (8.8 Axle) |
|  ST1858-A | Limited Slip Differential Rotating Tool T97T-4205-C (9.75 and 10.25 Axle) |
|  ST1749-A | Limited Slip Differential Tool T97T-4205-D (9.75 and 10.25 Axle) |
|  ST1543-A | Step Plate or equivalent D80L-630-5 |
|  ST1857-A | Traction-Lok Torque Tool Set T97T-4205-A |

Traction-Lok 8.8 Axle**Disassembly**

1. Remove the differential case; refer to [Differential Ring and Pinion](#) procedure in this section.
2. Remove the 10 ring gear bolts.

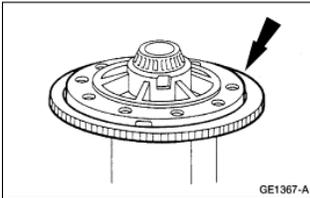


3. Remove the ring gear.
 1. Insert a punch in the bolt holes.
 2. Drive the ring gear off.

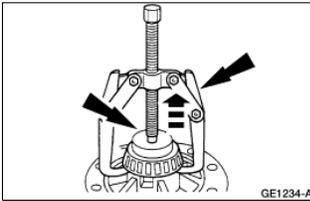


4. **NOTE:** The speed sensor ring cannot be reused once removed.

Remove the speed sensor ring.

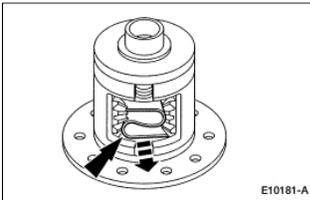


5. Use 2-Jaw Puller and Step Plate to remove the differential bearings.

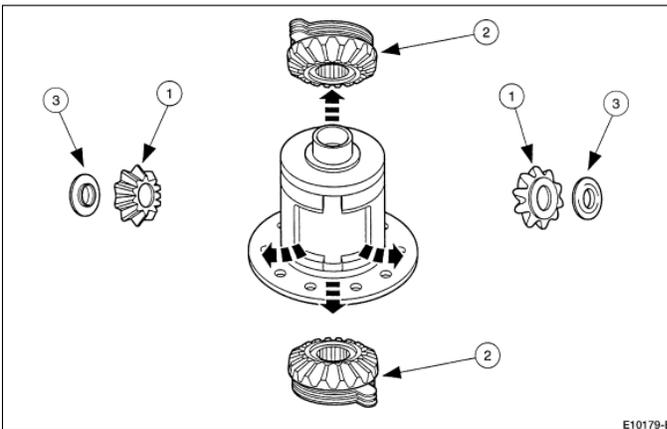


6. **WARNING:** DUE TO THE SPRING TENSION, CARE MUST BE USED WHEN REMOVING THE DIFFERENTIAL CLUTCH SPRING.

Remove the differential clutch spring (4214).

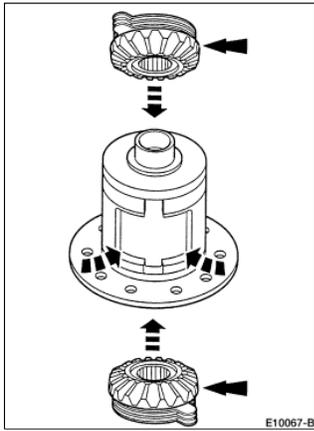


7. Remove the differential gears.
 1. Remove the two differential pinion gears.
 2. Remove the two differential side gears.
 3. Remove the two thrust washers.

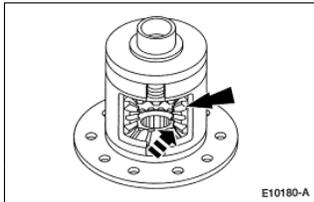


Assembly

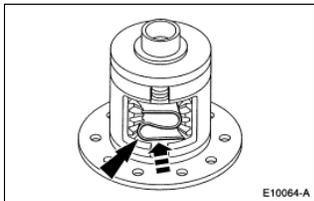
1. Install the differential side gears.



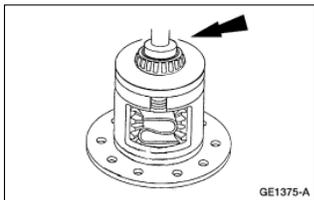
2. Install the differential pinion gears with thrust washers.



