FRONT WHEEL 2.5

REMOVAL

1. Place a scissor jack under jacking point and raise front wheel off ground. For location of jacking point see Figure 2-112.

NOTE

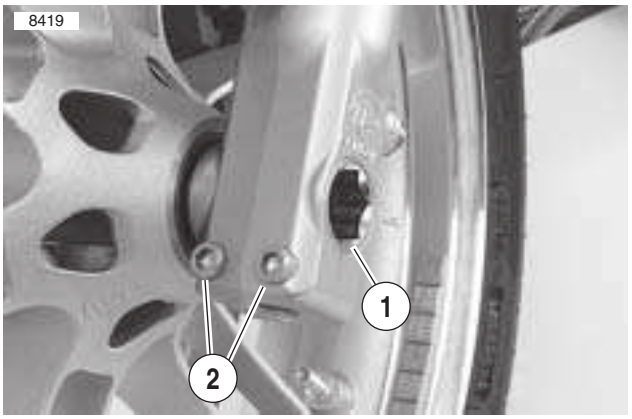
Do not operate front brake lever with front wheel removed or caliper pistons may be forced out. Reseating pistons requires caliper disassembly.

2. Remove the right side fender fasteners.See 2.34 FENDERS.
3. See Figure 2-5. Loosen front axle pinch fasteners (2) (metric) on front fork.
4. Remove axle (1).

NOTES

- *The front axle is left handed thread.*
- *To prevent cosmetic damage to the wheel, center caliper between spokes before removal.*

5. See Figure 2-6. Raise the wheel up until the rotor clears the caliper and rotate the fork leg counterclockwise allowing wheel clearance for removal.
6. Remove wheel.



1. Axle (left handed thread)
2. Front axle pinch fasteners (2) (metric)

Figure 2-5. Front Wheel Mounting

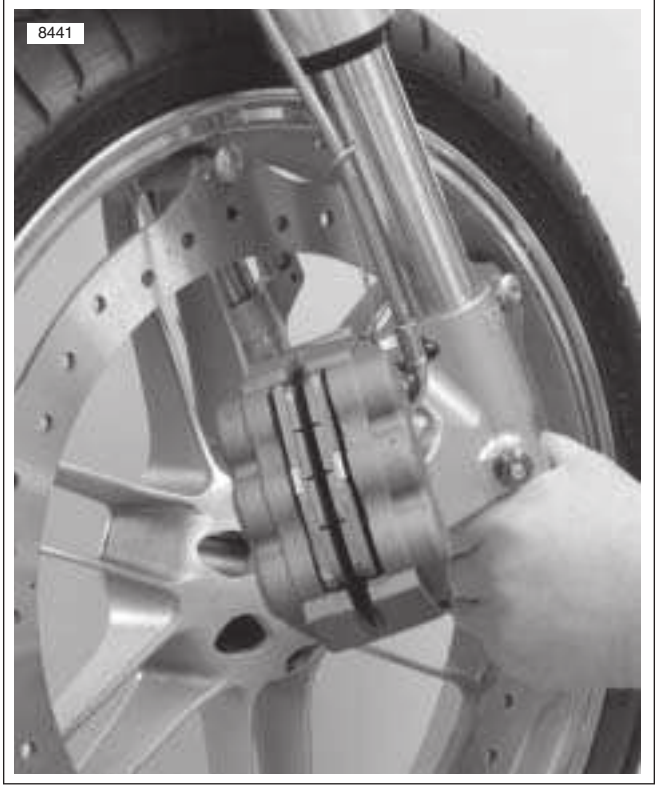


Figure 2-6. Front Wheel Removal

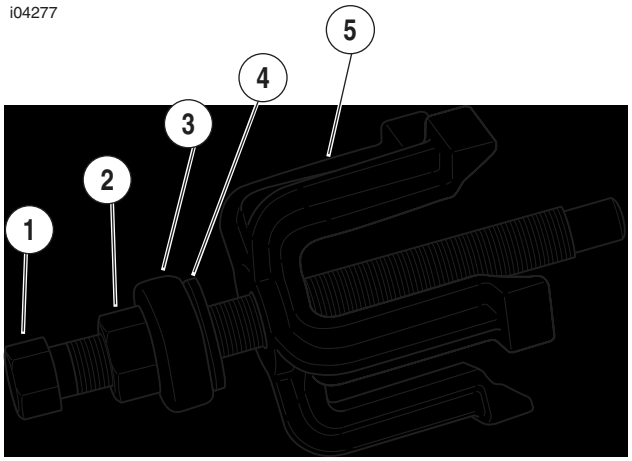
DISASSEMBLY

Bearing Removal

NOTE

On single disc wheels, always remove the brake disc side bearing first.

