



## Wheel Hub

### Special Tool(s)

 ST1137-A	73III Automotive Meter 105-R0057 or equivalent
 ST1176-A	Vacuum Pump Kit 416-D002 (D95L-7559-A) or equivalent

### Material

Item	Specification
Brake Parts Cleaner F6AZ-2C410-AB	—

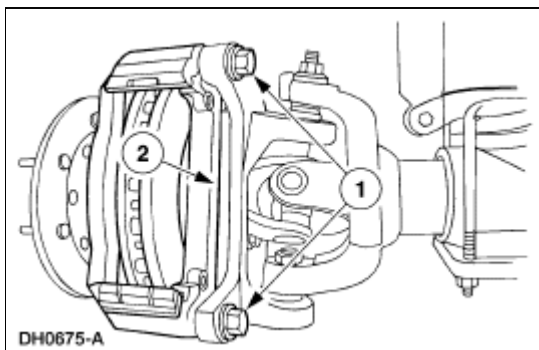
### Removal

#### All vehicles

1. Remove the wheel and tire assembly. For additional information, refer to [Section 204-04](#).
2. **NOTE:** Caliper is removed for clarity.

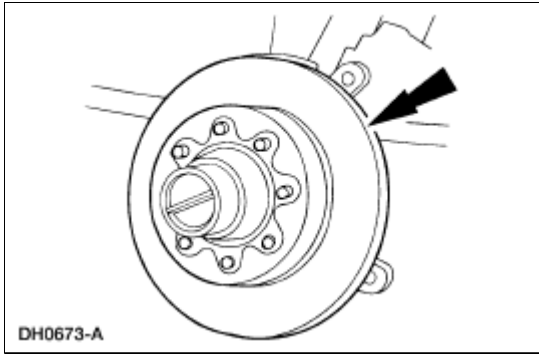
Position aside the front disc brake caliper and anchor plate (2B292).

1. Remove the two front disc brake caliper anchor plate bolts.
2. Remove the front disc brake caliper anchor plate and position aside.



3. **NOTE:** Carry out this step for F-250 and F-350 4x4 SRW vehicles.

Remove the rotor.

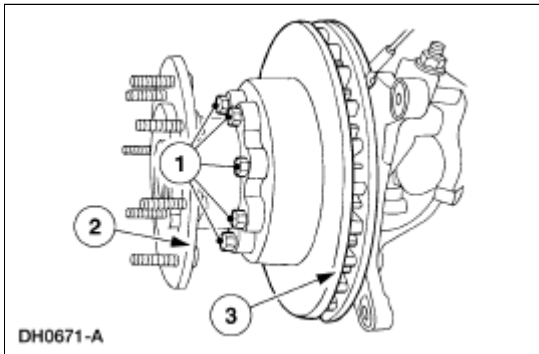


4. **NOTE:** Carry out this step for DRW vehicles.

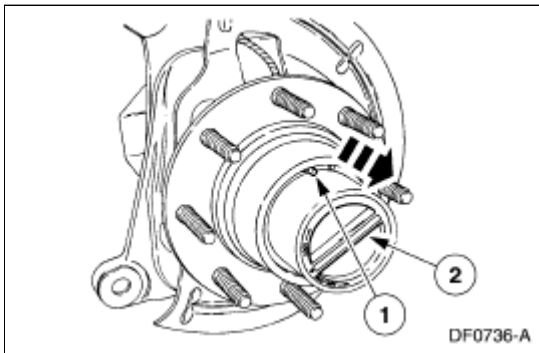
**NOTE:** If excessive force must be used during brake rotor removal, the brake rotors should be checked for lateral runout prior to installation. For additional information, refer to [Section 206-00](#).

Remove the eight hub extender nuts, the hub plate and the rotor.

