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2015 FORD Ranger Double Cab OEM Service and Repair Workshop Manual

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Yes	<p>Install a new differential carrier and/or differential carrier components as necessary. REFER to: Differential Carrier (205-02A Rear Drive Axle/Differential - Vehicles With: Ford 8.8 Inch Ring Gear, Removal and Installation).</p> <p>REFER to: Differential Carrier - Vehicles With: Electronic Locking Differential (ELD) (205-02A Rear Drive Axle/Differential - Vehicles With: Ford 8.8 Inch Ring Gear, Disassembly and Assembly).</p>
No	<p>Inspect the vehicle for any other symptoms related to the axle.</p>

PINPOINT TEST H : GRUNTING- NORMALLY ASSOCIATED WITH A SHUDDER EXPERIENCED DURING ACCELERATION FROM A COMPLETE STOP

Normal Operation and Fault Conditions

REFER to: [Rear Drive Axle and Differential](#)(205-02A Rear Drive Axle/Differential - Vehicles With: Ford 8.8 Inch Ring Gear, Description and Operation).

Possible Sources

- Loose rear axle mount bolts
- Loose suspension fasteners

H1 CHECK FOR LOOSE BOLTS

- Check for loose bolts.

Are any bolts loose?

Yes	<p>Tighten to specifications. REFER to: Axle Assembly (205-02A Rear Drive Axle/Differential - Vehicles With: Ford 8.8 Inch Ring Gear, Removal and Installation).</p>
No	<p>The system is operating correctly at this time.</p>

PINPOINT TEST I : ROTATIONAL NOISE FROM AXLE THAT CHANGES PITCH WHEN CONERING

- Loose axle bolts
- Driveline angle

J1 CHECK THE AXLE MOUNTS AND THE REAR SUSPENSION FOR DAMAGE OR WEAR

- Check the axle mounts and the rear suspension for damage or wear.

Was wear or damage found?

Yes	Repair as necessary. REFER to: Axle Assembly (205-02A Rear Drive Axle/Differential - Vehicles With: Ford 8.8 Inch Ring Gear, Removal and Installation).
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No	GO to J2
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J2 CHECK THE REAR AXLE FOR LOOSE BOLTS

- Check the rear axle for loose bolts.

Were any bolts loose?

Yes	Tighten the bolts as necessary. REFER to: Axle Assembly (205-02A Rear Drive Axle/Differential - Vehicles With: Ford 8.8 Inch Ring Gear, Removal and Installation).
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No	GO to J3
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J3 CHECK FOR CORRECT DRIVELINE ANGLES

- Check for correct driveline angles.
 REFER to: [Driveshaft Angle Measurement](#)(205-01 Driveshaft, General Procedures).

Are the driveline angles correct?

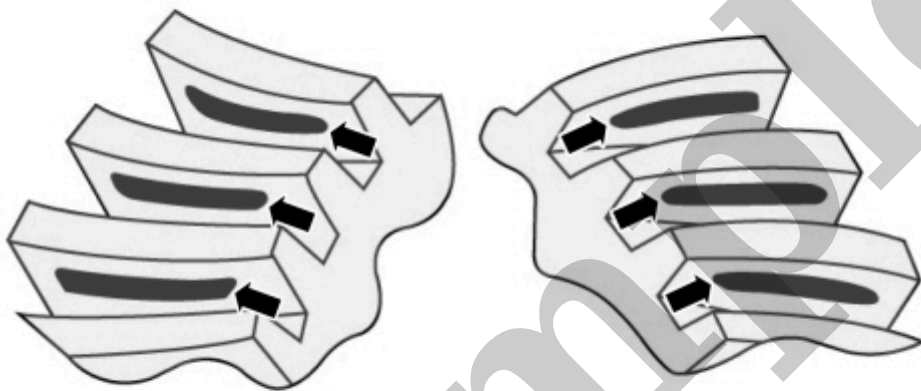
Yes	Inspect the vehicle for any other symptoms related to the axle.
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Contact Pattern

