

SECTION 204-01 Front Suspension

VEHICLE APPLICATION: . Mazda Tribute

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SPECIFICATIONS**Torque Specifications**

| Description | Nm | lb-ft | lb-in |
|---|-----------|--------------|--------------|
| Anti-lock brake sensor bolts | 9 | — | 80 |
| Anti-lock brake sensor wire bracket bolts | 18 | 14 | — |
| Ball joint pinch bolt | 70 | 52 | — |
| Front axle wheel hub nut | 290 | 214 | — |
| lower arm pivot bolt | 115 | 85 | — |
| Lower arm mounting bolt bushing (rear) | 200 | 148 | — |
| Stabilizer bar bushing mount | 70 | 52 | — |
| Stabilizer bar links | 48 | 35 | — |
| Strut piston rod to bearing plate nut | 103 | 76 | — |
| Strut-to-wheel knuckle bolts | 115 | 85 | — |
| Tie rod end nuts | 55 | 41 | — |
| Upper strut mount bolts | 80 | 59 | — |

DESCRIPTION AND OPERATION

Front Suspension

The front suspension consist of the following components:

- wheel bearing
- wheel hub
- wheel studs
- lower control arm
- stabilizer bar
- stabilizer bar bushing
- stabilizer bar link
- strut and spring assembly
- wheel knuckle

For the removal and installation of the wheel hub, refer to Wheel Bearing in this section.

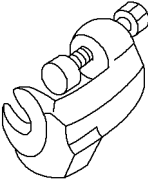
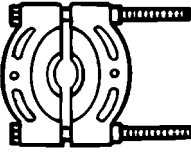
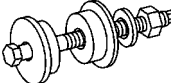
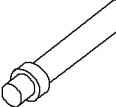
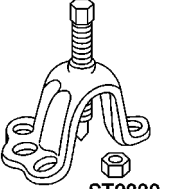
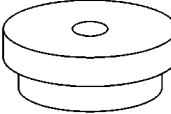
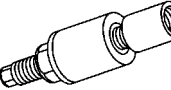
For the removal and installation of the wheel knuckle, refer to Wheel Bearing in this section.

DIAGNOSIS AND TESTING**Front Suspension**

Refer to Section 204-00.

REMOVAL AND INSTALLATION

Wheel Bearing (14 411 0)

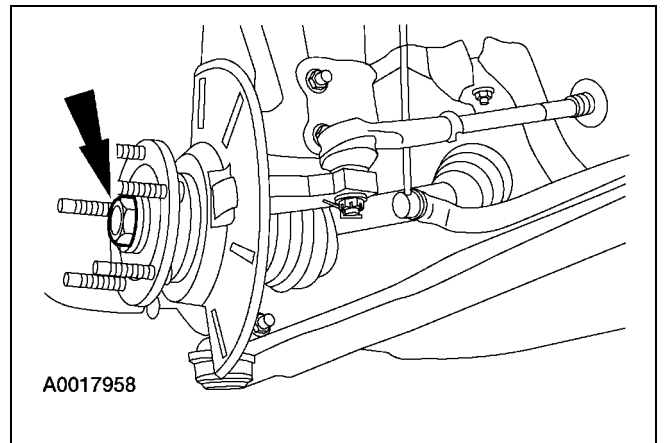
| Special Tool(s) | |
|---|---|
|  <p>ST1408-A</p> | Tie Rod End Remover 211-105 (T85M-3395-A) |
|  <p>ST1895-A</p> | Pinion Bearing Cone Remover 205-D002 (D79L-4621-A) or equivalent |
|  <p>ST2449-A</p> | Pinion Bearing Cup Replacer 205-014 (T60K-4616-A) |
|  <p>ST1255-A</p> | Handle 205-153 (T80T-4000W) |
|  <p>ST2330-A</p> | Front Hub Remover 205-D070 (D93P-1175-B) or equivalent |
|  <p>ST2446-A</p> | Step Plate 205-D015(D80L-630-4) or equivalent |
|  <p>ST2445-A</p> | Front Hub Replacer 205-D069(D93-1175A) or equivalent |

Removal

NOTE: Install a new wheel bearing when the wheel hub is removed.

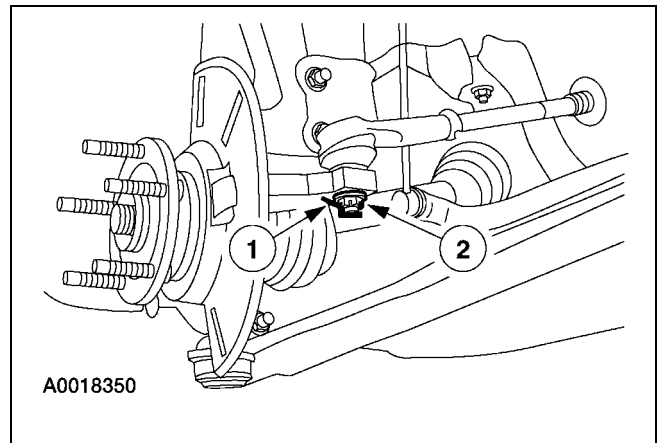
All vehicles

1. Remove the brake disc. For additional information, refer to Section 206-03.
2. Remove the wheel hub nut.



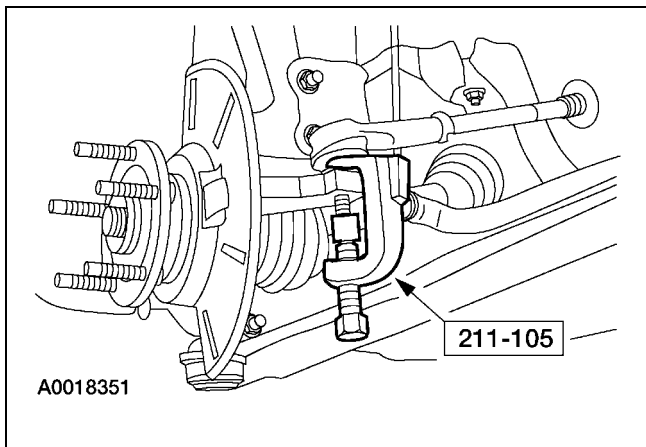
3. Remove the tie rod end nut.