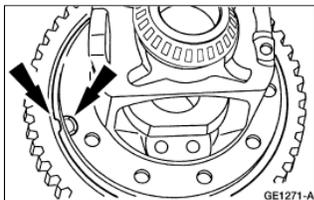
3. Install the differential clutch spring.



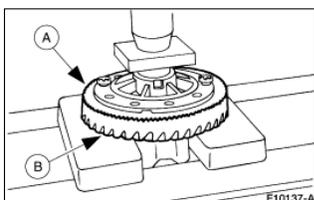
4. Use Differential Side Bearing Replacer to install the differential bearings on the differential case.



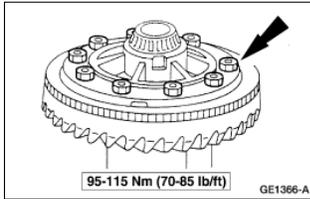
5. Install the anti-lock speed sensor ring by aligning the tab on the anti-lock speed sensor ring with the slot on the differential case.



6. Start two of the ring gear bolts to make sure the alignment is correct.
7. Press the new (A) anti-lock speed sensor ring and the (B) ring gear on the differential case.



8. Install the ring gear bolts.
 1. Apply Stud and Bearing Mount E0AZ-19554-BA or equivalent meeting Ford specification WSK-M2G349-A1 to ring gear bolts.

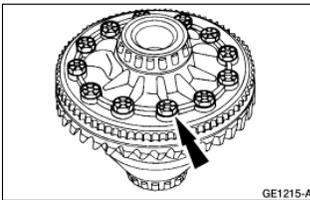


9. Install the differential case assembly; refer to [Differential Ring and Pinion](#) procedure in this section.

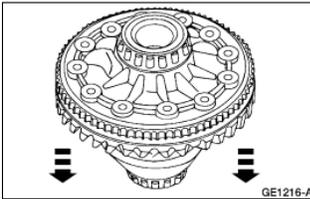
Traction-Lok 9.75 and 10.25 Axle

Disassembly

1. Remove the ring gear bolts.

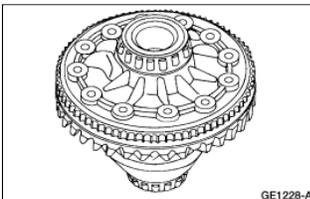


2. Insert a punch into the bolt holes and drive the ring gear off.

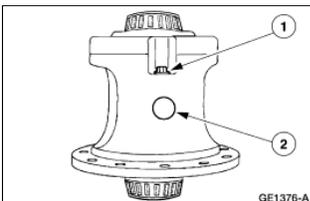


3. **NOTE:** The sensor ring cannot be reused once it has been removed.

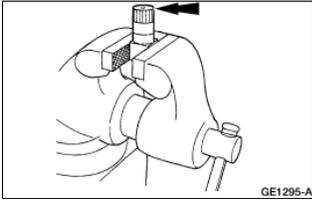
Remove the speed sensor ring.



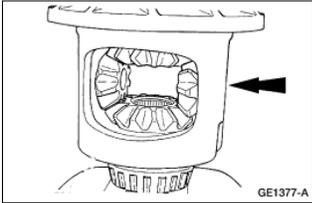
4. Remove the differential pinion shaft.
 1. Remove the differential pinion shaft lock bolt.
 2. Remove the differential pinion shaft.



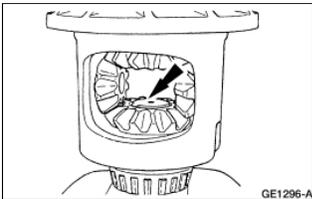
5. Install Traction-Lok Torque Tool in a suitable vise.



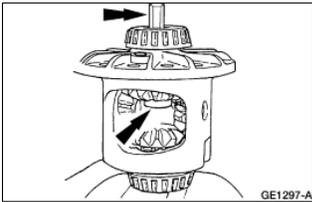
6. Position the differential case on Traction-Lok Tool with the ring gear side facing up.