In general, desirable ring gear tooth patterns must have the following characteristics:

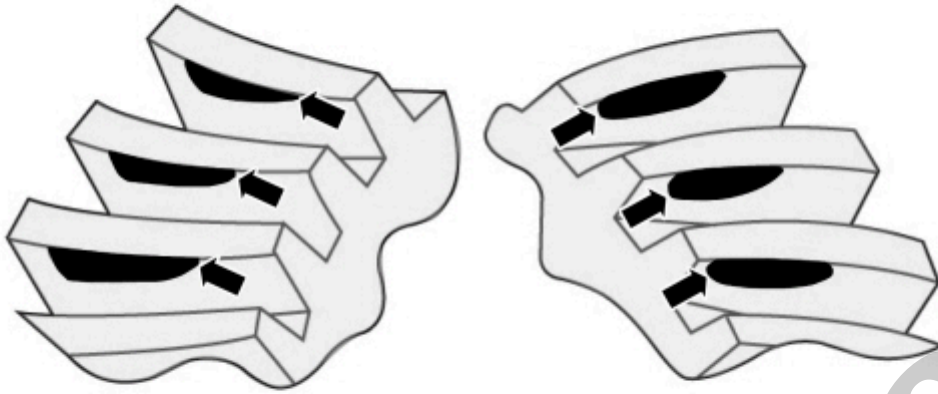
- Drive pattern on the drive side ring gear well centered on the tooth. There should be some clearance between the pattern and the top of the tooth.
- Coast pattern on the coast side ring gear well centered on the tooth, but may be slightly toward the toe. There should be some clearance between the pattern and the top of the tooth.

Acceptable ring gear tooth patterns for all axles.



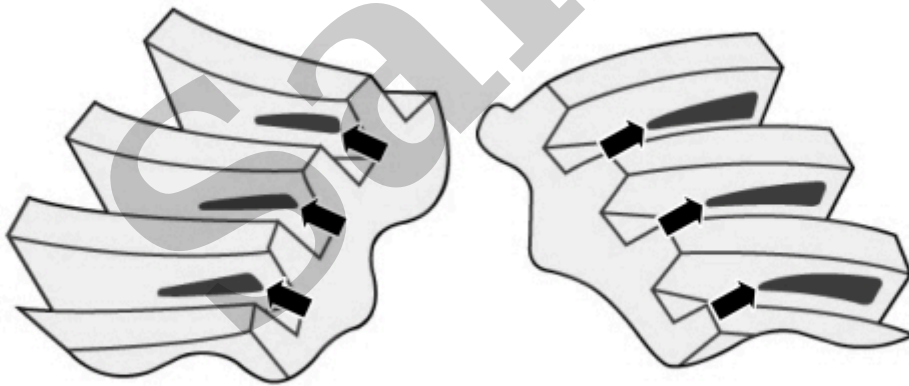
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Correct backlash with a thicker pinion position shim required.