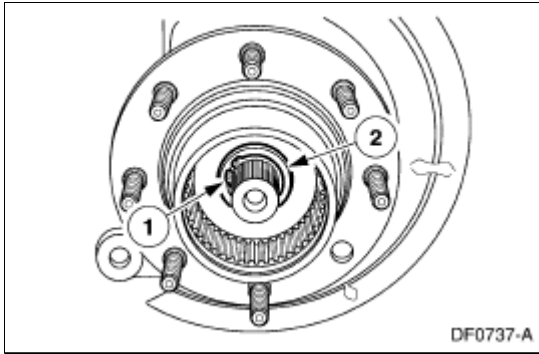
1. Remove the eight hub plate nuts.
2. Remove the hub plate.
3. Remove the rotor.



5. Remove the hub lock.
1. Remove the retainer ring.
  2. Pull outward and remove the hub lock.



6. Remove the axle shaft thrust washers.
1. Remove the snap ring.
  2. Remove the three thrust washers.

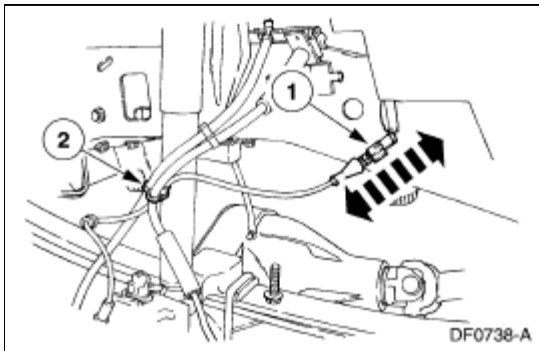


### Vehicles equipped with ABS

7.  **CAUTION: Do not remove the ABS sensor from the bearing.**

Disconnect the ABS wheel sensor harness.

1. Disconnect the connector.
2. Disconnect the harness routing clips.

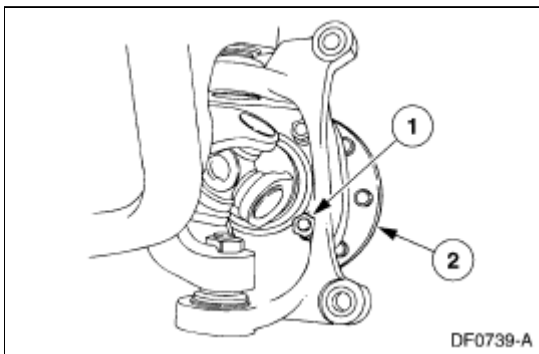


### All vehicles

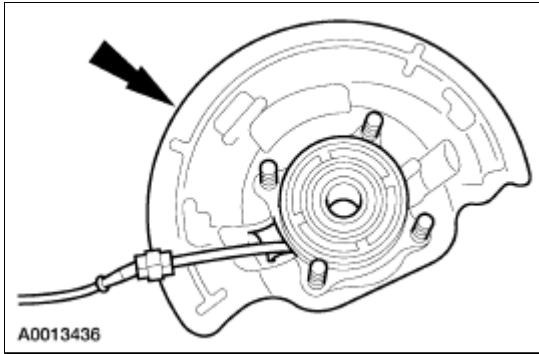
8. **NOTE:** The wheel hub and bearing is a slip fit design and should not require a puller to remove it.

Remove the wheel hub and bearing.