1. See Figure 2-7. Remove wheel bearings using WHEEL BEARING REMOVER/INSTALLER KIT (Part No. B-43993-50) and WHEEL BEARING REMOVER AND INSTALLER (Part No. HD-44060).
2. Sparingly apply EXTREME PRESSURE LUBRICANT (Part No. J-23444-A) to the threads of the short forcing screw (1) to prolong service life and ensure smooth operation.



1. **Short forcing screw**
2. **Nut**
3. **Nice bearing**
4. **Washer**
5. **Bridge**

Figure 2-7. Assemble Puller

3. Assemble the short forcing screw (1), nut (2), Nice bearing (3), washer (4) and bridge (5) from the WHEEL BEARING INSTALLER/REMOVER (Part No.HD-44060).
4. See Figure 2-8. Insert the FRONT WHEEL BEARING REMOVER COLLET (Part No. B-43993-7, from kit Part No. B-43993-50) into the wheel bearing until it fully seats against the bearing.

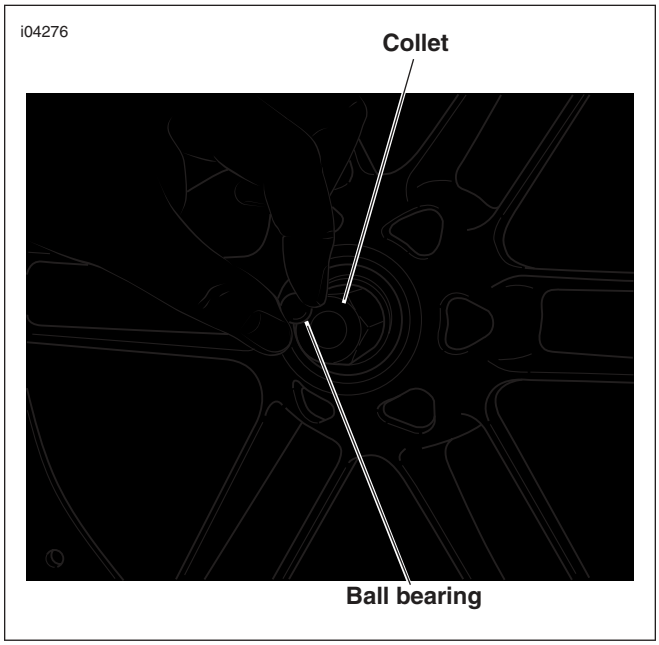
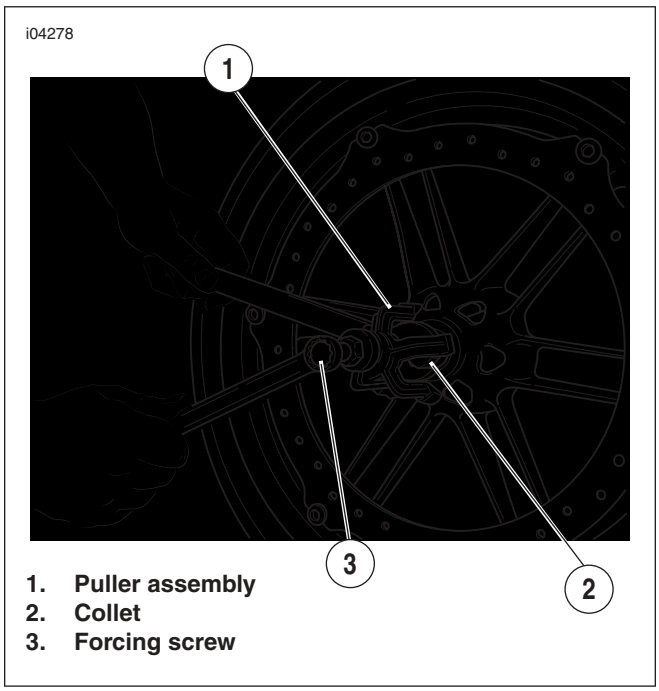