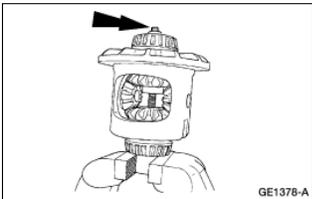
7. Install Step Plate.
- Apply a small amount of Premium Long-Life Grease XG-1-C or XG-1-K or equivalent meeting Ford specification ESA-M1C75-B



8. Install Limited Slip Differential Tool in the differential case.

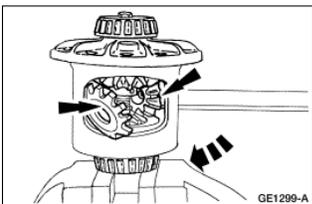


9. Tighten Limited Slip Differential Tool to force the differential side gears away from the differential pinion gears.

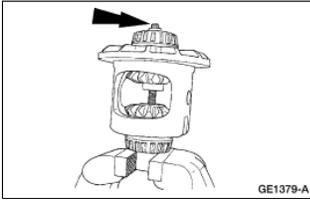


10. **⚠ WARNING: KEEP FINGERS/HANDS AWAY FROM PINION GEARS WHEN ROTATING DIFFERENTIAL CASE WITH DIFFERENTIAL ROTATING TOOL.**

Use Limited Slip Differential Rotating Tool to turn the differential case to walk the differential pinion gears out to the differential case windows and remove the differential pinion gears with thrust washers.

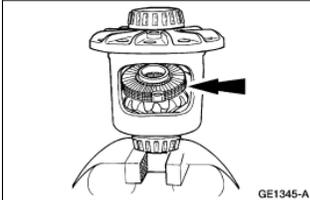


11. Remove Limited Slip Differential Tool.

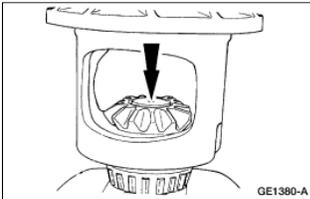


12. **NOTE:** The differential side gears and clutch packs must be tagged LEFT and RIGHT for proper assembly.

Remove the left side differential side gear and clutch pack.

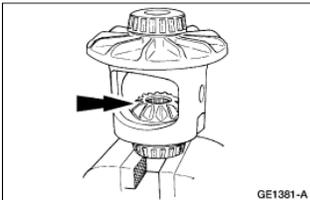


13. Remove Step Plate.



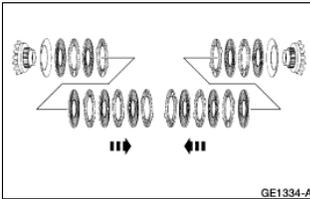
14. **NOTE:** The differential side gears and clutch packs must be tagged left and right for proper assembly.

Remove the right side differential side gear and clutch pack.



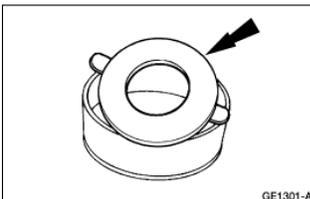
15. **CAUTION:** When separating the clutch discs and clutch friction plates, note the sequence in which are disassembled. They must be reassembled in the same sequence.

Separate the clutch discs and clutch friction plates for cleaning and inspection.

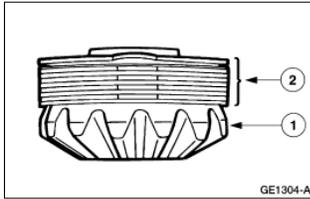


Assembly

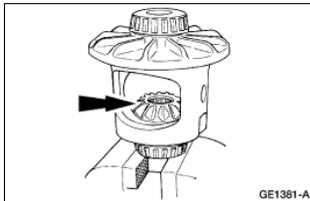
1. Prelubricate each clutch disc and soak clutch friction plates for at least 15 minutes in Additive Friction Modifier C8AZ-19B546-A or equivalent meeting Ford specification EST-M2C118-A.