1. Remove the four lock nuts.
2. Remove the wheel hub and bearing.

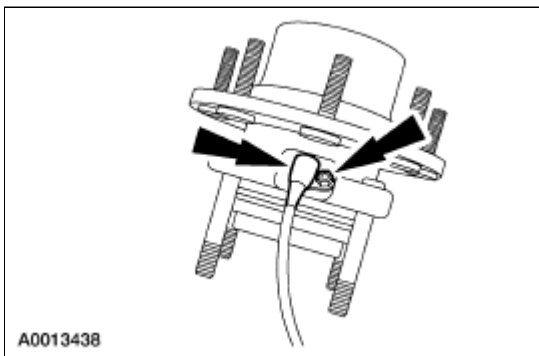


9. If necessary, remove the brake disc shield.



### Vehicles with ABS

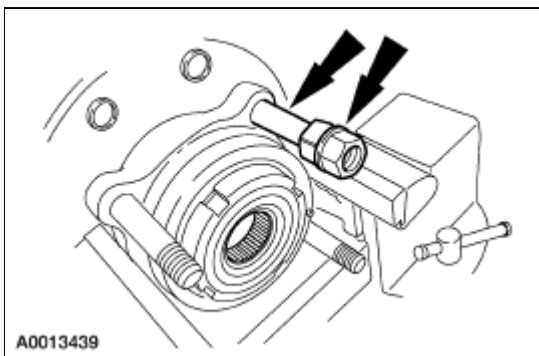
10. If necessary, remove the bolt and the ABS sensor.



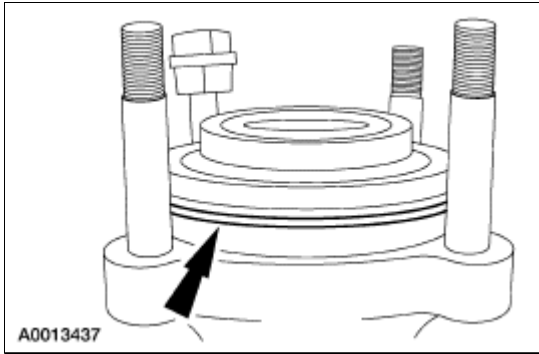
### All vehicles

11. **NOTE:** If necessary, position the hub in a soft-jawed vise.

Install two nuts on the studs and use the inner nut to remove the studs.



12. Remove and discard the O-ring.

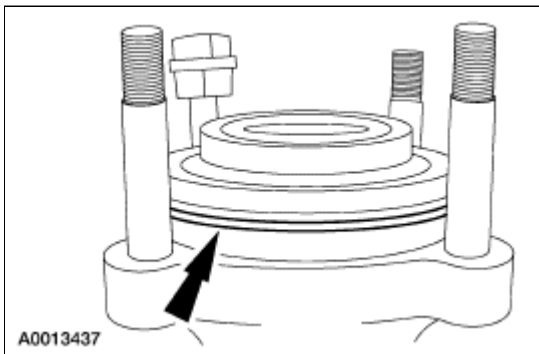


## Installation

### All vehicles

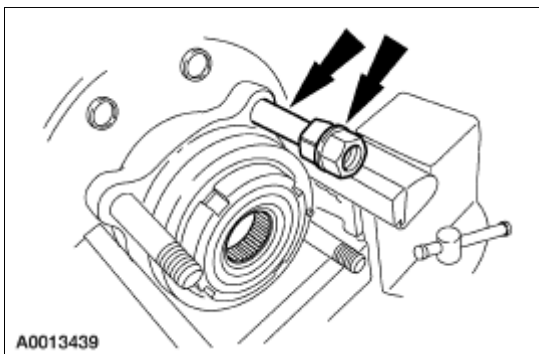
1. **NOTE:** Any time the wheel hub is removed for any reason, a new O-ring seal must be installed. Failure to do so can cause a vacuum leak and loss of four wheel drive operations.

Install a new O-ring.



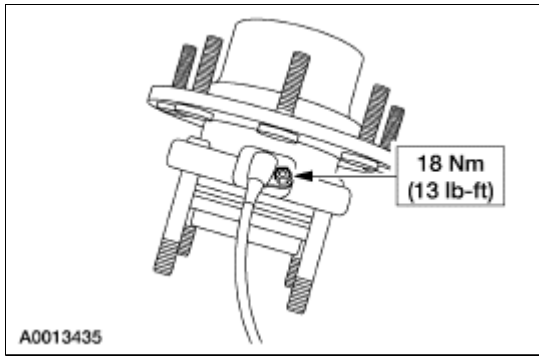
2. **NOTE:** Position the hub in a soft-jawed vise.