1. Remove the cotter pin.
2. Remove the nut.



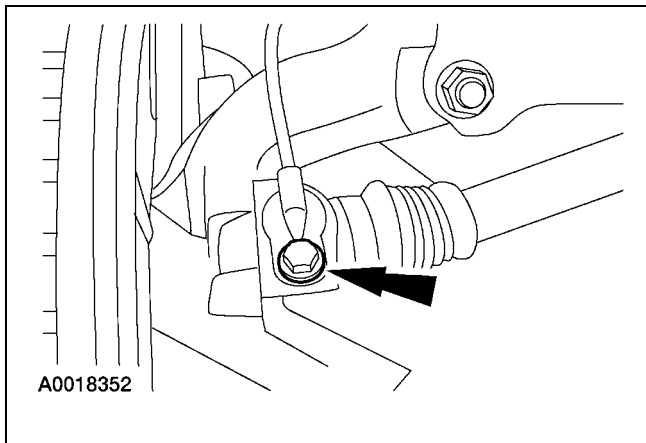
REMOVAL AND INSTALLATION (Continued)

4. Using the special tool, separate the tie rod end from the knuckle.



Vehicles with ABS

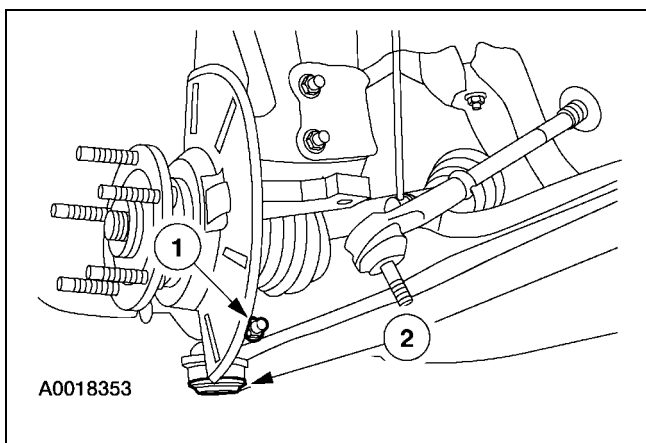
5. Remove the bolt and position the anti-lock brake sensor aside.



All vehicles

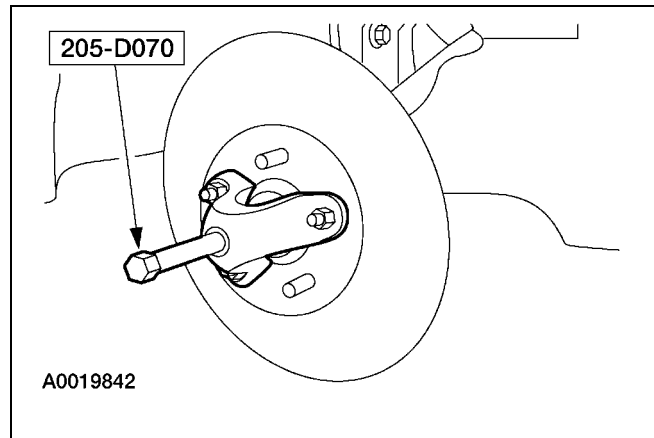
6. Separate the lower ball joint from the wheel knuckle.

1. Remove the pinch bolt.
2. Separate the lower ball joint from the wheel knuckle.



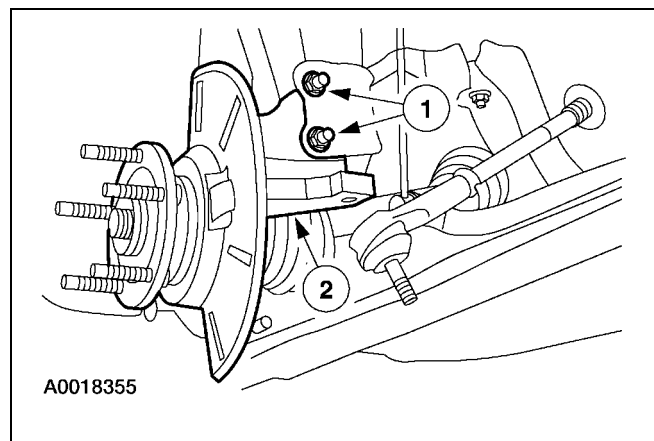
7. Using the special tool, separate the halfshaft from the wheel knuckle.

- Position the halfshaft aside and support.

