

## 2007 Hummer H3

2007 BRAKES Disc Brakes - H3

### 2007 BRAKES

#### Disc Brakes - H3

## SPECIFICATIONS

### FASTENER TIGHTENING SPECIFICATIONS

#### Fastener Tightening Specifications

Application	Specification	
	Metric	English
Backing Plate Bolts	135 N.m	100 lb ft
Brake Hose to Caliper Bolt, Front	40 N.m	30 lb ft
Brake Hose to Caliper Bolt, Rear	40 N.m	30 lb ft
Front Brake Caliper Mounting Bolt	195 N.m	144 lb ft
Park Brake Equalizer	3.5 N.m	31 lb in
Quarter Shaft Shield	25 N.m	18 lb ft
Rear Brake Caliper Guide Pin Bolt	36 N.m	27 lb ft
Rear Brake Caliper Mounting Bolt	135 N.m	100 lb ft
Rear Brake Caliper Mounting Bracket Bolt	135 N.m	100 lb ft

### DISC BRAKE COMPONENT SPECIFICATIONS

#### Disc Brake Component Specifications

Application	Specification	
	Metric	English
Front Brakes		
• Rotor Discard Thickness *	26.5 mm	1.04 in
• Rotor Minimum Allowable Thickness After Refinish	27.0 mm	1.06 in
• Rotor Thickness (new)	28.0 mm	1.10 in
• Rotor Maximum Allowable Lateral Runout	0.06 mm	0.002 in
• Rotor Maximum Allowable Scoring	1.50 mm	0.059 in
• Rotor Maximum Allowable Thickness Variation	0.025 mm	0.001 in
Rear Brakes		

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• Rotor Discard Thickness *	10.5 mm	0.413 in
• Rotor Minimum Allowable Thickness After Refinish	11.0 mm	0.433 in
• Rotor Thickness (new)	12.0 mm	0.472 in
• Rotor Maximum Allowable Lateral Runout	0.06 mm	0.002 in
• Rotor Maximum Allowable Scoring	1.50 mm	0.059 in
• Rotor Maximum Allowable Thickness Variation	0.025 mm	0.001 in

\* All brake rotors have a discard dimension cast into them. Replace any rotor that does not meet this specification. After refinishing the rotor, replace any rotor that does not meet the minimum thickness specifications.

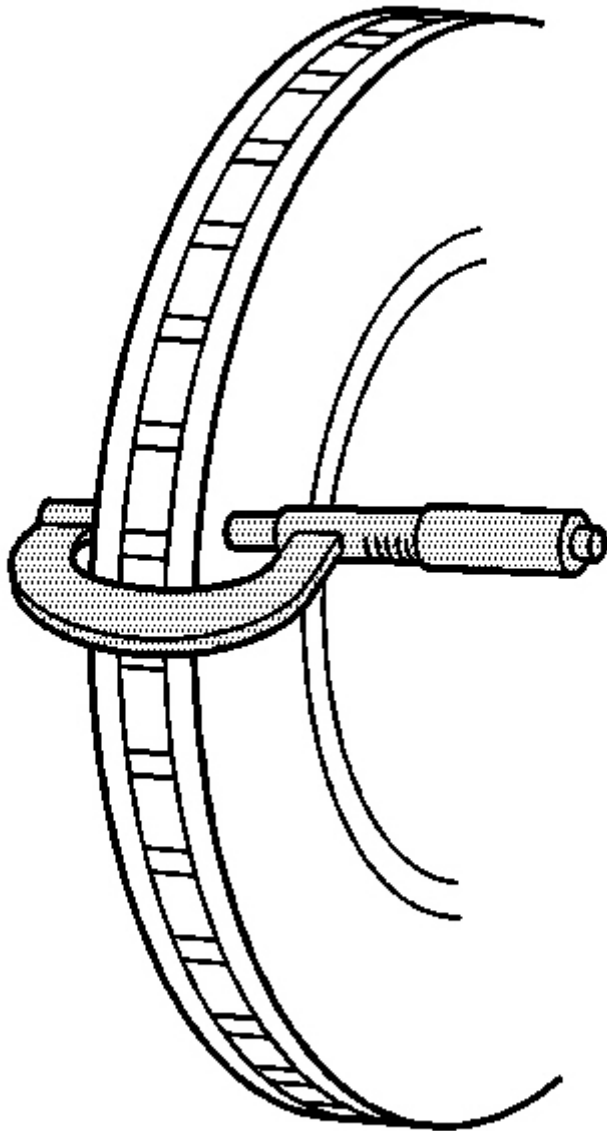
## DIAGNOSTIC INFORMATION AND PROCEDURES

