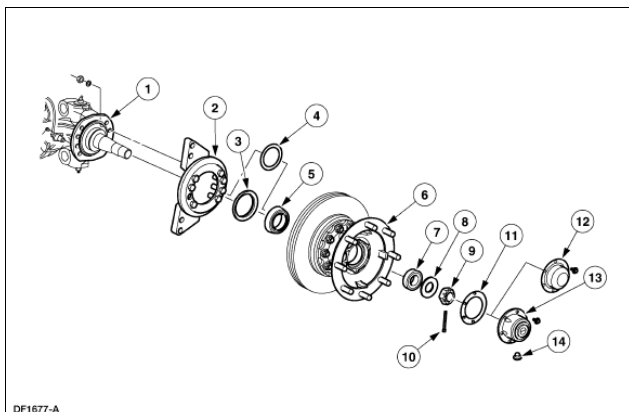


Item	Part Number	Description
1	5340	Spring front bracket
2		Pin
3	3020	Jounce bumper
4		Spring cap
5	18183	Shock absorber upper mounting bracket
6	18124	Shock absorber
7	5340	Spring rear bracket
8		Shackle
9	5310	Front spring
10	18183	Shock absorber lower mounting bracket
11	3001	Front Axle
12	5486	Stabilizer bar link lower mounting bracket

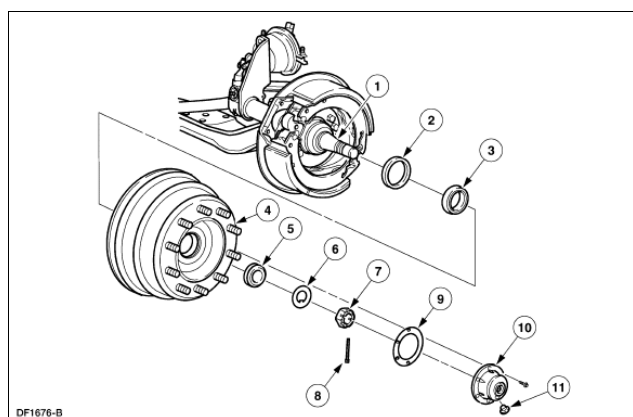
Wheel Hub, Disc Brakes Exploded View



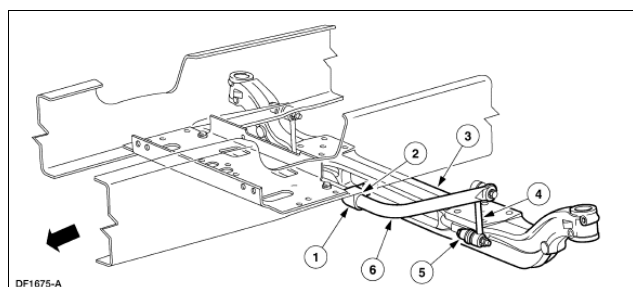
Item	Part Number	Description
1	3105	Spindle
2	2B540	Brake caliper support bracket
3	1190	Seal, oil-filled hubs

Front Suspension, 12,000 lb Axle Exploded View

4	1190	Seal, grease-filled hubs
5	1201	Inner wheel bearing
6	1102	Hub and disc assembly
7	1216	Outer wheel bearing
8	385603-S2	Washer
9	385602-S2	Nut
10	72145-S36	Cotter pin
11		Gasket
12	1131	Hub cap (grease-filled hubs)
13	1131	Hub cap (oil-filled hubs)
14		Oil plug (oil-filled hubs only)

Wheel Hub, Drum Brakes Exploded View

Item	Part Number	Description
1	3105	Spindle
2	1190	Seal
3	1201	Inner wheel bearing
4	1102	Hub and drum assembly
5	1216	Outer wheel bearing
6	385603-S2	Washer
7	385602-S2	Nut
8	72145-S36	Cotter pin
9		Gasket
10	1131	Hub Cap
11		Oil plug (oil-filled hubs only)

Stabilizer Bar Installed View

Item	Part Number	Description
1	5486	Stabilizer bar mounting bracket
2	5484	Stabilizer bar bushing
3	3001	Front axle
4	5K483	Stabilizer bar link
5	5486	Stabilizer bar link lower mounting bracket
6	5482	Stabilizer bar

When repairing the front axle, wheel hubs or suspension, install new any component that is damaged or out of specification. All major axle and suspension components are heat treated and, therefore, cannot be bent, twisted, welded, heated or reconditioned without experiencing a strength or fatigue life reduction.