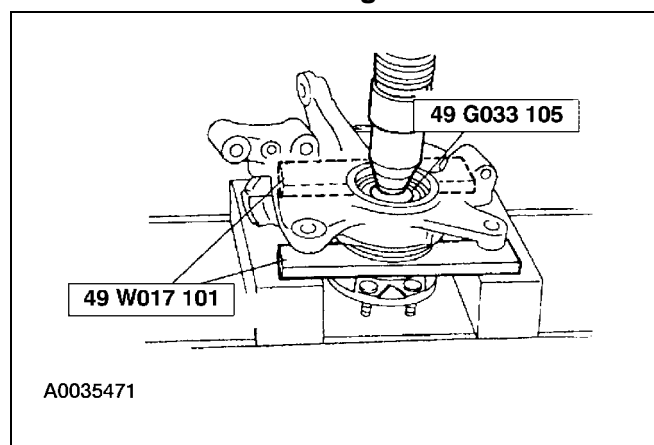


8. Remove the wheel knuckle.

1. Remove the strut-to-wheel knuckle bolts.
2. Remove the wheel knuckle.

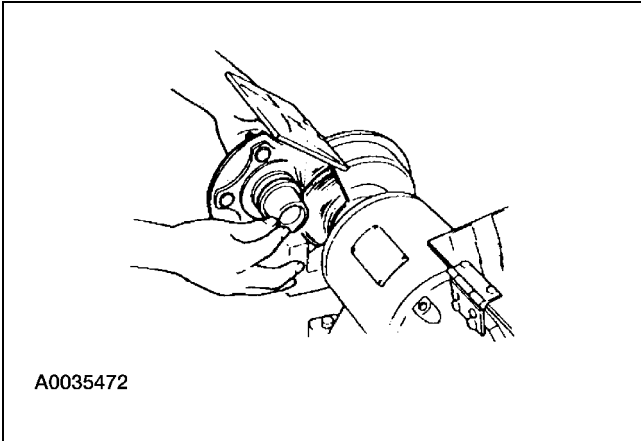


9. Using the special tool, press the wheel hub from the wheel bearing and knuckle.

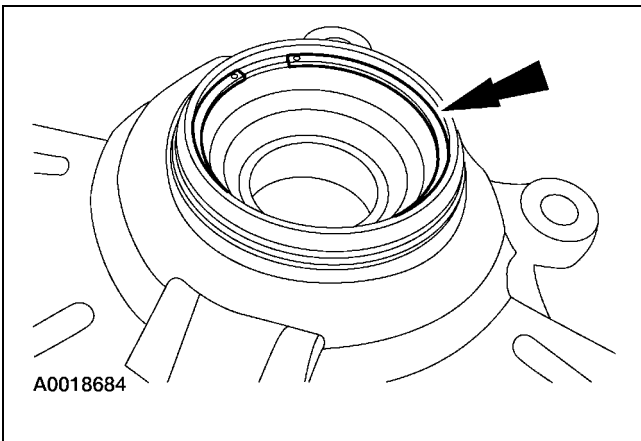


REMOVAL AND INSTALLATION (Continued)

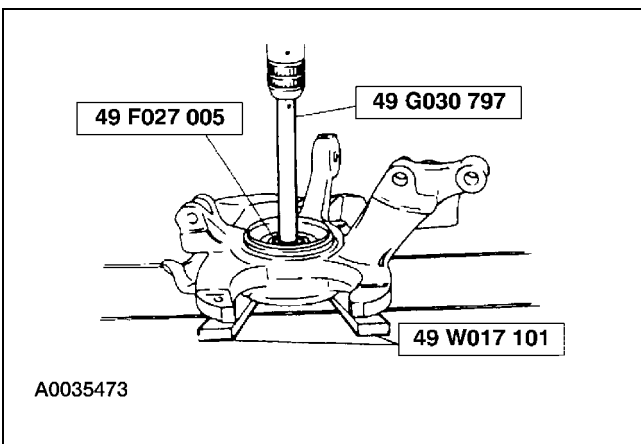
10. If the inner bearing race remains on the front wheel hub component, grind a section of the bearing inner race until approximately 0.5 mm (0.02 in) remains. Then remove it using a chisel.



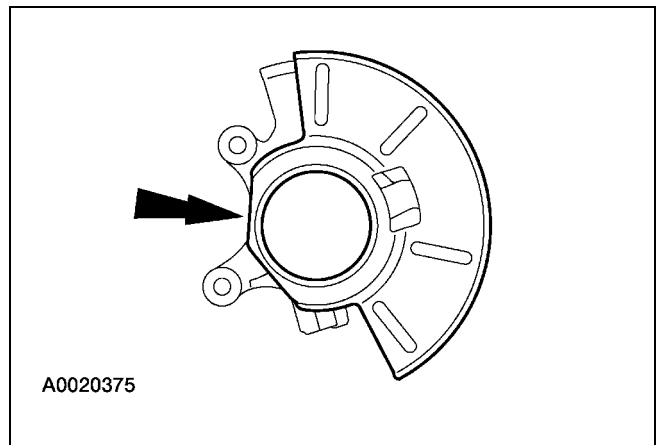
11. Remove the snap ring.



12. Using the special tools, press the outer wheel bearing race from the wheel knuckle.



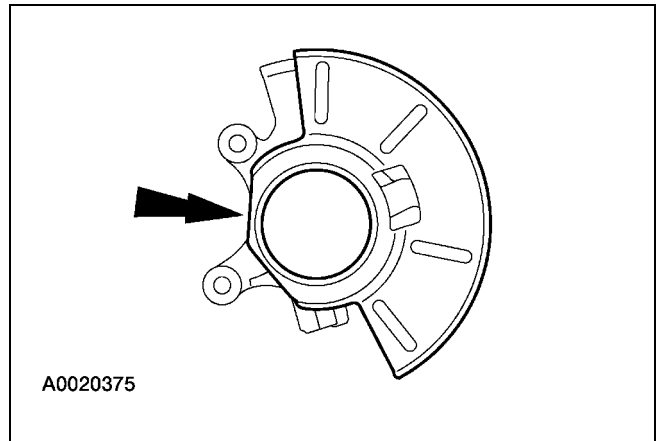
13. If necessary, remove the brake disc shield.



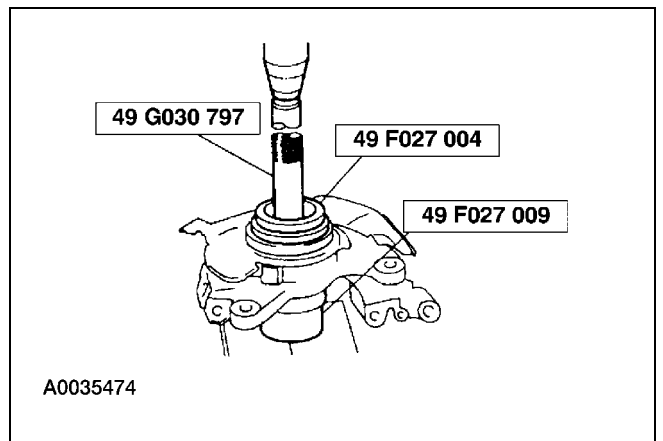
Installation

All vehicles

1. If necessary, install a disc brake shield.



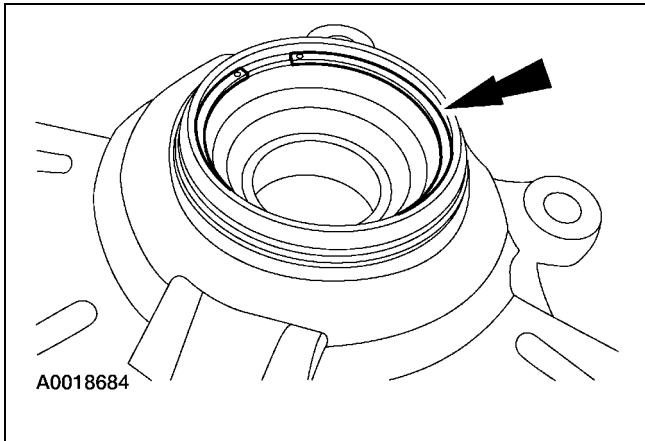
2. Using the special tool, install the wheel bearing into the wheel knuckle.