### DIAGNOSTIC STARTING POINT - DISC BRAKES

Begin the disc brake system diagnosis with **Diagnostic Starting Point - Hydraulic Brakes** . The use of the Diagnostic Starting Point will lead to the identification of the correct procedure for diagnosing the system and where the procedure is located.

### BRAKE ROTOR THICKNESS MEASUREMENT

**CAUTION: Refer to Brake Dust Caution .**



**Fig. 1: Measuring Brake Rotor Thickness**  
Courtesy of GENERAL MOTORS CORP.

1. Clean the brake pad lining contact surface of the brake rotor with denatured alcohol or an equivalent brake cleaner.
2. Using a calibrated micrometer measure and record the lowest thickness of the brake rotor at

4 or more points equally spaced around the rotor.

Ensure that the measurements are only taken within the brake pad lining contact area and that the micrometer is positioned the same distance from the outside edge of the rotor for each measurement.

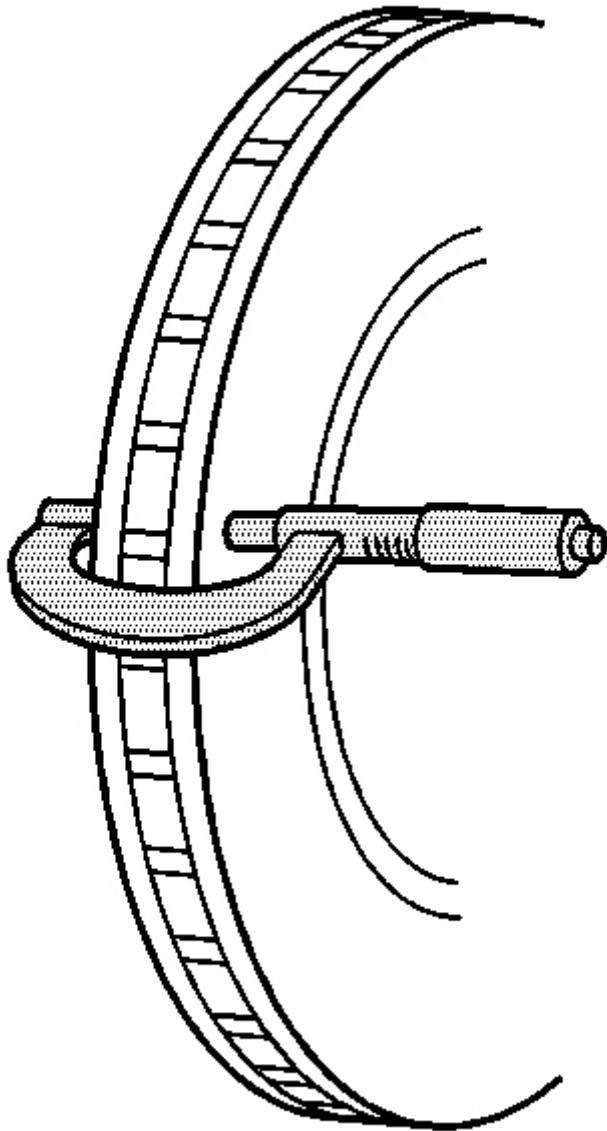
3. If the lowest thickness measurement of the brake rotor is above the minimum allowable thickness after refinishing specification, the rotor may be able to be refinished, depending upon surface and wear conditions which may be present.
4. If the lowest thickness measurement of the brake rotor is at or below the minimum allowable thickness after refinishing specification, the rotor may not be refinished.
5. If the lowest thickness measurement of the brake rotor is at or below the discard thickness specification, the rotor requires replacement.

