


Driveline Angle Inspection  [Printable View \(122 KB\)](#)

Special Tool(s)

| | |
|---|--|
|  ST1622-A | Anglemaster II Driveline Inclinometer 164-R2402 or equivalent |
|---|--|

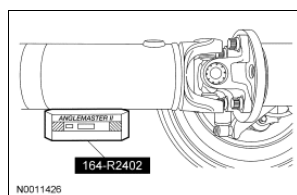
NOTE: An incorrect driveline angle can cause a vibration or shudder. For additional information, refer to [Section 100-04](#) .

All vehicles

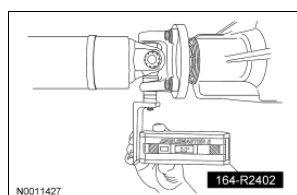
1. Check the vehicle for evidence of overload or sagging. Check for specified air pressures information in all 4 tires.
2. Normalize the suspension.
3. Drive the vehicle onto a drive-on hoist or back onto a front-end alignment rack.
4. Inspect the suspension and chassis. Verify that the vehicle curb position ride height is within specification. For additional information, refer to [Section 204-00](#) .
 - Measure the curb position ride height with the vehicle empty and all fluids full.

4.0L vehicles

5. Place the Inclinometer flush against the bottom of the driveshaft. After the tool has been held on the driveshaft surface for 5 seconds, push the ALT ZERO button to calibrate to zero degrees. Remove the tool.

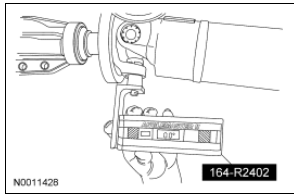


6. To check the pinion angle, rotate the driveshaft so that the pinion flange yoke ear is parallel to the floor. Install the special tool. Check and record the pinion angle reading.
 - If the angle is not within specification, repair or adjust to obtain the correct angle. Inspect the rear suspension, axle, axle mounting or the frame for wear or damage.



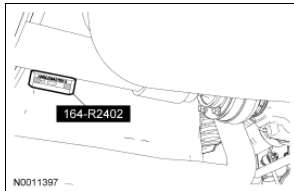
7. To check the engine angle, rotate the driveshaft so that the slip yoke ear is parallel to the floor. Install the special tool. Check and record the engine angle reading.

- If the angle is not within specifications, repair or adjust to obtain the correct angles. Inspect the powertrain/drivetrain mounts or frame rails for wear or damage.

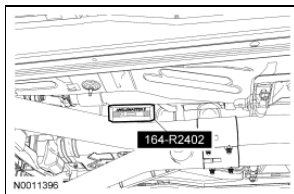


4.6L vehicles

8. Place the Inclinometer on a flat level surface. After the tool has been held on the flat level surface for 5 seconds, push the ALT ZERO button to calibrate to zero degrees.
9. To check the pinion angle, install the special tool at the rear of the driveshaft. Check and record the pinion angle reading.
 - If the angle is not within specification, repair or adjust to obtain the correct angle. Inspect the rear suspension, axle, axle mounting or the frame for wear or damage.



10. To check the engine angle, install the special tool on the front of the driveshaft. Check and record the engine angle reading.
 - If the angle is not within specifications, repair or adjust to obtain the correct angles. Inspect the powertrain/drivetrain mounts or frame rails for wear or damage.



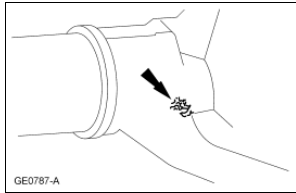
11. To check the center bearing angle, calculate the mean value of the pinion angle reading and the engine angle reading.
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Axle Housing Casting Porosity (Holes in Casting) Repair  [Printable View \(19 KB\)](#)

⚠ CAUTION: To keep the axle's sound characteristics, do not disassemble the carrier.

NOTE: Casting porosity is a condition where occasionally gas bubbles will form during the casting process leaving small pockets in the metal that will cause the axle housing to leak.

1. To fill small pockets,peen in a small amount of body lead.



2. Seal the pocket.
 - Use epoxy sealer meeting Ford specification M-3D35A(E).
 3. To fill large pockets, drill and tap a shallow hole for a small setscrew. Install the setscrew and seal it.
 - Use epoxy sealer meeting Ford specification M-3D35A(E).
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Axle Housing Weld Leaks Repair  [Printable View \(20 KB\)](#)

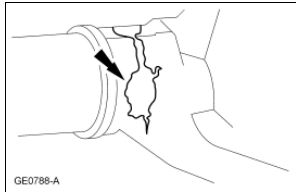
1. **⚠ CAUTION:** To keep the axle's sound characteristics, do not disassemble the carrier.

⚠ CAUTION: Axle housing straightness is too critical for field repair. Install a new axle housing if a weld is broken.

NOTE: Most minor weld leaks are repairable. This includes the puddle and fill welds that join the axle shaft tube to the axle housing on integral axles.

Seal the weld.

- Use epoxy sealer meeting Ford specification M-3D35A(E).



[Printable View \(7 KB\)](#)

General Specifications

| Item | Specification |
|------------------------------------|---------------|
| Premium Long-Life Grease XG-1-C | ESA-M1C75-B |
| Medium Strength Threadlocker TA-25 | WSK-M2G351-A5 |

Torque Specifications

| Description | Nm | lb-ft |
|---|-----|-------|
| Driveshaft flange bolts | 103 | 76 |
| Center bearing bolts | 48 | 35 |
| Driveshaft constant velocity (CV) joint bolts | 55 | 41 |
| Exhaust pipe nuts | 48 | 35 |

Driveshaft  [Printable View \(9 KB\)](#)

NOTE: All driveshaft assemblies are balanced. If undercoating the vehicle, protect the driveshaft to prevent overspray of any undercoating material.