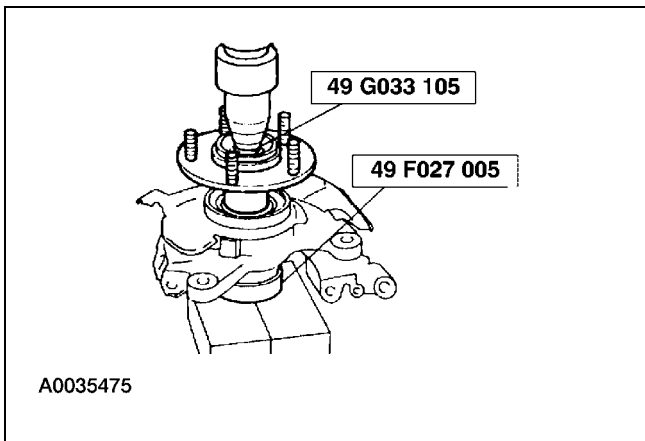
NOTE: The brake disc shield is pressed on.

REMOVAL AND INSTALLATION (Continued)

3. Install the snap ring.

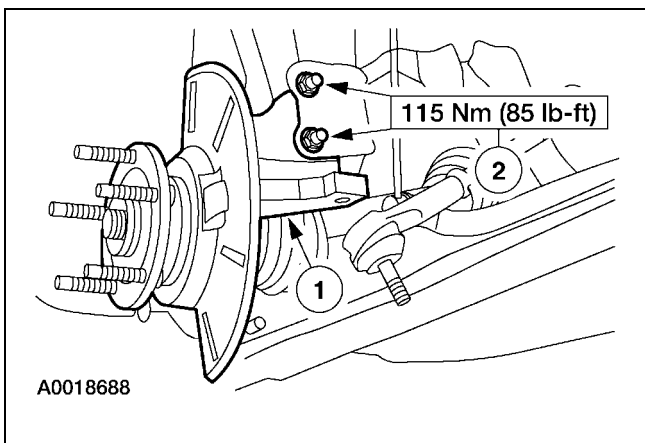


4. Using the special tool, press the wheel hub into the wheel bearing.

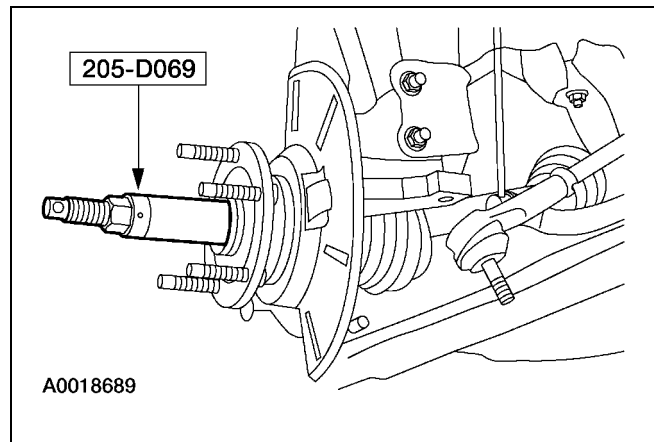


5. Install the wheel knuckle.

1. Position the wheel knuckle.
2. Install the strut-to-wheel knuckle bolts.

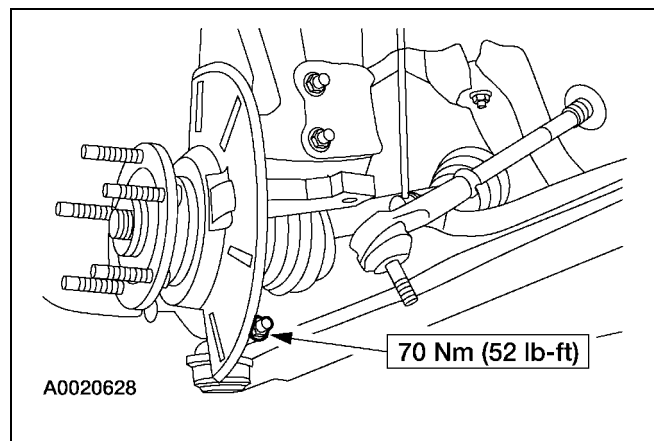


6. Using the special tool, insert the halfshaft into the wheel hub.



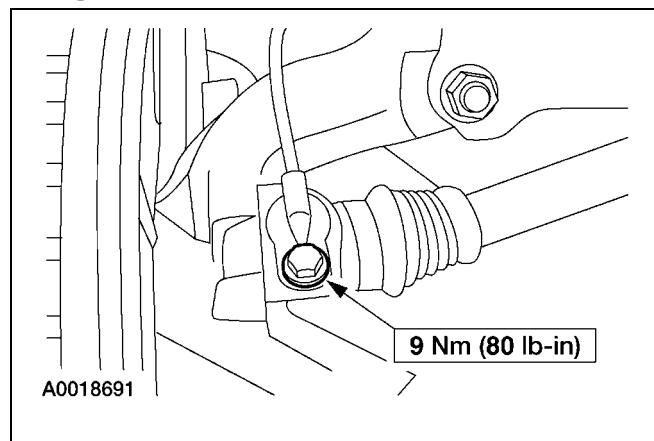
7. Install the pinch bolt into the wheel knuckle.

- Position and align the ball joint stud into the wheel knuckle.



