SECTION 204-01B: Front Suspension 4x4 REMOVAL AND INSTALLATION

2004 F-Super Duty/Excursion Workshop Manual Procedure revision date: 05/24/2003

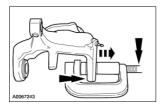
Ball Joint Upper Printable View (35 KB)

Removal

- 1. Remove the wheel knuckle. For additional information, refer to Wheel Knuckle in this section.
- 2. Place the wheel knuckle into a suitable vise.
- 3. **NOTE:** Always remove the lower ball joint first.

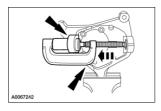
Remove the lower ball joint. For additional information, refer to <u>Ball Joint Lower</u> in this section.

4. Using a suitable ball joint press, remove the ball joint.



Installation

- 1. Clean the wheel knuckle ball joint bores.
- 2. Using a suitable ball joint press, install the ball joint.

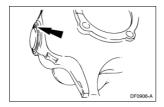


- 3. Install the lower ball joint. For additional information, refer to <u>Ball Joint Lower</u> in this section.
- 4. Install the wheel knuckle. For additional information, refer to Wheel Knuckle in this section.

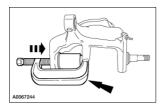
Ball Joint Lower Printable View (45 KB)

Removal

- 1. Remove the wheel knuckle. For additional information, refer to Wheel Knuckle in this section.
- 2. Place the wheel knuckle into a suitable vise.
- 3. Remove the snap ring.

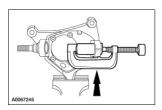


4. Using a suitable ball joint press, remove the ball joint.

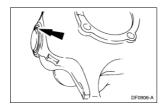


Installation

- 1. Clean the wheel knuckle ball joint bore.
- 2. Using a suitable ball joint press, install the ball joint.



3. Install the snap ring.



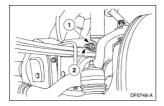
4. Install the wheel knuckle. For additional information, refer to Wheel Knuckle in this section.

Shock Absorber

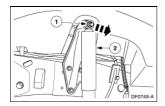
Printable View (88 KB)

Removal and Installation

- 1. Raise and support the vehicle. For additional information, refer to Section 100-02.
- 2. Disconnect the shock absorber lower mount.
 - 1. Remove the nut.
 - 2. Remove the bolt.

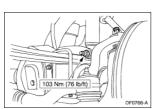


- 3. Disconnect the shock absorber upper mount.
 - 1. Remove the nut.
 - 2. Pull the shock absorber away from the mounting stud.

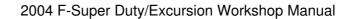


4. To install, reverse the removal procedure.





Shock Absorber

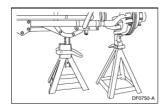


Shock Absorber Printable View (88 KB) 2265

Spring Leaf Printable View (380 KB)

Removal

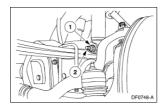
- 1. Remove the wheel and tire assembly. For additional information, refer to Section 204-04.
- 2. Position jack stands under the axle housing.



3. **NOTE:** The following step is for the left-hand shock only.

Remove the shock.

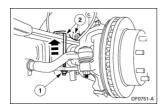
- 1. Remove the nut and bolt.
- 2. Remove the shock from the front spring cap.



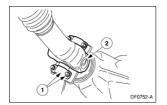
4. ▲ CAUTION: Never reuse U-bolts. The U-bolts are a torque-to-yield design and cannot be retightened. Failure to use a new U-bolt can result in loose or broken springs and suspension components.

Remove the U-bolts.

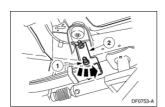
- 1. Remove the four nuts.
- 2. Remove the two U-bolts and the front spring spacer. Discard the U-bolts.



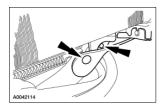
- 5. Disconnect the front driveshaft.
 - 1. Remove the four bolts and the two straps.
 - 2. Remove the driveshaft from the pinion flange.



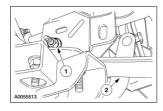
- 6. Disconnect the spring shackle.
 - 1. Remove the nut and bolt.
 - 2. Position the spring shackle away from the spring.



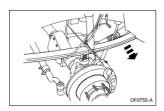
7. Detach the pushpin and remove the bolt and condenser bracket.



- 8. Disconnect the spring hanger.
 - 1. Remove the nut and bolt.
 - 2. Using a hammer, tap the spring until the spring is free from the hanger bracket.



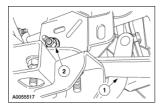
9. Remove the spring from the vehicle.



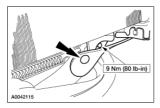
Installation

- 1. Position the spring in the vehicle.
- 2. Install the spring into the spring hanger.
 - 1. Position the spring into the hanger.
 - 2. Install the bolt and nut. Do not tighten the nut and bolt at this time.

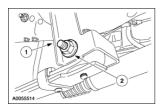
Spring Leaf Printable View (380 KB)



3. Install the bracket and bolt and the pushpin.



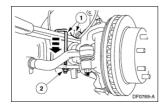
- 4. Install the spring into the spring shackle.
 - 1. Position the shackle.
 - 2. Install the bolt and nut. Do not tighten the nut and bolt at this time.



5. **NOTE:** The U-bolts insert through the front spring cap on the left-hand side and through the axle assembly bracket on the right-hand side.

Install the upper front spring spacer and U-bolts.

- 1. Position the front spring spacer and the new U-bolts.
- 2. Install the four nuts. Do not tighten the nuts at this time.



6. **NOTE:** The following step is for the left-hand shock only. The right-hand shock is similar.

Install the shock, bolt and nut onto the spring cap.



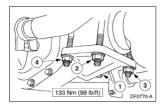
7. **NOTE:** The suspension must be loaded with the weight of the vehicle before the U-bolts and the leaf spring mounting bolts can be tightened. Make sure that the locating pin is correctly aligned with the axle.

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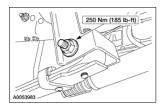
Lower the vehicle onto the jack stands until the front suspension is supporting the weight of the vehicle.

8. **NOTE:** The U-bolts must be tightened in a criss-cross sequence. This will tighten the U-bolts evenly.

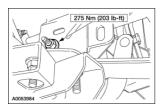
Tighten the U-bolts following the sequence.



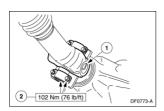
9. Tighten the leaf spring rear retaining bolt and nut.



10. Tighten the leaf spring front retaining bolt and nut.



- 11. Raise the vehicle and remove the jack stands.
- 12. Install the front driveshaft.
 - 1. Position the driveshaft onto the pinion flange.
 - 2. Install the two straps and the four bolts.



13. Install the wheel and tire assembly. For additional information, refer to Section 204-04.

Spring Leaf Printable View (380 KB)

Spring Leaf Printable View (380 KB)