Following are examples of specified prohibited operations:

- hot or cold bending or twisting of I-beam, tie-rod assemblies, spindles, steering arms or tie-rod arms for any reason
- welding of, or to, steering arms, tie-rod arms, I-beams, steering spindles, spindle pins or tie rod assemblies
- redrilling or re boring of I-beam spindle pin holes for a bushing
- milling or machining of any component
- spray welding of bearing diameters or other machined surfaces
- redrilling or re boring of draw keyholes
- relocation or removal of tie-rod clamps

Fasteners

⚠ CAUTION: All front suspension fasteners are important attaching parts in that they can affect the performance of vital parts and systems, and their failure can result in major service expense. A new part with the same part number must be installed if installation becomes necessary. Do not use a new part of lower quality or substitute design. Torque values must be used as specified during assembly to make sure of correct retention of suspension parts.

Never attempt to heat, quench or straighten any front suspension part. Install a new part.

Wheel Seal and Bearing

Two opposed tapered roller bearings are installed in each hub. A grease or oil retainer is installed at the inner end of each hub to prevent lubricant from leaking. The entire assembly is retained to its spindle by a retaining nut.

Wheel bearing lubricant is a lithium based grease such as Motorcraft Premium Long-Life Grease XG-1-C or -K or equivalent meeting Ford specification ESA-M1C75-B for grease-filled hubs, or Hypoid Gear Oil C6AZ-19580-E or equivalent meeting Ford specification ESW-M2C105-A for oil-filled hubs.

Sodium-based grease is not compatible with lithium based grease and should not be intermixed. Do not lubricate wheel bearings without determining the type of original wheel bearing lubricant. Mixing incompatible lubricants can result in premature lubricant breakdown.

If bearing adjustment does not eliminate looseness or rough and noisy operation, the hub and bearings must be cleaned, inspected and repacked with the specified wheel grease. If the bearing cups or the cone and roller assemblies or worn or damaged, new ones must be installed.

SECTION 204-01: Front Suspension
DIAGNOSIS AND TESTING

2003 F-650/750 Workshop Manual

Front Suspension

Refer to Section 204-00 .

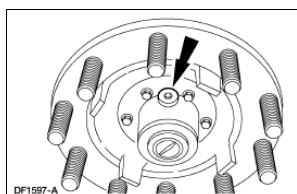
Wheel Bearing Adjustment

All vehicles

1. Remove the wheel and tire assembly. For additional information, refer to [Section 204-04](#).

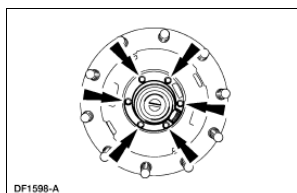
Vehicles with oil-filled hubs

2. Remove the oil plug and drain the oil into a suitable container.

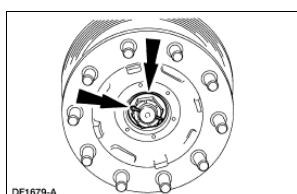


All vehicles

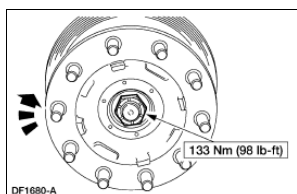
3. Remove the bolts, the hub cap and gasket.



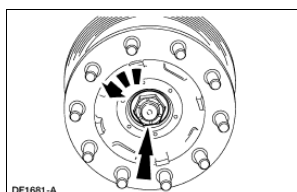
4. Remove and discard the cotter pin.



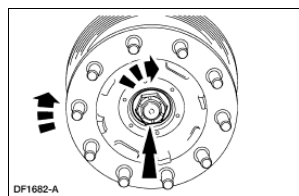
5. With the hub assembly rotating, tighten the nut.



6. Loosen the nut one turn.

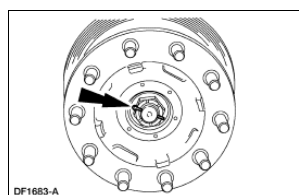


7. With the hub assembly rotating, tighten the nut by hand until it is snug.



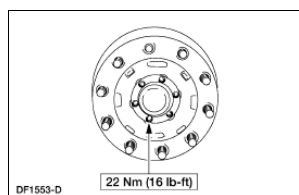
8. **NOTE:** If the slots in the nut do not line up with the hole in the spindle, continue tightening the nut until the cotter pin can be installed.

Install a new cotter pin.



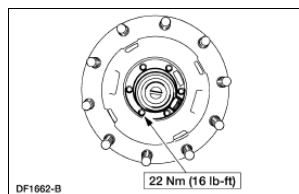
Vehicles with grease-filled hubs

9. Install a new gasket, the hub cap and the six bolts.

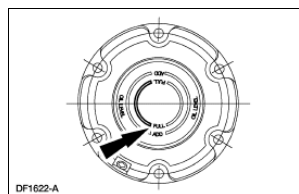


Vehicles with oil-filled hubs

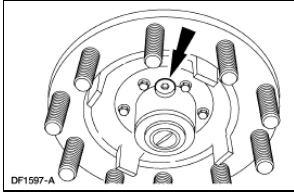
10. Install a new gasket, the hub cap and the six bolts.