Vehicles with ABS

8. Install the anti-lock brake sensor and tighten the bolt.

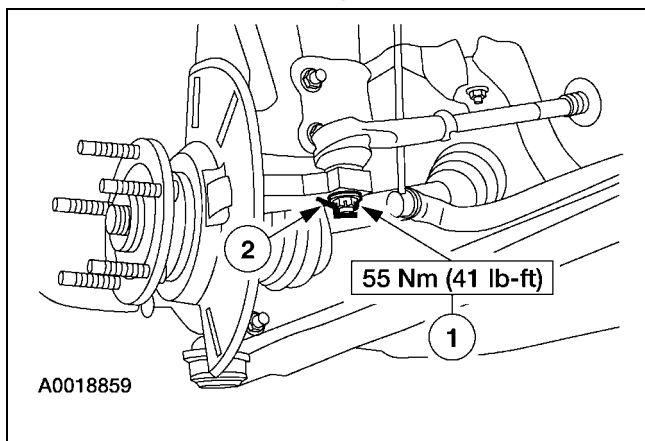
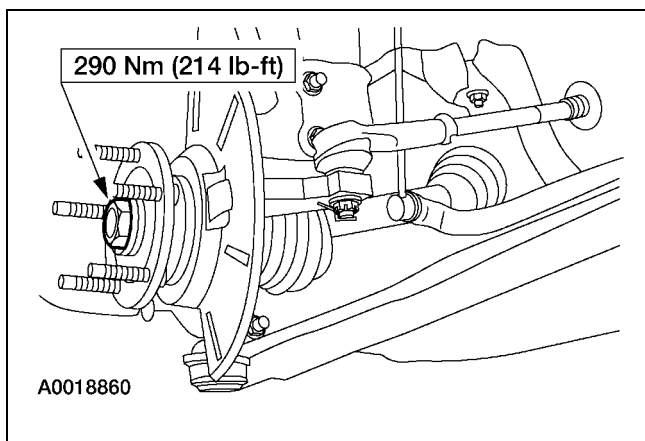


REMOVAL AND INSTALLATION (Continued)

All vehicles

9. Install the tie rod end into the wheel knuckle.

1. Install the tie rod end nut.
2. Install a new cotter pin.

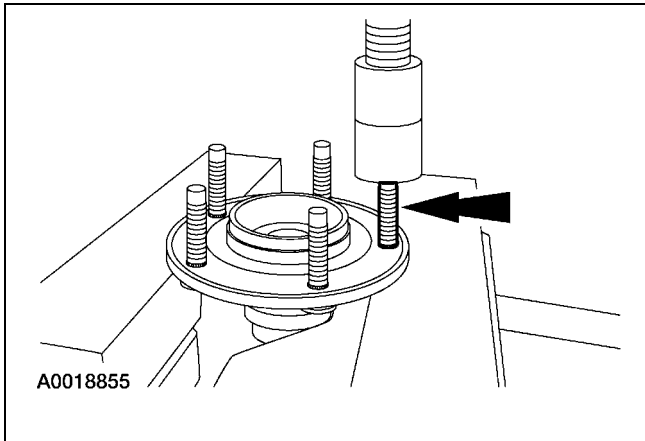
**10. Install the wheel hub nut.****11. Install the brake disc. For additional information, refer to Section 206-03.**

REMOVAL AND INSTALLATION

Wheel Studs

Removal

1. Remove the front wheel bearing. For additional information, refer to Wheel Bearing in this section.
2. Press out the wheel studs.



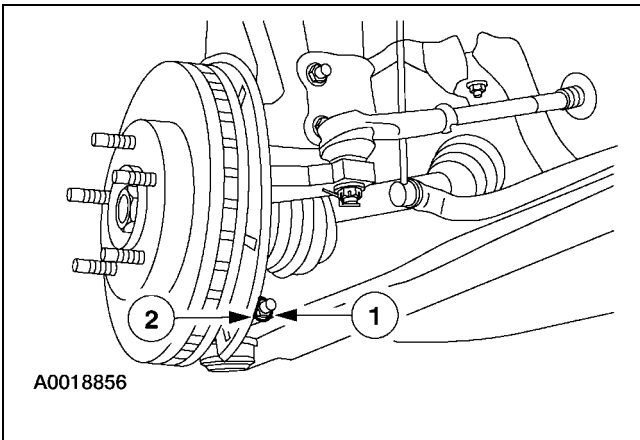
3. To install, reverse the removal procedure.

REMOVAL AND INSTALLATION

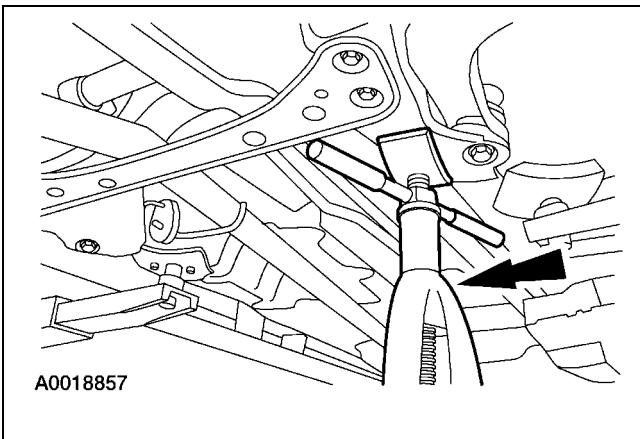
Lower Arm (14 706 0)

Removal

1. Remove the wheel and tire. For additional information, refer to Section 204-04.
2. Separate the lower ball joint from the wheel knuckle.
 1. Remove the pinch bolt.
 2. Separate the lower ball joint from the wheel knuckle.