#### **BRAKE ROTOR THICKNESS VARIATION MEASUREMENT**

**CAUTION: Refer to Brake Dust Caution .**

**IMPORTANT: Any disc brake rotor that exhibits thickness variation exceeding the maximum acceptable level must be refinished or replaced. Thickness variation exceeding the maximum acceptable level can cause brake pulsation.**

1. If the inboard friction surface of the brake rotor is not accessible, reposition and support the caliper with the brake pads. Refer to **Front Disc Brake Pads Replacement** and/or **Rear Disc Brake Pads Replacement**.
2. Clean the friction surfaces of the brake rotor with denatured alcohol or an equivalent approved brake cleaner.



**Fig. 2: Measuring Brake Rotor Thickness**  
Courtesy of GENERAL MOTORS CORP.

3. Using a micrometer calibrated in thousandths-of-a-millimeter or ten-thousandths-of-an-inch, measure and record the thickness of the brake rotor at 4 or more points, evenly spaced around the rotor.

Ensure that the measurements are only taken within the friction surfaces and that the micrometer is positioned the same distance from the outer edge of the rotor, about 13 mm (1/2 in), for each measurement.

4. Calculate the difference between the highest and lowest thickness measurements recorded to obtain the amount of thickness variation.
5. Compare the thickness variation measurement to the following specification:

**Specification:** Brake rotor maximum allowable thickness variation: 0.025 mm (0.001 in)

**IMPORTANT: Whenever a brake rotor is refinished or replaced, the assembled lateral runout (LRO) of the rotor must be measured to ensure optimum performance of the disc brakes.**

6. If the brake rotor thickness variation measurement exceeds the specification, the rotor requires refinishing or replacement.

#### **BRAKE ROTOR SURFACE AND WEAR INSPECTION**

**CAUTION: Refer to Brake Dust Caution .**

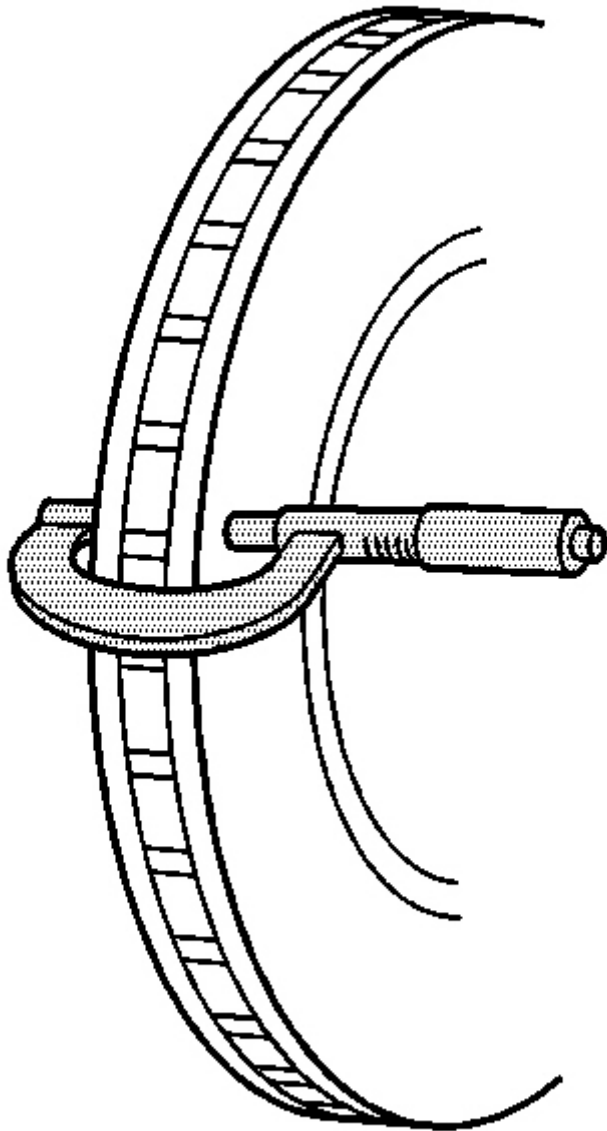
1. If the inboard friction surface of the brake rotor is not accessible, reposition and support the caliper with the brake pads. Refer to **Front Disc Brake Pads Replacement** and/or **Rear Disc Brake Pads Replacement**.
2. Clean the friction surfaces of the brake rotor with denatured alcohol or an equivalent approved brake cleaner.
3. Inspect the friction surfaces of the brake rotor for the following Braking Surface Conditions:

- Heavy rust and/or pitting

Light surface rust can be removed with an abrasive disc. Heavy surface rust and/or pitting must be removed by refinishing the rotor.

- Cracks and/or heat spots
- Excessive blueing discoloration

4. If the friction surfaces of the brake rotor exhibit one or more of the Braking Surface Conditions, the rotor requires refinishing or replacement.



**Fig. 3: Measuring Brake Rotor Thickness**  
Courtesy of GENERAL MOTORS CORP.

5. Using a micrometer calibrated in thousandths-of-a-millimeter or ten-thousandths-of-an-inch, measure and record the scoring depth of any grooves present on the rotor friction surfaces.
6. Compare the groove scoring depth recorded to the following specification:

**Specification:** Brake rotor maximum allowable scoring: 1.50 mm (0.059 in)

7. If the brake rotor scoring depth exceeds the specification or if an excessive amount of scoring is present, the rotor requires refinishing or replacement.

#### **BRAKE ROTOR ASSEMBLED LATERAL RUNOUT MEASUREMENT**

##### **Tools Required**

- **J 39544-KIT** Complete Torque Socket Set-10 Pieces or equivalent. See **Special Tools**.
- **J 41013** Rotor Resurfacing Kit. See **Special Tools**.
- **J 42450-A** Wheel Hub Resurfacing Kit. See **Special Tools**.
- **J 45101** Hub and Wheel Runout Gage. See **Special Tools**.
- **J 45101-100** Conical Brake Rotor Washers. See **Special Tools**.

**CAUTION:** Refer to **Brake Dust Caution** .

- IMPORTANT:**
- **Brake rotor assembled lateral runout (LRO) exceeding the maximum allowable specification can cause thickness variation to develop in the brake rotor over time, usually between 4 800-11 300 km (3,000-7,000 mi).**
  - **Brake rotor thickness variation MUST be checked BEFORE checking for assembled lateral runout (LRO). Thickness variation exceeding the maximum acceptable level can cause brake pulsation. Refer to Brake Rotor Thickness Variation Measurement.**