Install two nuts on the studs and use the outer nut to install the studs.



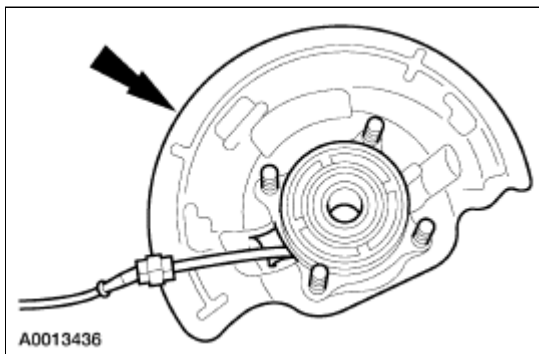
### Vehicles equipped with ABS

3. Position the ABS sensor and install the bolt.



### All vehicles

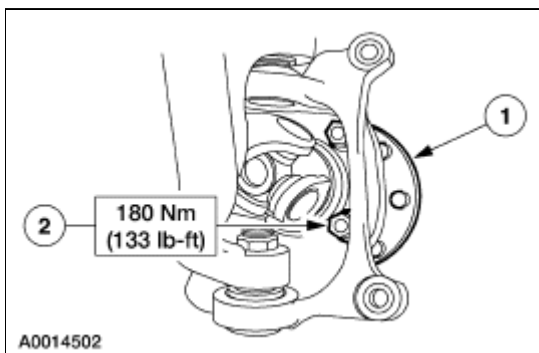
4. Position the brake disc shield.



5. **NOTE:** Apply a coat of Ford High Temperature 4x4 Front Axle and Wheel Bearing Grease E8TZ-19590-A meeting Ford specification ESA-M1C198-A to the O-ring area of the wheel hub and bearing before installing the hub and bearing.

Install the wheel hub and bearing.

1. Position the wheel hub and bearing.
2. Install the four lock nuts.

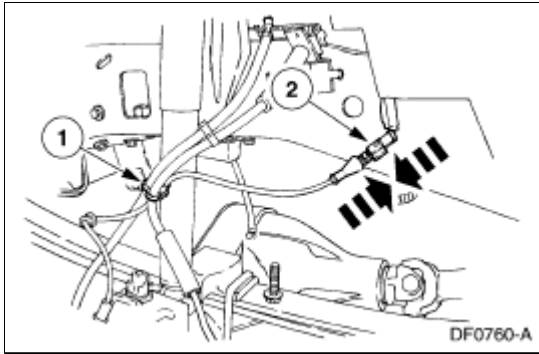


### Vehicle equipped with ABS


6. **NOTE:** The following step applies only to vehicles equipped with ABS.

Connect the ABS sensor harness.

1. Position the ABS sensor harness and install the routing clips.
2. Connect the harness connector.

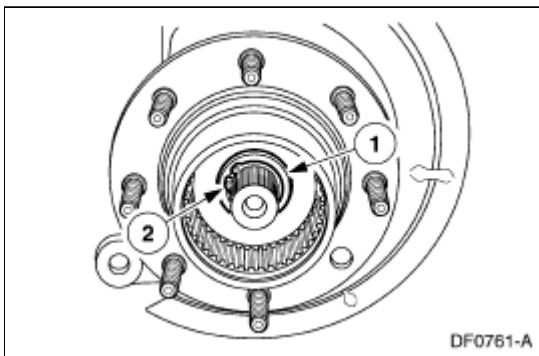


### All vehicles

7.  **CAUTION:** The non-metallic thrust washer must be installed between the two metal thrust washers. Failure to do so will cause severe wear to the non-metallic thrust washer, allowing the axle shaft to travel further in and out during torque thrust causing damage to the wheel hub and bearing, the axle shaft end seal and the axle shaft.

Install the snap ring.