Figure 2-8. Install Collet and Ball Bearing

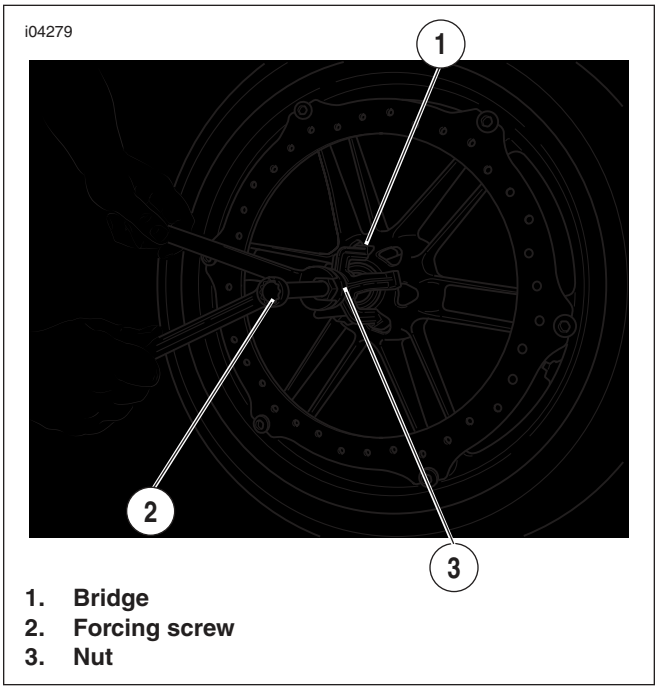
5. Insert the ball bearing into the collet.
6. See Figure 2-9. Thread the puller assembly (1) into the collet (2).
7. Hold the collet (2), and turn the forcing screw (3) to expand the collet.



1. **Puller assembly**
2. **Collet**
3. **Forcing screw**

Figure 2-9. Expand the Collet

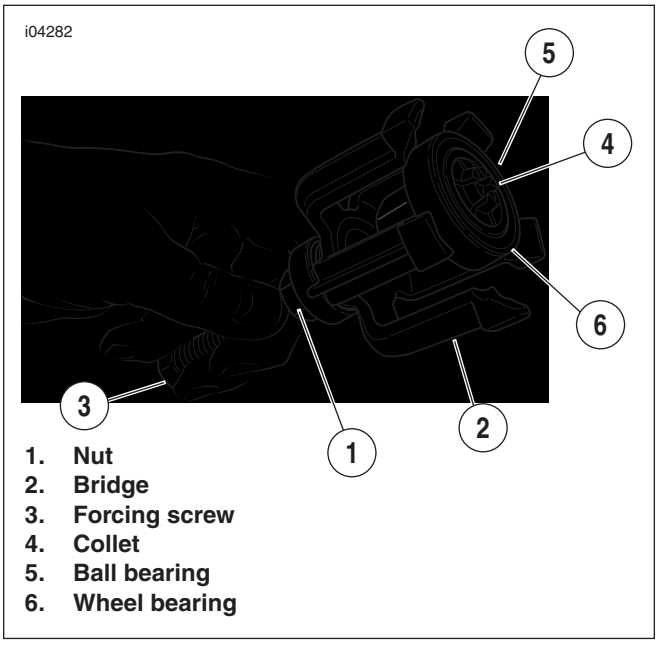
8. See Figure 2-10. Place the bridge (1) against the wheel hub.
9. Hold the forcing screw (2), and turn the nut (3) clockwise until the bearing is free of the hub.



1. **Bridge**
2. **Forcing screw**
3. **Nut**

Figure 2-10. Remove the Bearing

10. See Figure 2-10. Loosen the nut (3), and back off the bridge (1). Hold the forcing screw (2) while holding the collet to remove the forcing screw from the collet.
11. See Figure 2-11. Remove the ball bearing (5) and wheel bearing (6) from the collet (4).