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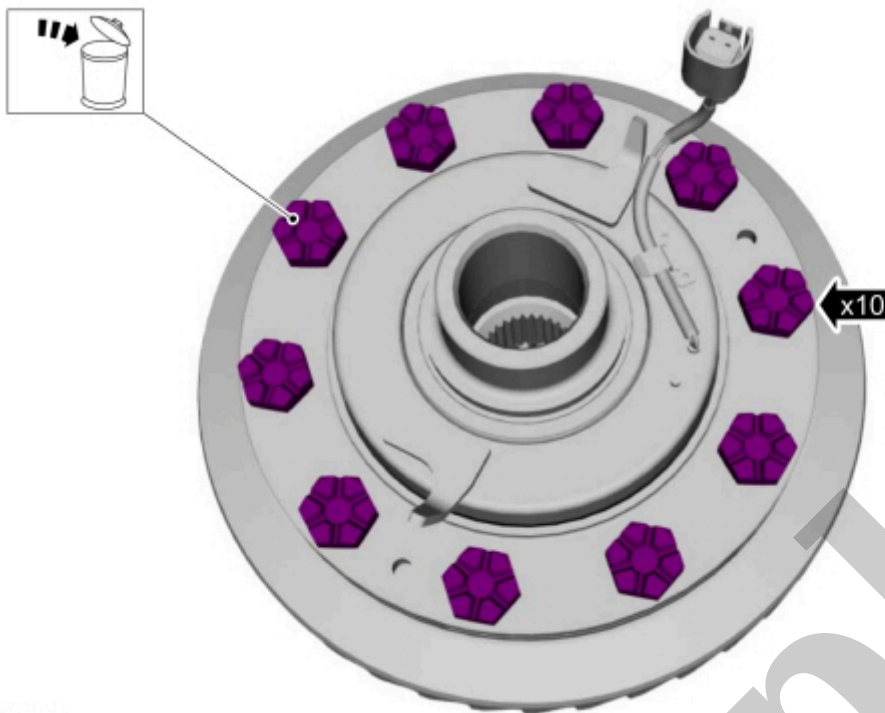
Pinion position correct. Increase backlash.



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3. Remove and discard the ring gear bolts.



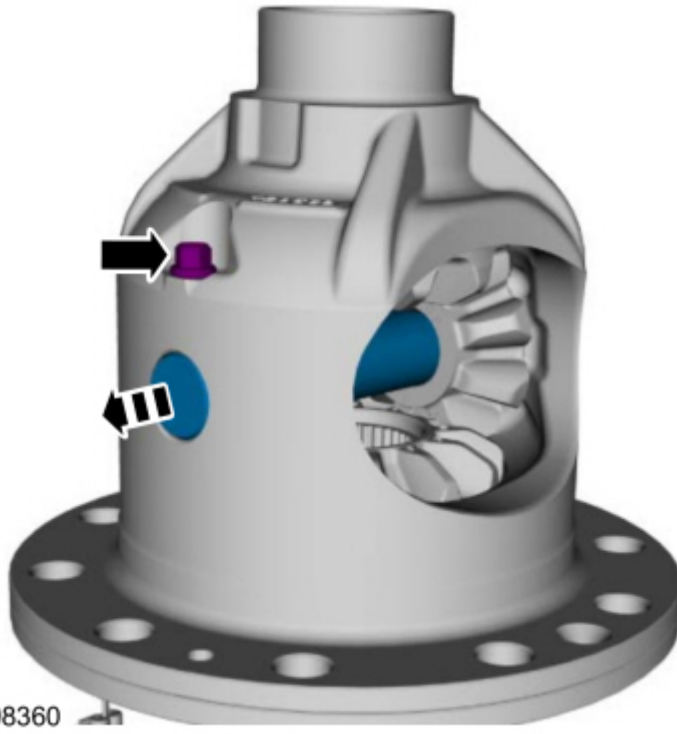
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4. Using the brass punch and a soft face hammer, remove the ring gear.