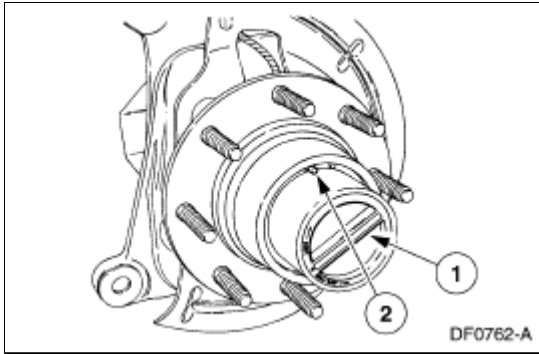
1. Position the three thrust washers onto the axle shaft.
2. Install the snap ring.



8. **NOTE:** Any time the hub lock is removed, a new O-ring seal must be installed. Failure to do so can cause a vacuum leak and loss of four wheel drive functions.

Install a new O-ring.

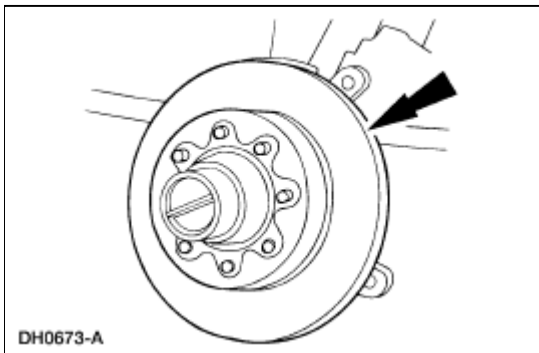
9. Install the hub lock.
1. Position the hub lock.
  2. Install the retainer ring.



10. **NOTE:** If a new wheel hub is installed, also install a new brake disc.

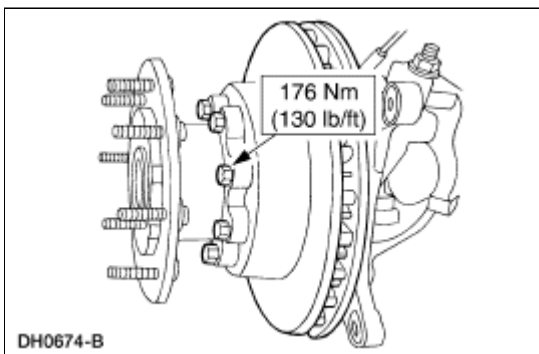
Position the front disc brake rotor (1125) to the wheel hub (1104). Make sure the wheel hub and the front disc brake rotor braking and mounting surfaces are clean.

- Use brake parts cleaner to clean the front disc brake rotor.



11. **NOTE:** Carry out this step for DRW vehicles only.

Install the front wheel hub extender and nuts.

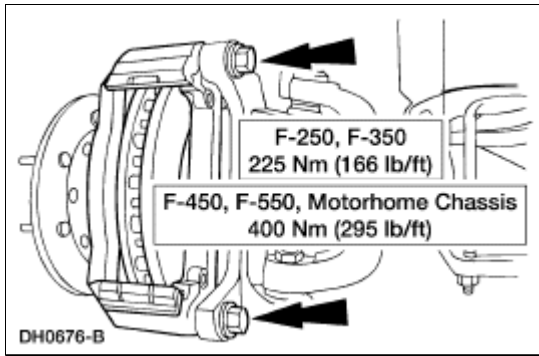


12. **NOTE:** Caliper is removed for clarity.

Position back the front disc brake caliper and anchor plate (2B292).

1. Position back the front disc brake caliper and anchor plate bolts.
2. Install the front disc brake caliper anchor plate bolts.





13. Install the wheel and tire assembly. For additional information, refer to [Section 204-04](#).
14. Install the vacuum pump and gauge line on the knuckle vacuum fitting and pump to 20 in-Hg.
15. If the vacuum drop is less than 0.5 in-Hg in 30 seconds, the 4x4 hublock is working correctly.
16. If the vacuum drop is greater than 0.5 in-Hg in 30 seconds, refer to [Front Suspension](#) in the Diagnosis and Testing portion of this section.