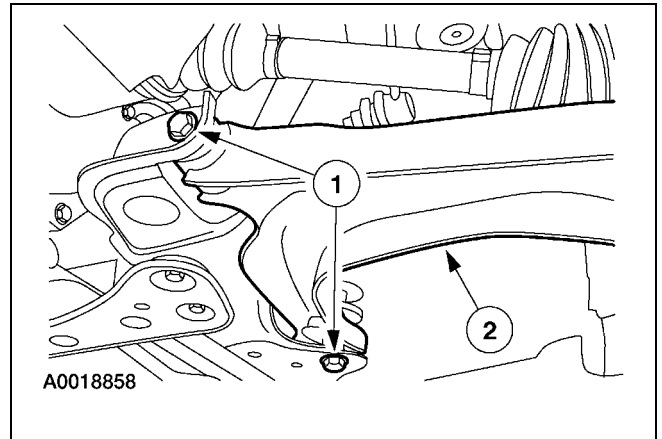


3. Support the subframe.



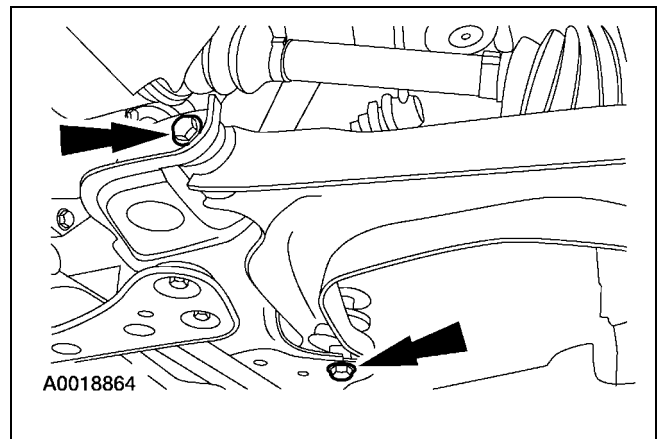
4. Remove the lower arm.

1. Remove the lower arm bolts.
2. Remove the lower arm.

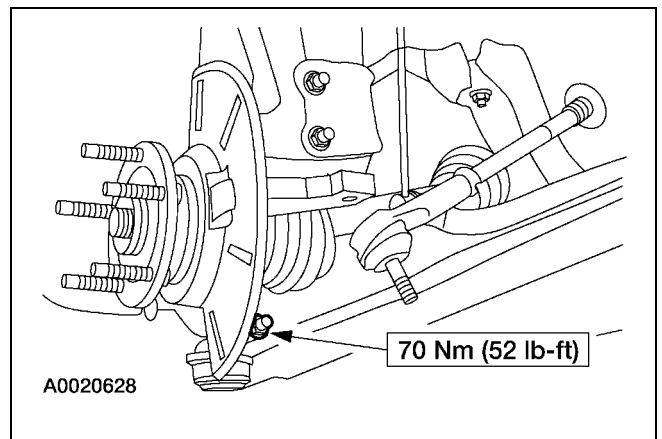


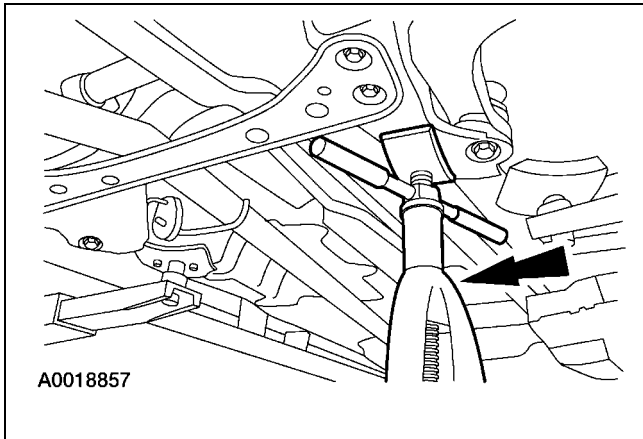
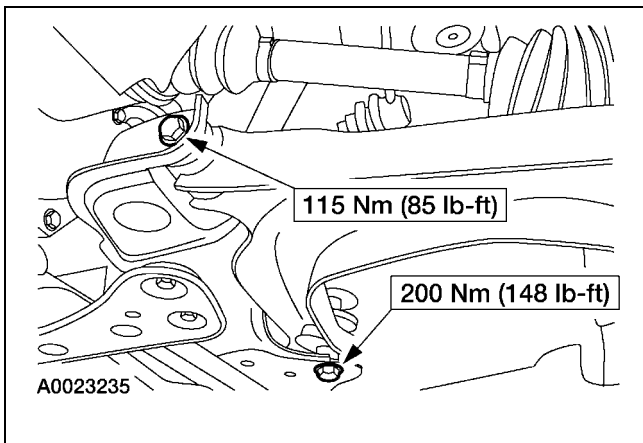
Installation

1. Install the lower arm bolts loosely.



2. Install the pinch bolt into the wheel knuckle.



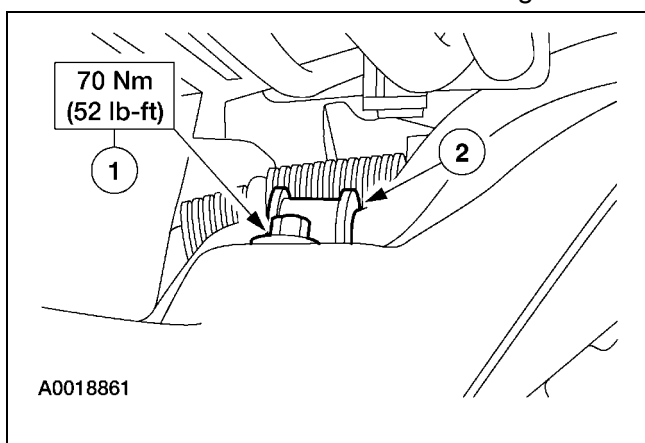
REMOVAL AND INSTALLATION (Continued)**3. Remove the subframe support.****4. Install the wheel and tire. For additional information, refer to Section 204-04.****5. Jounce the vehicle.****6. Tighten the lower arm bolts.**

REMOVAL AND INSTALLATION

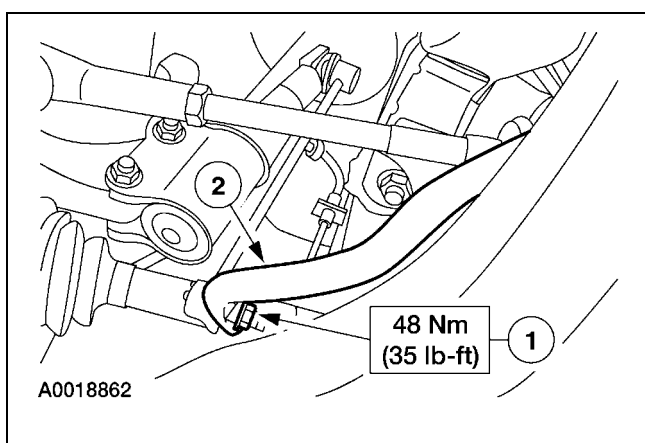
Stabilizer Bar (14 752 0)

Removal

1. Remove the LH wheel and tire. For additional information, refer to Section 204-04.
2. Remove the two stabilizer bushings.
 1. Remove the four bolts.
 2. Remove the two stabilizer bushings.