##### **Measuring Procedure**

1. Matchmark the position of the brake rotor to the wheel studs if this has not been done already.

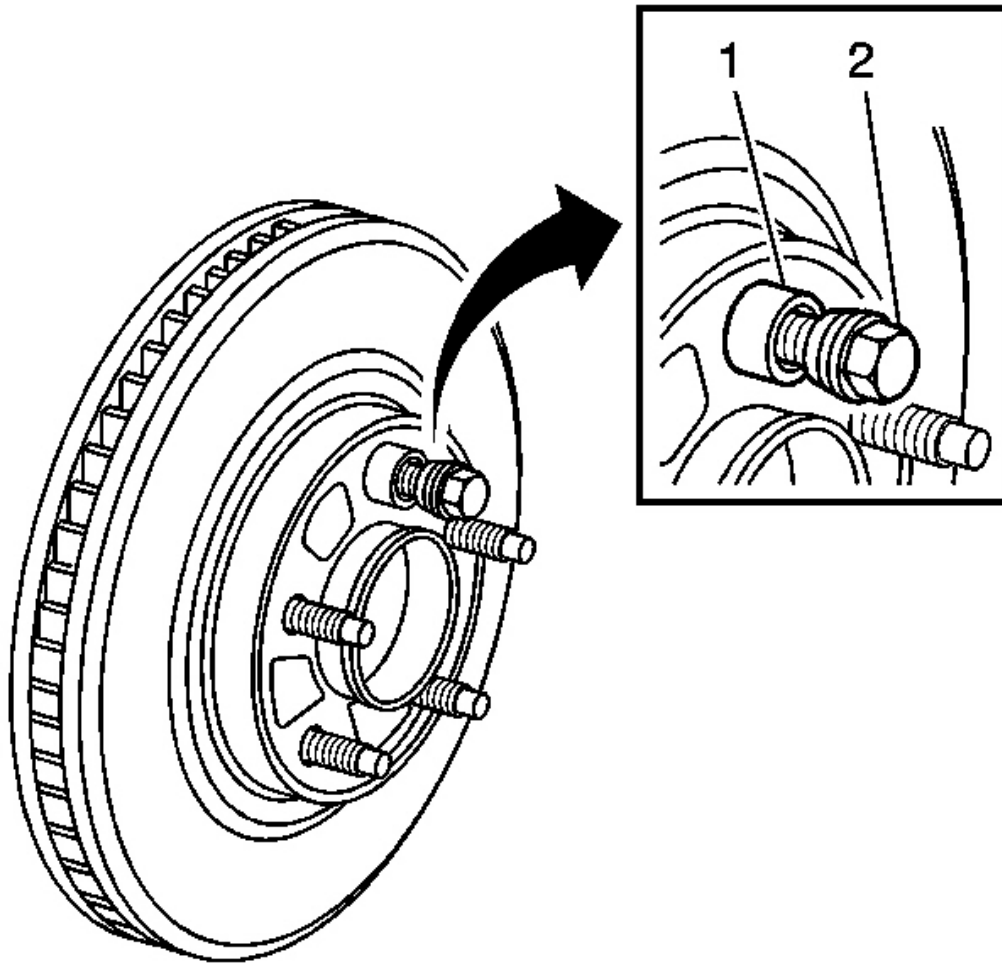
**IMPORTANT:** Whenever the brake rotor has been separated from the hub/axle flange, any rust or contaminants should be cleaned from the hub/axle flange and the brake rotor mating surfaces. Failure to do this may result in excessive assembled lateral runout (LRO) of the brake rotor, which could lead to brake pulsation.