1. **Nut**
2. **Bridge**
3. **Forcing screw**
4. **Collet**
5. **Ball bearing**
6. **Wheel bearing**

Figure 2-11. Removing Bearing from Puller

12. See Figure 2-12. Remove the spacer.

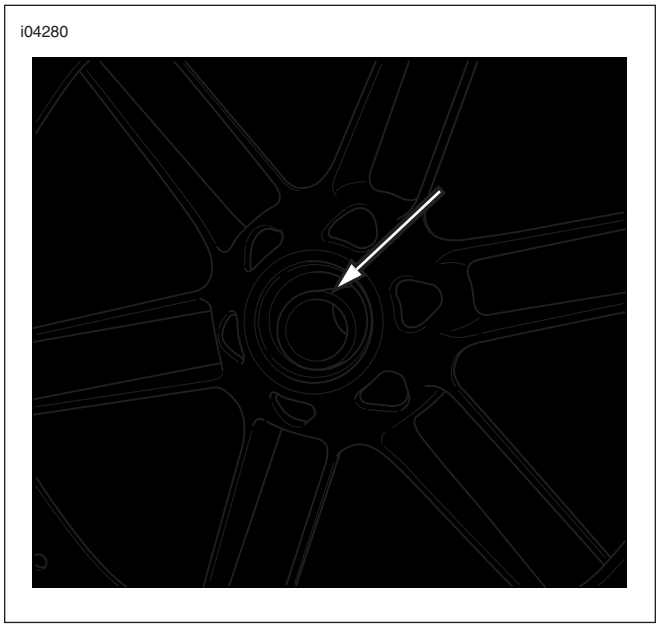


Figure 2-12. Remove the Spacer

13. Repeat Steps 4-12 for the bearing on the other side of the wheel.

Front Rotor Removal

1. See Figure 2-18. Remove and discard rotor mounting fasteners (7).
2. Remove and inspect brake rotor (6) for wear and warping. See 2.12 FRONT BRAKE CALIPER/1.6 BRAKE SYSTEM MAINTENANCE.
3. Remove drive bushings (8) and discard.
4. Remove washers (9) and discard.
5. Remove front brake springs (4) and discard.

CLEANING AND INSPECTION

⚠WARNING

Never use compressed air to "spin-dry" bearings. Very high bearing speeds can damage unlubricated bearings. Spinning bearings with compressed air can also cause a bearing to fly apart, which could result in death or serious injury.

1. Inspect all parts for damage or excessive wear.

NOTE

The wheel bearings are designed as sealed bearings which are not intended to be disassembled, serviced or cleaned with solvents.

⚠WARNING

Always replace brake pads in complete sets for correct and safe brake operation. Improper brake operation could result in death or serious injury. (00111a)

2. Inspect brake rotor and pads. See 1.6 BRAKE SYSTEM MAINTENANCE and 2.12 FRONT BRAKE CALIPER.

ASSEMBLY

1. See Figure 2-18. Install spacer (5).
2. Install **new** wheel bearings (2) into hub using suitable driver. Press on outer race only.

NOTES

- *Press the rotor side bearings in first ensuring it is seated on the shoulder of the wheel. Followed by pressing the alternate side until it contacts the spacer.*
- *The Wheel Bearing Remover and Installer (B-43993-50) consists of the Front Wheel Bearing Remover Collet (B-43993-7), Rear Wheel Bearing Remover Collet (B-43993-8), Rear Wheel Bearing Installer (B-43993-9), Front Wheel Bearing Installer (B-43993-10) and Backing Plates (B-43993-11 front wheel) and (B-43993-12 rear wheel).*

⚠WARNING

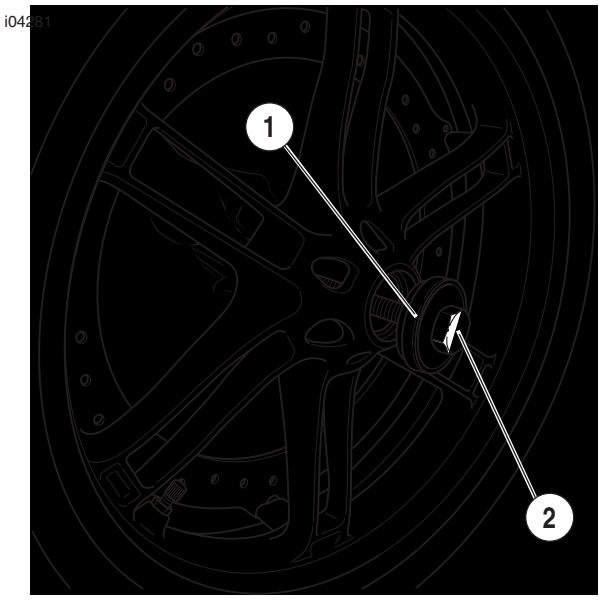
Be sure that brake fluid or other lubricants do not contact brake pads or discs. Such contact can adversely affect braking ability, which could cause loss of control, resulting in death or serious injury. (00290a)

Bearing Installation

NOTE

On single disc wheels, always install the brake disc side bearing first.