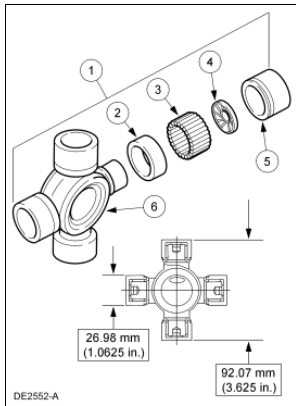
The driveshafts have the following features:

- A tubular shaft used to transfer engine torque from the transmission output shaft to the differential in the axle housing, which transmits torque through the axle shafts to the drive wheels.
 - The 4.0L driveshaft consists of 2 driveshaft centering socket yokes, 2 single-cardan universal joints, a driveshaft slip yoke, a driveshaft slip yoke boot, 2 driveshaft slip yoke boot clamps and a welded tube assembly.
 - The 4.6L drive shaft consists of a driveshaft centering socket yoke, a single-cardon universal joint, a center bearing and 2 constant velocity (CV) joints.
 - The splined driveshaft slip yoke permits the driveshaft to move forward and rearward during drivetrain movement and during driveshaft removal and installation.
 - The driveshafts are not serviced.
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Universal Joints  [Printable View \(44 KB\)](#)

The universal joints are:

- lubed-for-life design and require no lubrication.
- equipped with nylon thrust washers, located at each base of the bearing cup, which control end play, position the needle bearing and improve grease movement.



| Item | Part Number | Description |
|------|-------------|-----------------------------------|
| 1 | 4635 | Universal joint (U-joint) |
| 2 | | Grease seal (part of 4635) |
| 3 | | 32 needle bearings (part of 4635) |
| 4 | | Thrust washer (part of 4635) |
| 5 | | Bearing cup (part of 4635) |
| 6 | | Spider (part of 4635) |

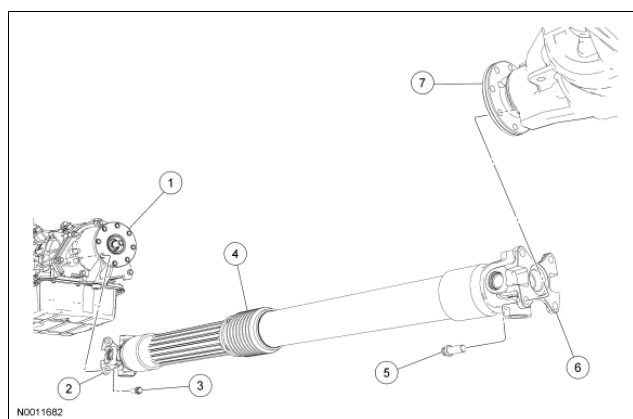
Driveshaft  [Printable View \(7 KB\)](#)

Refer to [Section 205-00](#) .

Driveshaft 4.0L  [Printable View \(203 KB\)](#)

Material

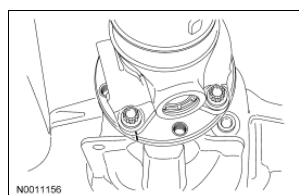
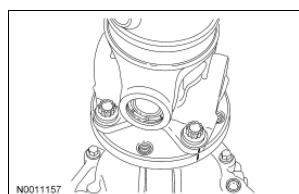
| Item | Specification |
|---------------------------------------|---------------|
| Medium Strength Threadlocker TA-25 | WSK-M2G351-A5 |



| Item | Part Number | Description |
|------|-------------|--|
| 1 | | Transmission output flange |
| 2 | | Driveshaft flange (part of 4602) |
| 3 | | Driveshaft flange bolt |
| 4 | | Driveshaft slip yoke boot (part of 4602) |
| 5 | | Driveshaft flange bolt |
| 6 | | Driveshaft flange (part of 4602) |
| 7 | | Pinion flange |

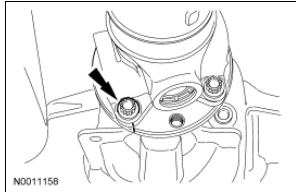
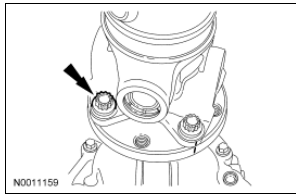
Removal and Installation

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to [Section 100-02](#) .
2. Index mark the driveshaft to maintain alignment during installation.



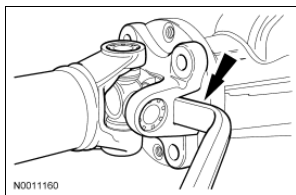
3. Remove and discard the 8 driveshaft flange bolts.

- To install, tighten to 103 Nm (76 lb-ft).



4. **⚠ CAUTION:** The driveshaft flanges fits tightly on the flange pilots. Never hammer on the driveshaft or any of its components to disconnect the driveshaft flanges from the flange pilots. Pry only in the area shown with a suitable tool, to disconnect the driveshaft flanges from the flange pilots.

Using a suitable tool as shown, disconnect the driveshaft flanges from the flange pilots and remove the driveshaft.



5. **⚠ CAUTION:** The driveshaft flanges fits tightly on the pinion flange pilots. To make sure that the driveshaft flanges seat squarely on the pinion flange pilots, tighten the driveshaft flange bolts evenly in a cross pattern.

⚠ CAUTION: If new driveshaft flange bolts are not available, coat the threads of the original driveshaft flange bolts with Medium Strength Threadlocker TA-25 meeting Ford specification WSK-M2G351-A5.

To install, reverse the removal procedure.

- Install new fasteners.