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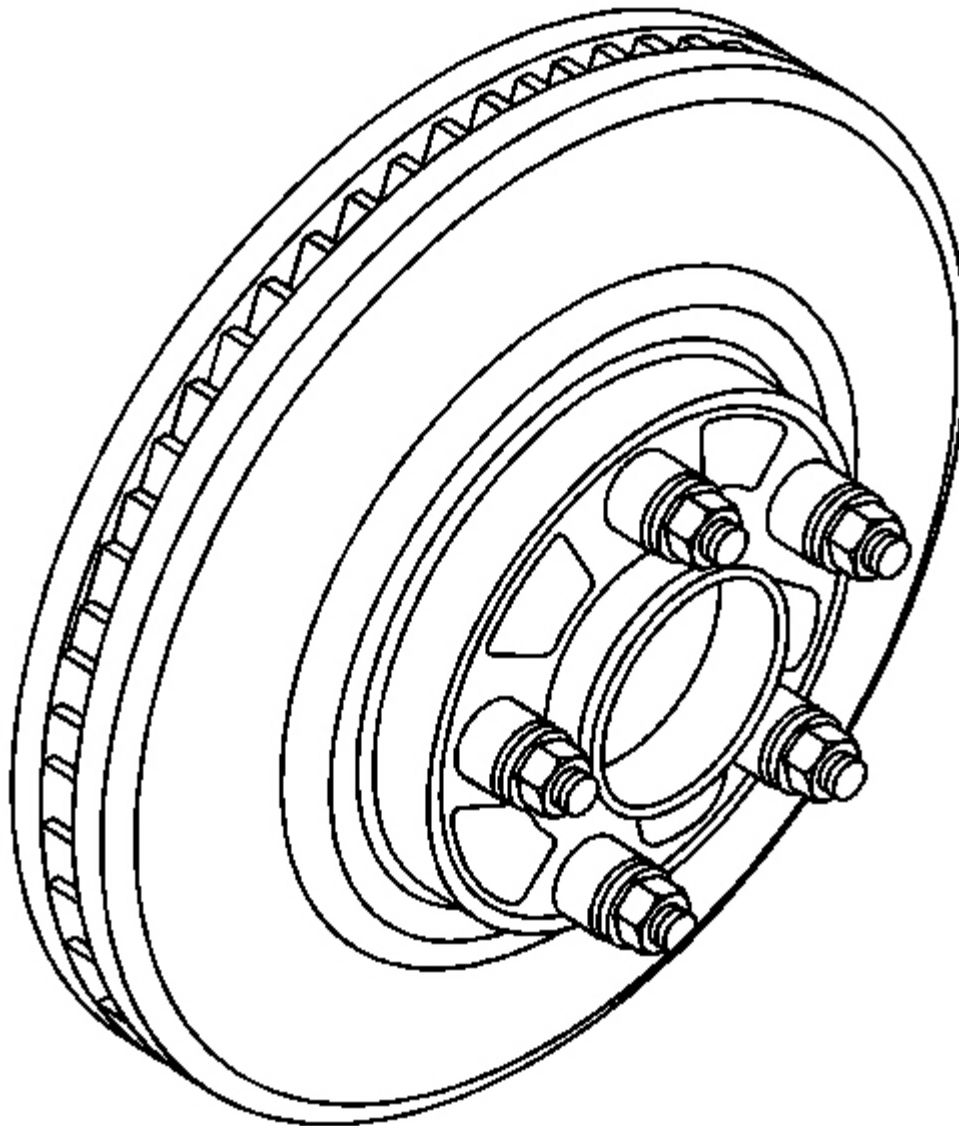
### 2007 BRAKES Disc Brakes - H3

2. Inspect the mating surface of the hub/axle flange and the brake rotor to ensure that there are no foreign particles, corrosion, rust or debris remaining. If the wheel hub/axle flange and/or if the brake rotor mating surfaces exhibit these conditions, perform the following steps:
  1. Remove the brake rotor from the vehicle. Refer to **Front Brake Rotor Replacement** and/or **Rear Brake Rotor Replacement** .
  2. Using the **J 42450-A** , thoroughly clean any rust or corrosion from the mating surface of the hub/axle flange. See **Special Tools**.
  3. Using the **J 41013** , thoroughly clean any rust or corrosion from the mating surface of the brake rotor.
  4. Clean the friction surfaces of the brake rotor with denatured alcohol or an equivalent approved brake cleaner.
3. Install the rotor to the hub/axle flange using the matchmark made prior to removal.



**Fig. 4: Identifying J 45101-100 & Lug Nut**  
Courtesy of GENERAL MOTORS CORP.

4. Hold the rotor firmly in place against the hub/axle flange and install one of the **J 45101-100** (1) and one lug nut (2) onto the upper-most wheel stud. See **Special Tools**.
5. Continue to hold the rotor secure and tighten the lug nut firmly by hand.