Use the General Equipment: Punch

Use the General Equipment: Copper Hammer



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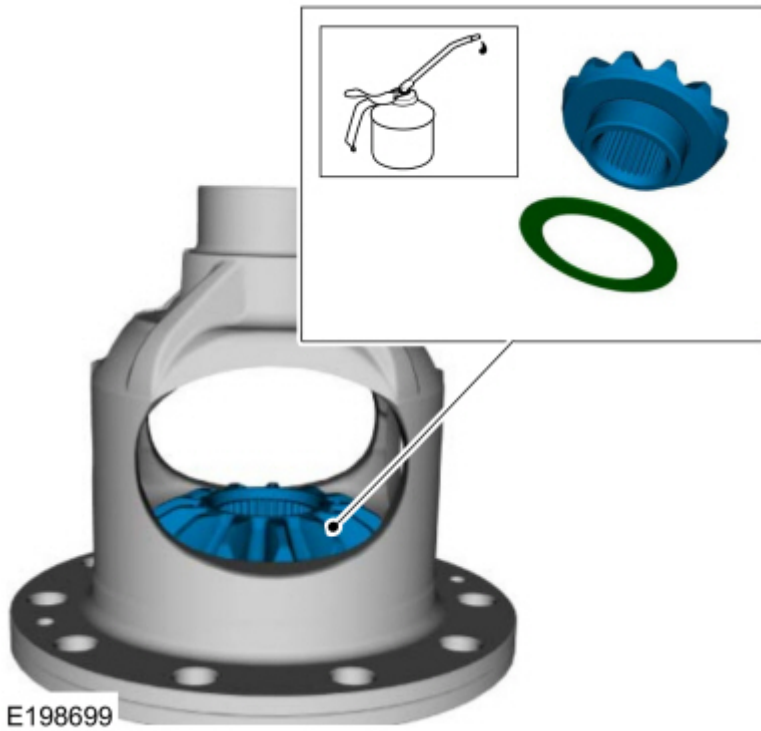
7. Rotate and remove the differential pinion gears and differential pinion gear thrust washers.



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



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2. **NOTE**

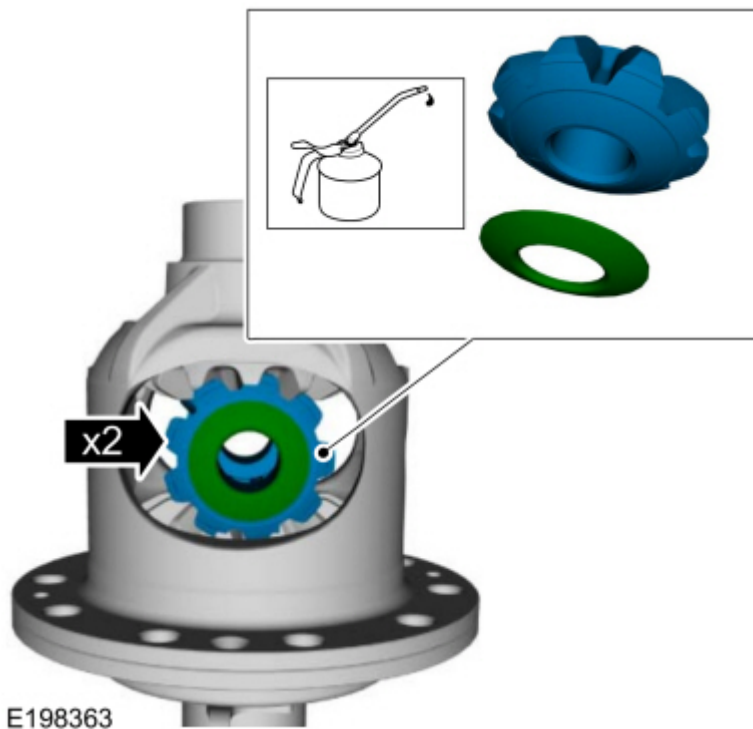
Replace the RH (right-hand) side gear thrust washer with a new thrust washer (0.864 mm (0.034 in)) thick.

NOTE

Lubricate the differential side gear thrust washer and the side gear journal with axle lubricant.