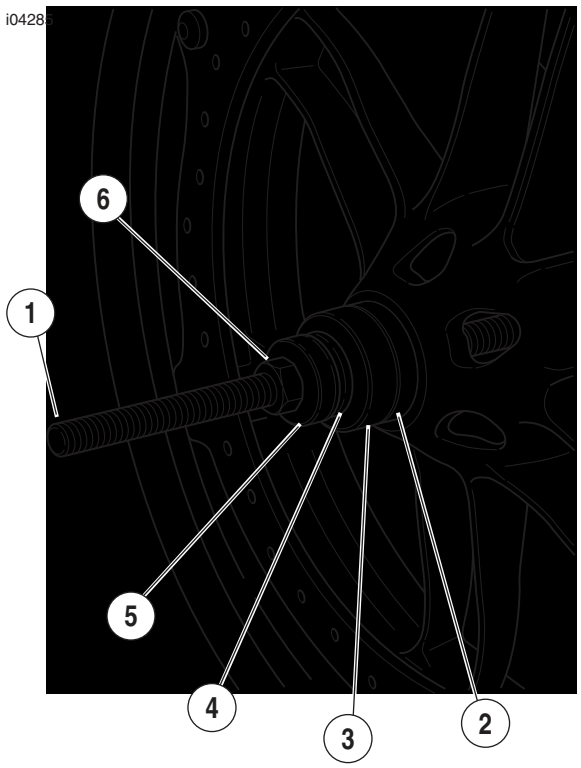
The following procedure describes the bearing installation for the front wheel; the procedure for the rear wheel is the same.



1. Backing plate
2. Forcing screw

Figure 2-13. Install the Backing Plate (B-43993-12) and Forcing Screw

1. See Figure 2-13. Install the Backing Plate (Part No. B-43993-11) onto the long forcing screw from the Wheel Bearing Installer/Remover (Part No. HD-44060), with the smaller diameter toward the wheel hub. Insert the forcing screw and backing plate into the wheel hub.



1. Long forcing screw
2. Wheel bearing
3. Front Wheel Bearing Installer (Part No. B-43993-9)
4. Washer
5. Nice bearing
6. Nut

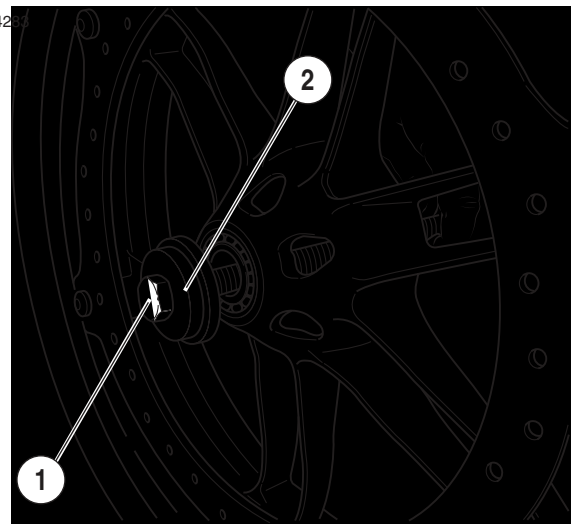
Figure 2-14. Installing Wheel Bearings

2. See Figure 2-14. Sparingly apply EXTREME PRESSURE LUBRICANT (Part No. J-23444-A) to the threads of the long forcing screw (1) to prolong service life and ensure smooth operation.
3. Insert a **new** wheel bearing (2) squarely into the hub, with the lettered side pointing out (away from the wheel).
4. Slide the FRONT BEARING INSTALLER (Part No. B-43993-9, from kit Part No. B-43993-50) (3) onto the forcing screw (1), with the smaller diameter toward the bearing bore.
5. Install a washer (4), Nice bearing (5) and nut (6) onto the forcing screw (1).
6. While holding the forcing screw (1), tighten the nut (6) until the bearing is seated firmly against the shoulder inside the bearing bore in the wheel hub.