11. Fill the hub with Hypoid Gear Oil C6AZ-19580-E or equivalent meeting Ford specification ESW-M2C105-A. Allow the oil to flow through the bearings for a few minutes and check the level. Add fluid as necessary to fill the hub to the full mark on the see-through hub cap.



12. Install the filler plug.







All vehicles

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

Wheel Hub and Bearing

Special Tool(s)

	Handle 205-153 (T80T-4000-W)
	Impact Slide Hammer 100-001 (T50T-100-A)
	Puller 307-001 (TOOL-1175-AC)
	Seal Replacer 204-019 (T73T-1190-B)

Removal

⚠ CAUTION: All front suspension fasteners are important attaching parts in that they can affect the performance of vital parts and systems, and their failure can result in major service expense. A new part with the same part number must be installed if installation becomes necessary. Do not use a new part of lower quality or substitute design. Torque values must be used as specified during assembly to make sure of correct retention of suspension parts.

All vehicles

1. Remove the wheel and tire assembly. For additional information, refer to [Section 204-04](#).

Vehicles with drum brakes

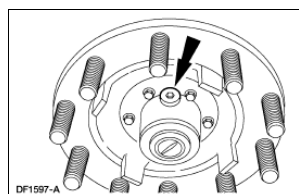
2. Remove the brake drum.

Vehicles equipped with disc brakes

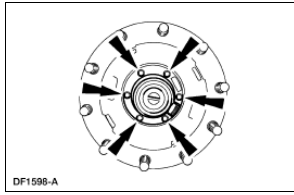
3. Remove the disc brake caliper.

Vehicles equipped with oil-filled hubs

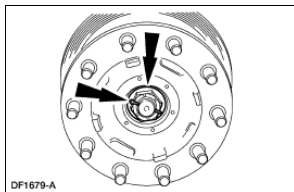
4. Remove the filler plug and drain the oil from the hub into a suitable container.

**All vehicles**

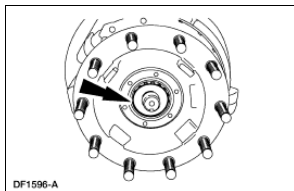
5. Remove the bolts, the hub cap (1131) and the gasket.



6. Remove the cotter pin and the nut.

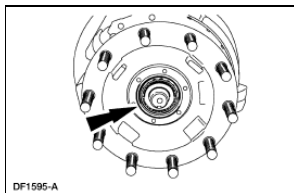


7. Remove the washer.

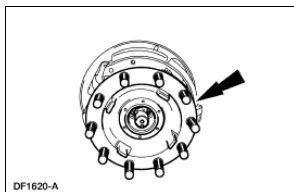


8. **⚠ CAUTION:** Use extreme care not to scratch, nick or otherwise damage the spindle when removing the bearing or the hub.

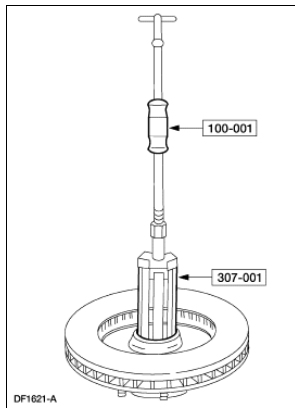
Carefully remove the outer wheel bearing (1216).



9. Carefully remove the hub (1102).



10. Using the special tools, remove the inner wheel bearing seal.



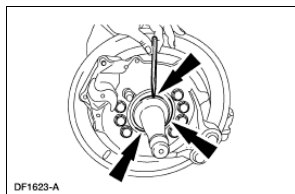
11. Remove the inner wheel bearing (1201).

Vehicles with oil-filled hubs and drum brakes

12. Remove the front brake shoes.

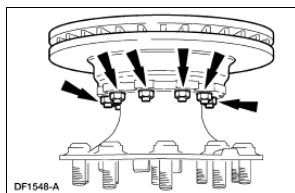
Vehicles with oil-filled hubs

13. Using a chisel, distort the seal ring in three places. Remove the ring.



Vehicles equipped with disc brakes

14. If necessary, remove the 10 nuts, bolts, washers and the front brake disc.



All vehicles

15. **⚠ CAUTION: Do not spin the bearings dry with compressed air.**

Clean all grease or oil from the spindle (3105), bearings and hub.

16. Inspect for worn or damaged parts.

Vehicles requiring a new inner wheel bearing

17. Using a brass drift, remove the inner wheel bearing cup.

Vehicles requiring a new outer wheel bearing

18. Using a brass drift, remove the outer wheel bearing cup.