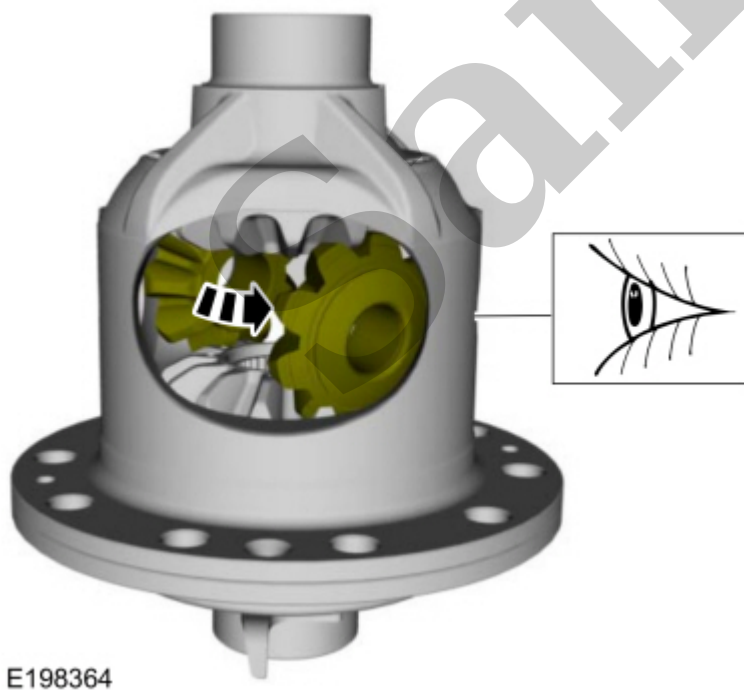
Position the RH (right-hand) differential side gear thrust washer on the RH (right-hand) differential side gear and install the gear.

Material : Motorcraft® SAE 75W-85 Premium Synthetic Hypoid Gear Lubricant / XY-75W85-QL (WSS-M2C942-A)



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



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5. Insert the differential pinion shaft, and install a new differential pinion shaft lock bolt finger-tight.

7. **NOTE**

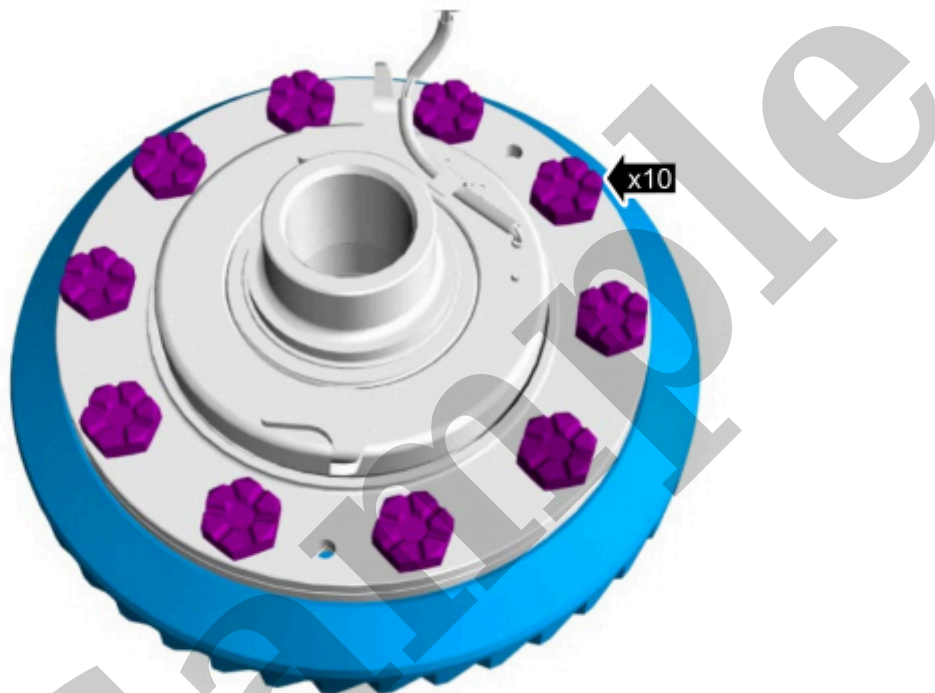
Tighten the ring gear bolts in a cross pattern.

Install the ring gear and the new ring gear bolts.

Torque :

Stage 1: 44 lb.ft (60 Nm)

Stage 2: 90°



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8. Using the general equipment, install the new differential bearings.

Use Special Service Tool : 205-153 (T80T-4000-W) Handle , 205-1016 Installer, Differential Bearing