NOTES

- *Press the rotor side bearings in first ensuring it is seated on the shoulder of the wheel. Followed by pressing the alternate side until it contacts the spacer.*
- *Always install the brake side bearing first with the lettering facing out from the hub.*

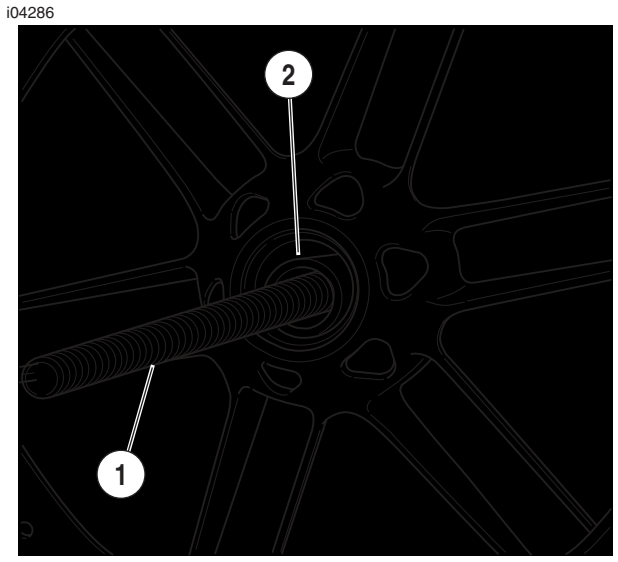
7. Remove the nut, bearing, washer, FRONT BEARING INSTALLER (Part No. B-43993-9) and forcing screw.



1. **Forcing screw**
2. **Backing Plate**

Figure 2-15. Insert Forcing Screw and Backing Plate

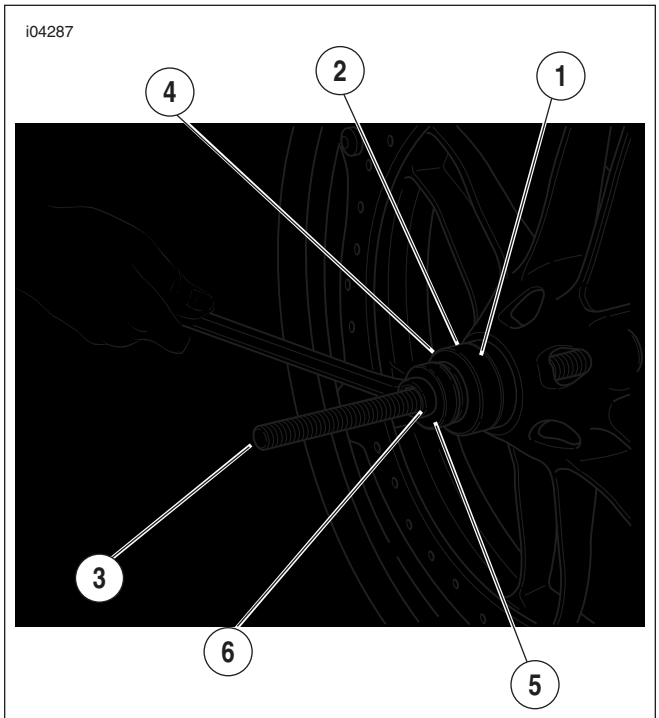
8. See Figure 2-15. Remove the BACKING PLATE (Part No. B-43993-11) from the long forcing screw. Reinstall the Backing Plate onto the forcing screw, with the smaller diameter toward the hex-head.
9. Insert the forcing screw through the wheel hub on the opposite side of the wheel.



1. **Forcing screw**
2. **Spacer**

Figure 2-16. Install the Spacer

10. See Figure 2-16. Install the spacer.



1. **Wheel bearing**
2. **Front Wheel Bearing Installer (B-43993-9)**
3. **Forcing screw**
4. **Washer**
5. **Nice bearing**
6. **Nut**