3. Remove the stabilizer bar.
 1. Remove the two stabilizer bar links lower nut.
 2. Remove the stabilizer bar.



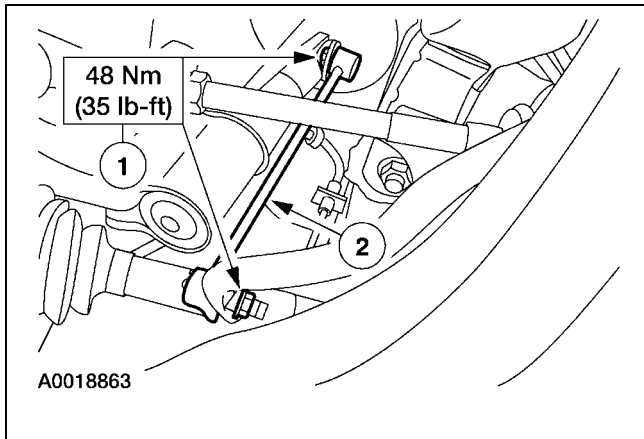
4. To install, reverse the removal procedure.

REMOVAL AND INSTALLATION

Stabilizer Bar Link

Removal

- 1. Remove the wheel and tire. For additional information, refer to Section 204-04.**
- 2. Remove the stabilizer bar link.**
 1. Remove the upper and lower stabilizer bar link nuts.
 2. Remove the stabilizer bar link.



- 3. To install, reverse the removal procedure.**

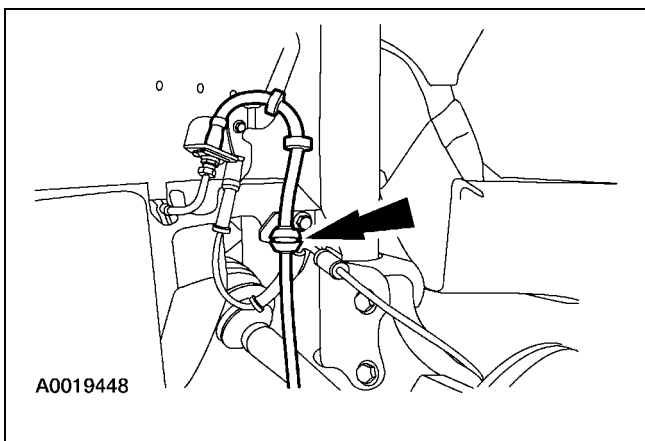
REMOVAL AND INSTALLATION

Strut and Spring Assembly (14 781 0)

Removal

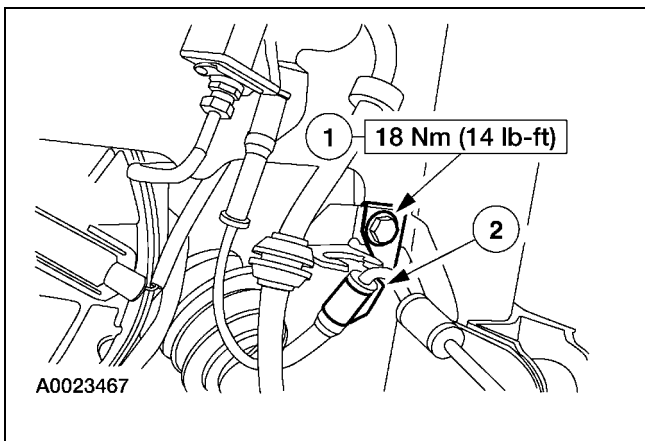
All vehicles

1. Remove the wheel and tire. For additional information, refer to Section 204-04.
2. Disconnect the brake hose grommet from the bracket.



Vehicles with ABS

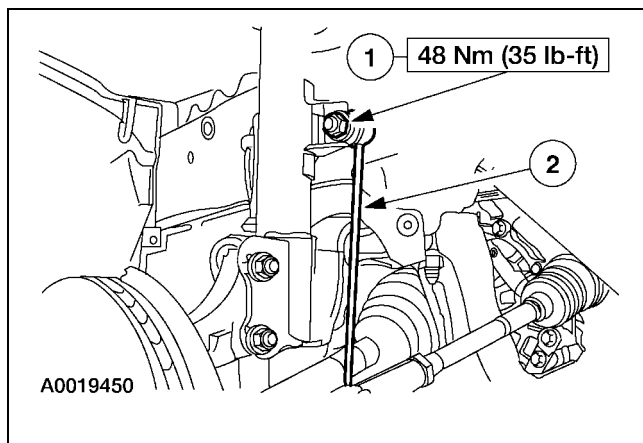
3. Disconnect the anti-lock brake harness from the strut and spring assembly.
 1. Remove the bolt.
 2. Position the bracket aside.



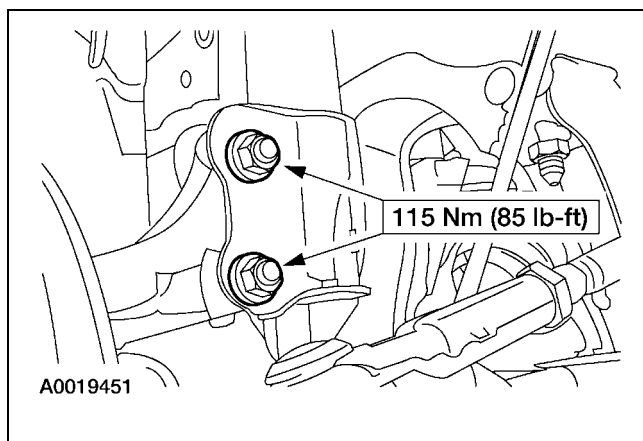
All vehicles

4. Position the stabilizer bar link aside.

1. Remove the upper stabilizer bar link nut.
2. Position the stabilizer bar link aside.



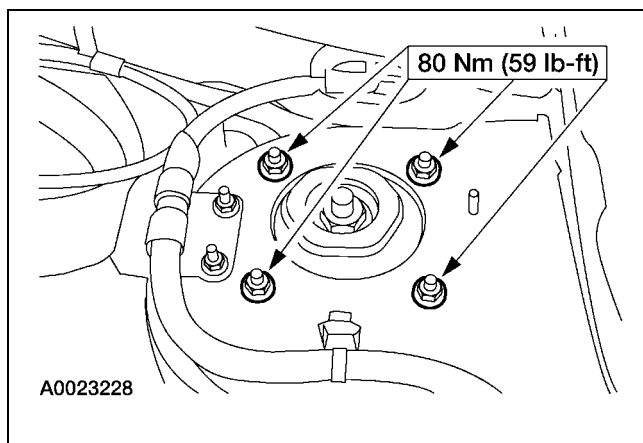
5. Remove the strut-to-wheel knuckle bolts.