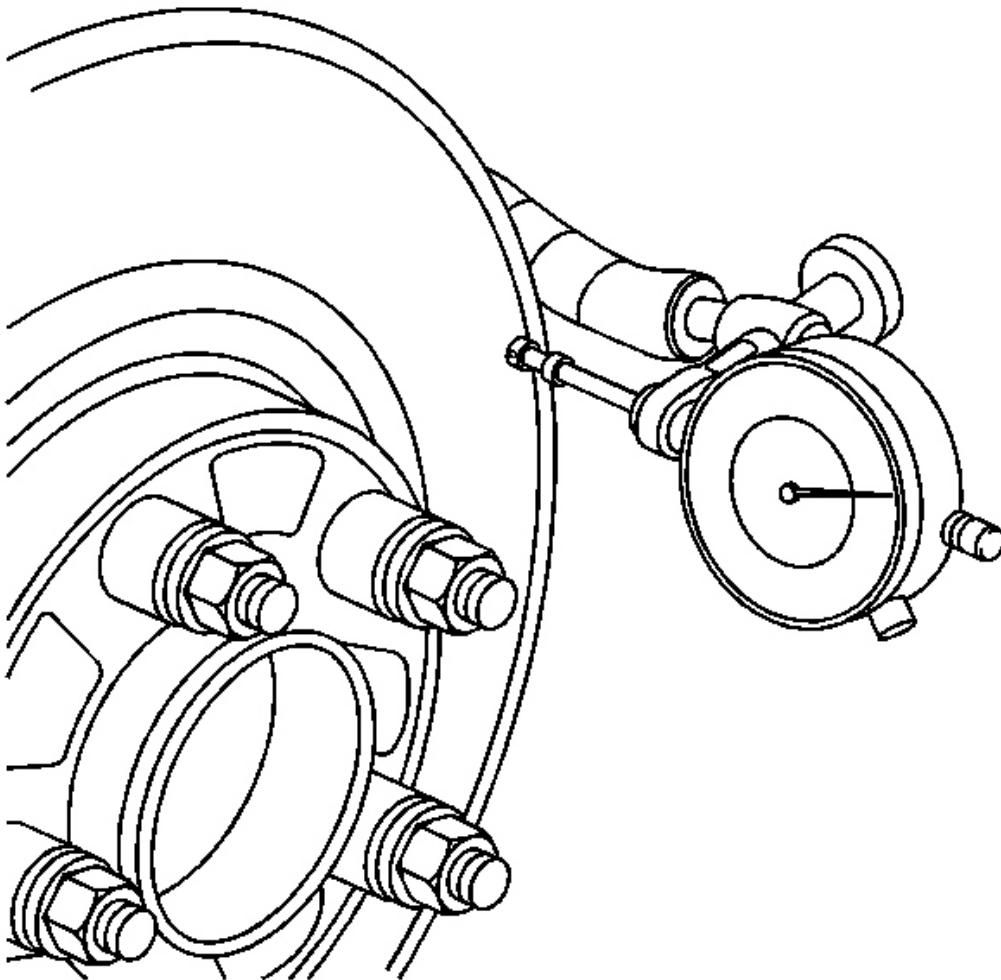


**Fig. 5: Identifying Brake Rotor**  
Courtesy of GENERAL MOTORS CORP.

6. Install the remaining **J 45101-100** and lug nuts onto the wheel studs and tighten the nuts firmly by hand in a star-pattern.
7. Using the **J 39544-KIT** or equivalent, tighten the lug nuts in a star-pattern to specification,

in order to properly secure the rotor. Refer to **Tire and Wheel Removal and Installation** .

8. If the brake rotor has been REFINISHED or REPLACED with a new rotor, proceed to step 14.
9. If the brake rotor meets the following criteria, proceed to step 10.
  - The rotor is within specifications and is being REUSED.
  - The rotor has NOT been refinished.
  - The rotor does NOT exhibit thickness variation exceeding the maximum allowable level.