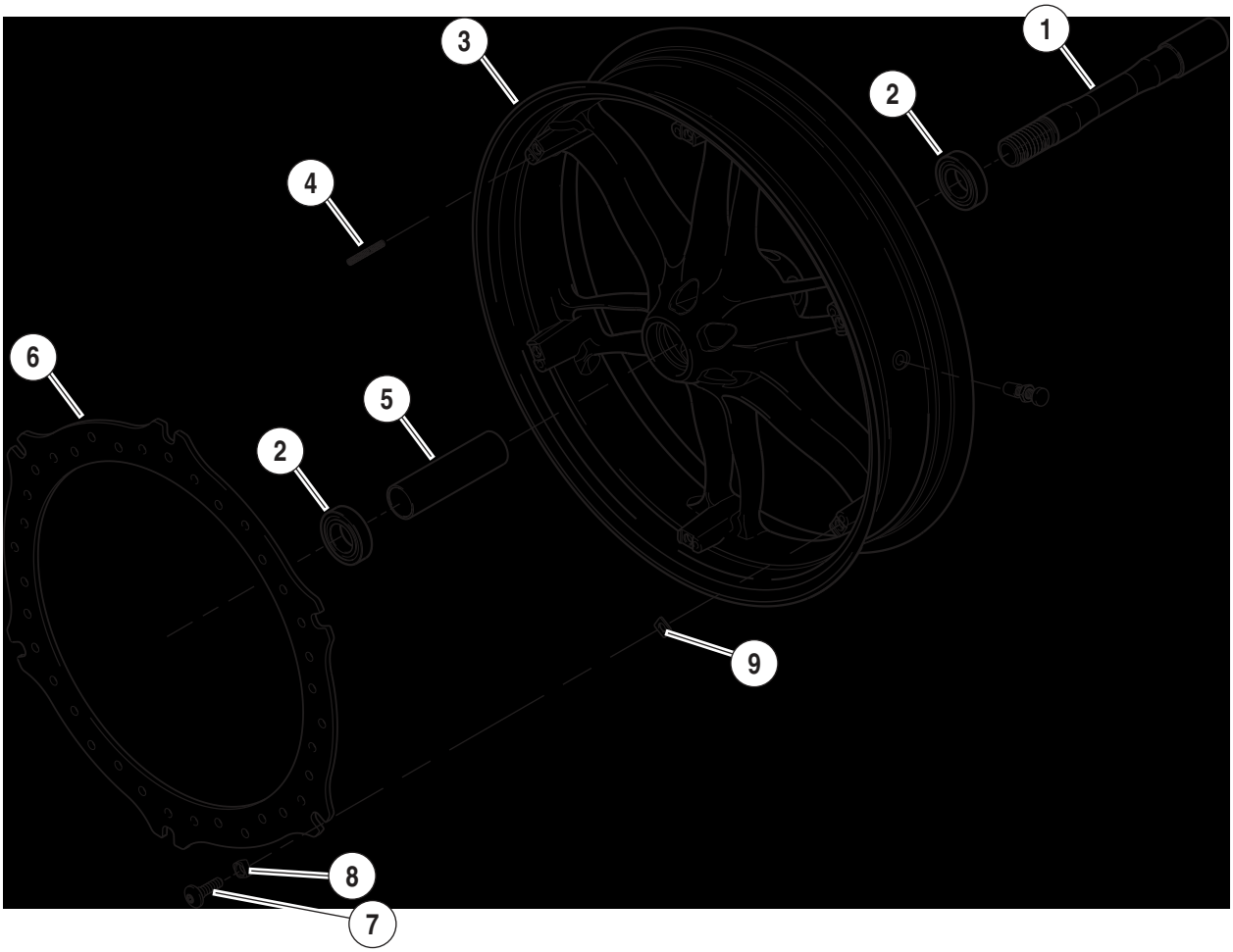
Figure 2-17. Install the Bearing

11. See Figure 2-17. Insert a **new** wheel bearing (1) squarely into the hub, with the lettered side pointing out (away from the wheel).
12. Slide the FRONT BEARING INSTALLER (Part No. B-43993-9) (2) onto the forcing screw (3), with the smaller diameter toward the bearing bore.
13. Install a washer (4), Nice bearing (5) and nut (6) onto the forcing screw (3).

NOTE

See Figure 2-16. Center the spacer while installing the wheel bearing. Failure to center the spacer could cause the bearing not to pull in straight.

14. While holding the forcing screw (3), tighten the nut (6) until the bearing contacts the spacer.
15. Remove the nut, bearing, washer, FRONT BEARING INSTALLER (Part No. B-43993-10) and forcing screw.
16. Install the wheel. See INSTALLATION under 2.5 FRONT WHEEL.



1. **Front axle**
2. **Wheel bearing**
3. **Front wheel**
4. **Front brake springs (6)**
5. **Front wheel spacer**
6. **Front brake rotor**
7. **Rotor mount fastener (6)**
8. **Drive bushings (6)**
9. **Washers (6)**

Figure 2-18. Front Wheel Assembly

Front Rotor Installation

1. See Figure 2-18. Install **new** spring (4).
2. Install **new** washers (9).
3. Install **new** drive bushings (8) into rotor.