6. **NOTE:** Support the strut and spring assembly when removing upper nuts.

Remove the strut and spring assembly.

- Remove the nuts.



REMOVAL AND INSTALLATION (Continued)**7. To install, reverse the removal procedure.**


- Align the front wheels to specifications. For additional information, refer to Section 204-00.

DISASSEMBLY AND ASSEMBLY

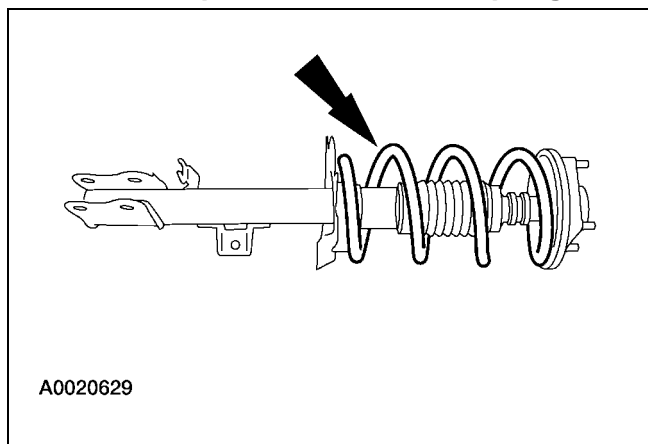
Strut and Spring Assembly (14 783 4)

Disassembly

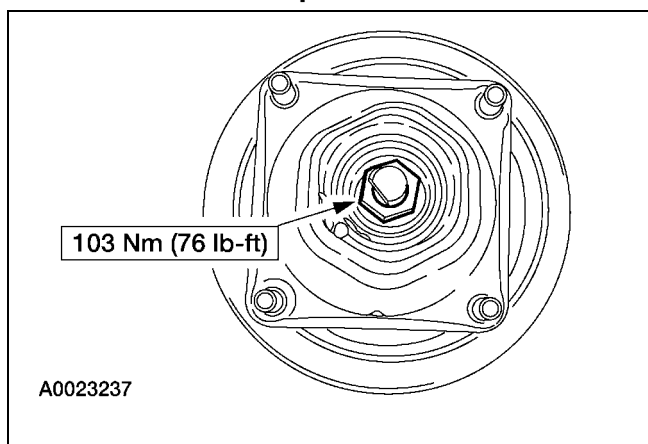
1. Remove the strut and spring assembly; refer to [Strut and Spring Assembly](#) in this section.

2.  **WARNING:** Always wear safety goggles when using a spring compressor. Failure to follow these instructions may result in personal injury.

Mount the assembly in a suitable holding fixture and use a suitable spring compressor to compress the front coil spring.

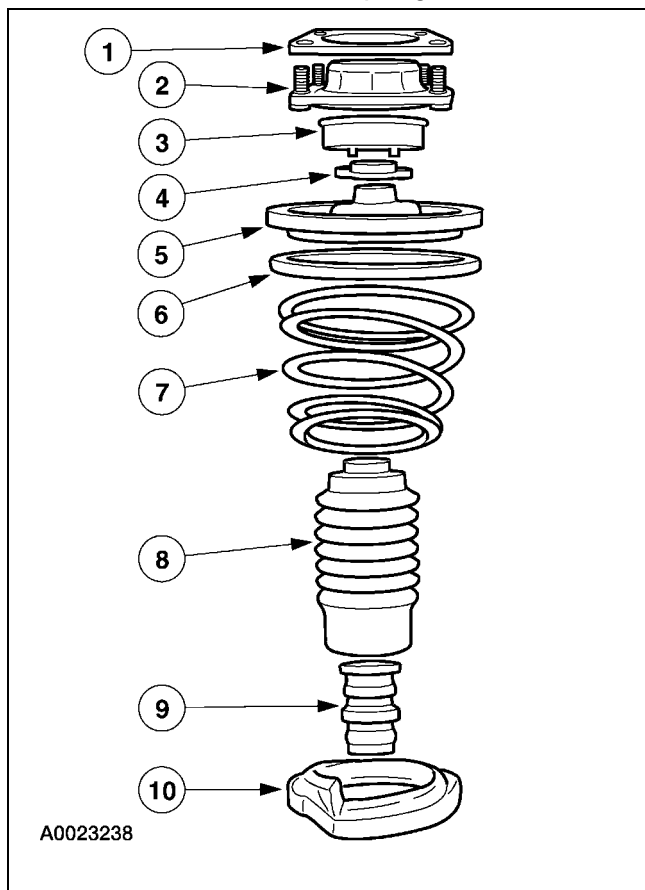


3. Remove the strut piston rod nut.



4. Disassemble the strut and spring assembly.

1. Remove the metal sheet plate.
2. Remove the upper strut mount.
3. Remove the thrust bearing plate.
4. Remove the thrust bearing.
5. Remove the upper spring seat.
6. Remove the upper spring seat isolator.
7. Remove the spring.
8. Remove the dust boot.
9. Remove the rubber bump stopper.
10. Remove the lower spring seat.



DISASSEMBLY AND ASSEMBLY (Continued)

5. NOTE: New fasteners must be used when old fasteners are loosened and/or removed.

NOTE: Make sure that an alignment procedure is carried out any time the strut and spring assembly or the front shock absorber mounting bracket bolts are loosened. Refer to Section 204-00.

NOTE: Be sure the spring is correctly seated in the insulator.

To assemble, reverse the disassembly procedure.