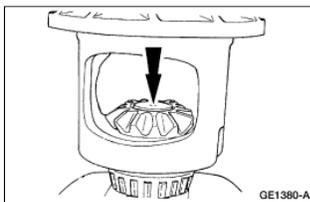
2. Assemble the clutch packs.
 1. Prelubricate the thrust face of the differential side gears.
 2. Assemble the clutch plates, clutch discs, Shim and Belleville spring to the side gear splines in exactly the same sequence in which they were removed.



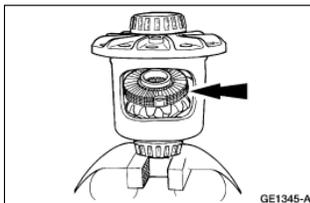
3. Position the right side differential side gear and clutch pack.



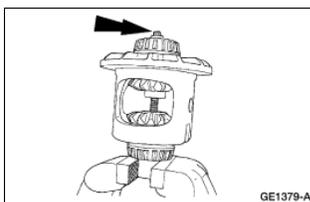
4. Position Step Plate.



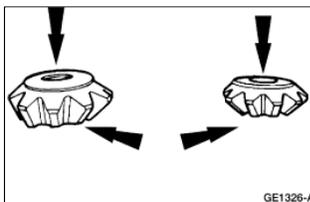
5. Position the left side differential side gear and clutch pack.



6. Install Limited Slip Differential Tool in the differential case and tighten two turns after it contacts Step Plate.
 - Apply a small amount of Premium Long Life Grease XG-1-C or equivalent meeting Ford specification ESA-M1C75-B



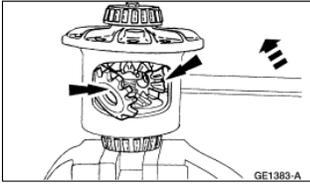
7. Prelubricate the differential pinion gears and both sides of the thrust washers with Motorcraft Synthetic Rear Axle Lubricant F1TZ-19580-B or equivalent meeting Ford Specification WSL-M2C192-A.



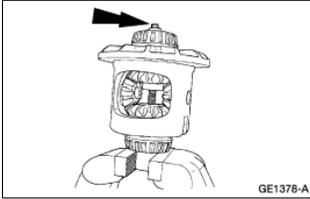
8. **⚠ WARNING: KEEP FINGERS/HANDS AWAY FROM PINION GEARS WHEN ROTATING DIFFERENTIAL CASE WITH DIFFERENTIAL ROTATING TOOL.**

NOTE: It may be necessary to tighten or loosen Limited Slip Differential Tool to allow the differential pinion gears and differential side gears to rotate.

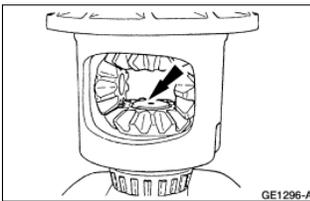
Insert the differential pinion gears and thrust washers into mesh with the side gears 180 (apart and use Limited Slip Diff. Rotating Tool to turn the differential case walking the differential pinion gears into position.



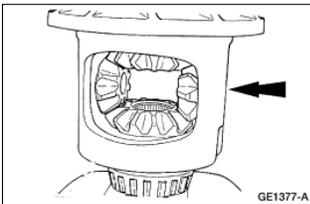
9. Remove Limited Slip Differential Tool from the differential case.



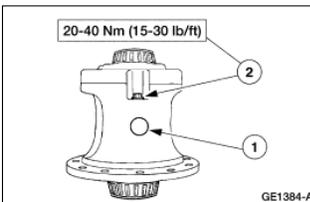
10. Remove Step Plate.



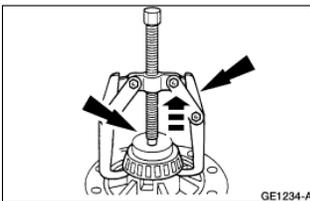
11. Remove the differential case from the vise.



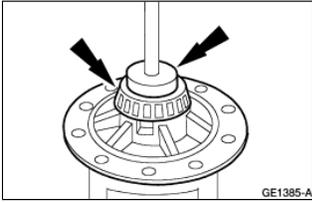
12. Install the differential pinion shaft.
 1. Position the differential pinion shaft.
 2. Install the differential pinion shaft lock bolt.