NOTE

Note the identifying mark of rotor is up and radius end of drive bushing (8) toward center of wheel.

4. Align reference dot on front rotor with the valve stem.
5. Install **new** rotor mounting fasteners in a criss-cross pattern around the wheel to insure proper fitting between rotor, fastener and bushing. Tighten to 25-27 ft-lbs (34-37 Nm).

NOTE

Rotor mounting fasteners must be seated into drive bushings and drive bushings must be fitted into rotor properly. Failure to comply may affect braking ability and lead to brake failure which could result in death or serious injury.

INSTALLATION

1. Raise front wheel to allow clearance for the caliper to swing under and inside the front rotor.

NOTE

To prevent cosmetic damage to the wheel, center caliper between spokes before removal.

2. See Figure 2-19. Install caliper.
   a. Align wheel so that rotor mounting fasteners straddle caliper.
   b. Rotate right front fork counterclockwise to align caliper with rotor.
   c. Lower front wheel into caliper assembly.
3. Install front axle.
   a. Apply LOCTITE ANTI-SEIZE LUBRICANT to axle.
   b. See Figure 2-20. With pinch fasteners (metric) loose, insert threaded end of axle (1) through left side fork, wheel hub and thread into right fork.
   c. Compress the front suspension to make sure it is free and not binding.
   d. Tighten axle (1) (metric) to 39-41 ft-lbs (53-56 Nm).

NOTE

The front axle is left handed thread.

4. See Figure 2-20.Tighten the front axle pinch fasteners (2) to 20-22 ft-lbs (27-30 Nm).
5. Install right side fender fasteners. See 2.34 FENDERS.

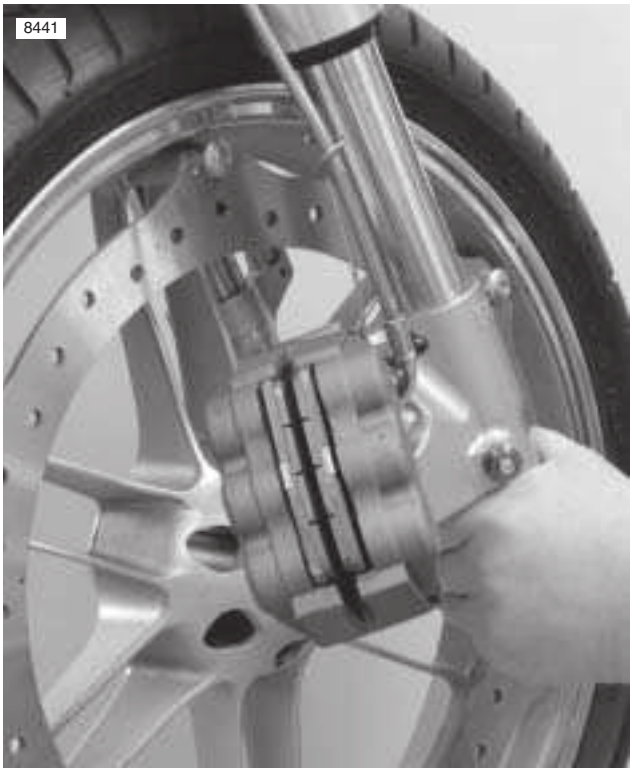
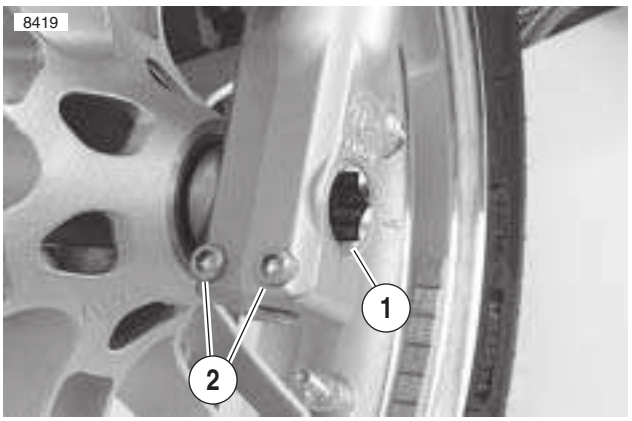


Figure 2-19. Front Wheel Installation



1. Axle (left handed thread)
2. Front axle pinch fasteners (2) (metric)

Figure 2-20. Front Wheel Mounting