13. Use 2-Jaw Puller for Differential Case Bearing along with Step Plate to remove the differential case bearings.

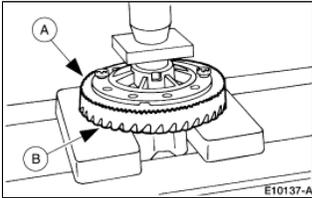


14. Use Differential Bearing Cone Replacer to install the new differential case bearings.

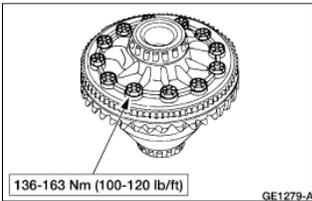


15. **NOTE:** Thread two bolts into the ring gear while pressing to align the bolt holes.

Press the new (A) anti-lock speed sensor ring and the (B) ring gear onto the differential case.



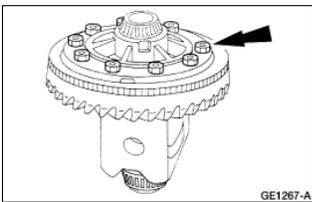
16. Install the remaining ring gear bolts.
- Apply Stud and Bearing Mount EOAZ-19554-BA or equivalent meeting Ford specification WSK-M2G349-A1 to the ring gear bolts.



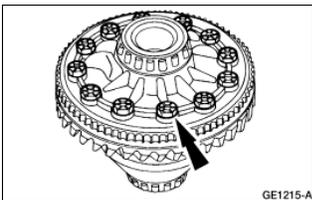
Conventional

Disassembly

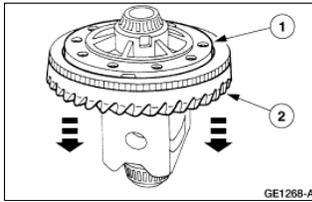
1. Remove the differential case; refer to [Differential Ring and Pinion](#) procedure in this section.
2. For 8.8 inch axle, remove the 10 ring gear bolts.



3. For 9.75 and 10.25, remove the 12 ring gear bolts.

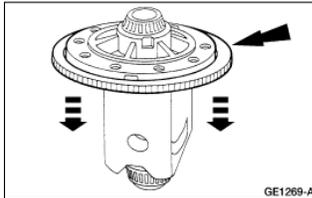


4. Remove the ring gear.
 1. Insert a punch in the bolt holes.
 2. Drive the ring gear off.

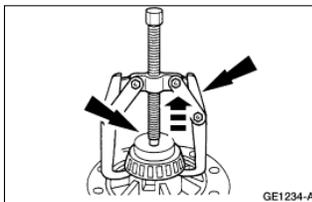


5. **NOTE:** The speed sensor ring cannot be reused once removed.

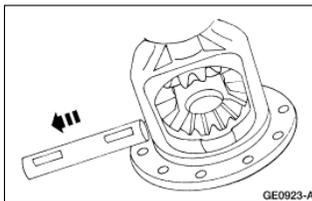
Remove the speed sensor ring.



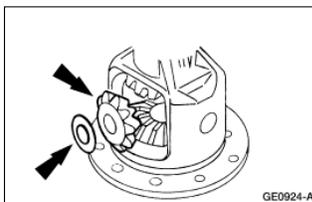
6. Use 2-Jaw Puller and Step Plate to remove the differential bearing(s).



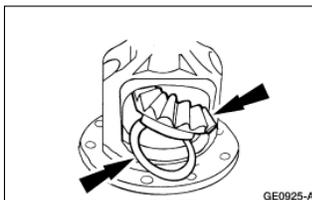
7. Remove the pinion shaft lock bolt and the differential pinion shaft (4211).



8. Rotate and remove the differential pinion gears and the differential pinion thrust washers.

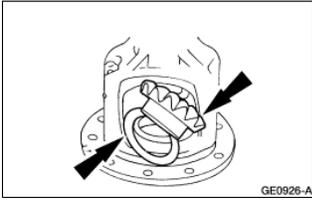


9. Remove the differential side gears (4236) and the differential side gear thrust washers (4228).

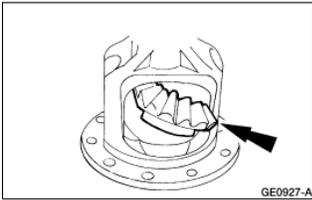


Assembly

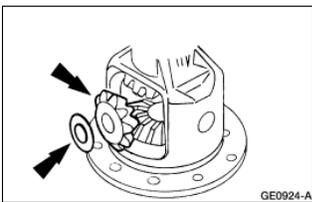
- Use Motorcraft Synthetic Rear Axle Lubricant F1TZ-19580-B meeting Ford specification WSL-M2C192-A to lubricate the differential side gear thrust washers and the differential side gear journals.
 - Position the differential side gear thrust washers on the differential side gears.



2. Position the differential side gears.



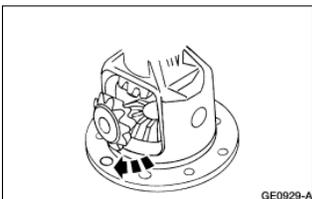
3. Use Motorcraft Synthetic Rear Axle Lubricant meeting Ford specification WSL-M2C192-A to lubricate the differential pinion thrust washers (4230) and the differential pinion gears (4215) and assemble.



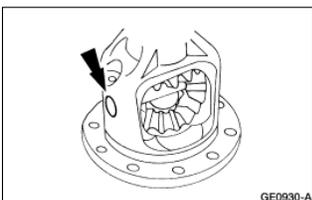
4. Engage the differential pinion gears opposite the differential side gears.



5. Rotate the differential pinion gears to align the differential pinion shaft bore.

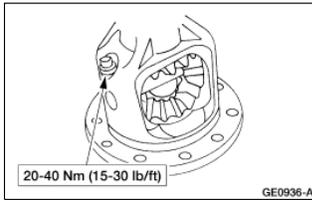


6. Insert the differential pinion shaft.

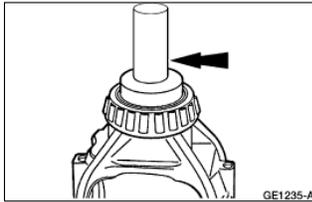


7. **NOTE:** If a new pinion shaft lock bolt is unavailable, coat the threads with Threadlock and Sealer EOAZ-19554-AA or equivalent meeting Ford specification WSK-M2G315-A5 and ESE-M4G204-A2 prior to installation.

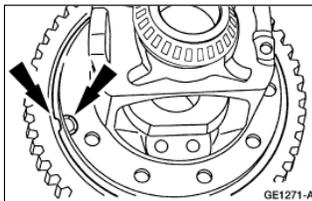
Install the differential pinion shaft lock bolt.



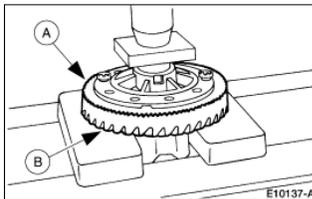
8. Use Differential Side Bearing Replacer to install the differential bearing on the differential case.



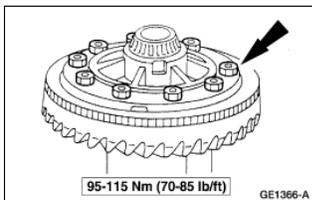
9. Install the anti-lock speed sensor ring by aligning the tab on the anti-lock speed sensor ring with the slot on the differential case.



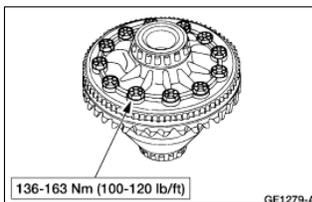
10. Start two of the ring gear bolts to make sure the alignment is correct.
11. Press the new (A) anti-lock speed sensor ring and the (B) ring gear on the differential case.



12. On 8.8 inch axle, apply Stud and Bearing Mount E0AZ-19554-BA or equivalent meeting Ford specification WSK-M2G349-A1 to ring gear bolts and install the 10 ring gear bolts.



13. On 9.75 and 10.25 inch axle, apply Stud and Bearing Mount E0AZ-19554-BA or equivalent meeting Ford specification WSK-M2G349-A1 to ring gear bolts and install the 12 ring gear bolts.



14. Install the differential case; refer to [Differential Ring and Pinion](#) in this section.