**Fig. 6: Mounting Dial Indicator To Measure Lateral Runout**  
**Courtesy of GENERAL MOTORS CORP.**

10. Mount a dial indicator, **J 45101** or equivalent, to the steering knuckle and position the indicator button so it contacts the brake rotor friction surface at a 90 degree angle, approximately 13 mm (0. See **Special Tools**.5 in) from the outer edge of the rotor.
11. Measure and record the assembled LRO of the brake rotor.
  1. Rotate the rotor until the lowest reading is displayed on the indicator dial, then set the dial to zero.
  2. Rotate the rotor until the highest reading is displayed on the dial.
  3. Mark the location of the high spot relative to the nearest wheel stud or studs.
  4. Measure and record the amount of LRO.
12. Compare the brake rotor assembled LRO to the following specification:

**Specification:**

- Front brake rotor maximum allowable assembled lateral runout: 0.13 mm (0.005 in)
- Rear brake rotor maximum allowable assembled lateral runout: 0.13 mm (0.005 in)

13. If the brake rotor assembled LRO is within specifications, proceed to step 18.

If the brake rotor assembled LRO exceeds the specification, refinish the rotor to ensure true parallelism. Refer to **Brake Rotor Refinishing**. After refinishing the rotor, proceed to step 14.

14. Mount a dial indicator, **J 45101** or equivalent, to the steering knuckle and position the indicator button so it contacts the brake rotor friction surface at a 90 degree angle, approximately 13 mm (0. See **Special Tools**.5 in) from the outer edge of the rotor.
15. Measure and record the assembled LRO of the brake rotor.
  1. Rotate the rotor until the lowest reading is displayed on the indicator dial, then set the dial to zero.
  2. Rotate the rotor until the highest reading is displayed on the dial.
  3. Mark the location of the high spot relative to the nearest wheel stud or studs.
  4. Measure and record the amount of LRO.
16. Compare the brake rotor assembled LRO to the following specification:

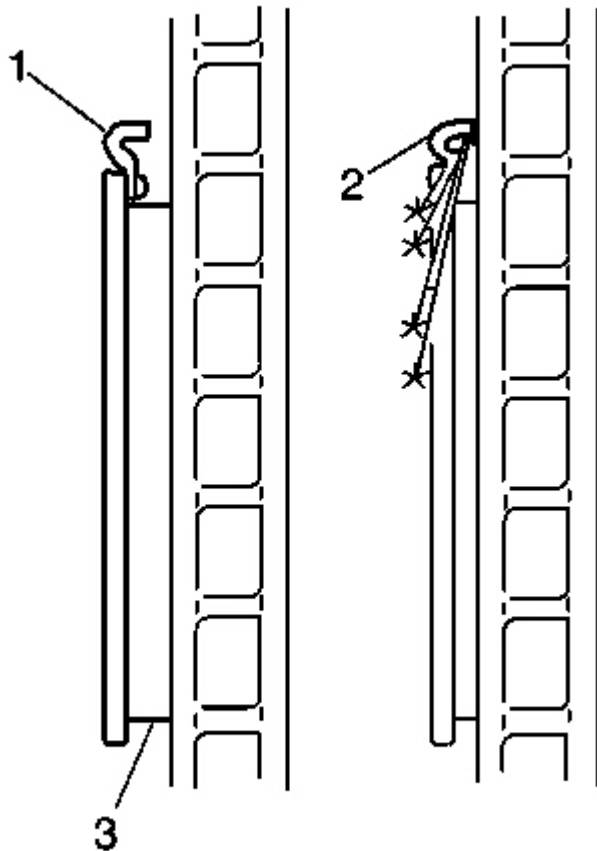
**Specification:**

- Front brake rotor maximum allowable assembled lateral runout: 0.13 mm (0.005 in)

- Rear brake rotor maximum allowable assembled lateral runout: 0.13 mm (0.005 in)
17. If the brake rotor assembled LRO measurement exceeds the specification, bring the LRO to within specifications. Refer to **Brake Rotor Assembled Lateral Runout Correction**.
  18. If the brake rotor assembled LRO measurement is within specification, install the brake caliper and depress the brake pedal several times to secure the rotor in place before removing the **J 45101-100** and the lug nuts.

### BRAKE PAD INSPECTION

**CAUTION:** Refer to **Brake Dust Caution** .

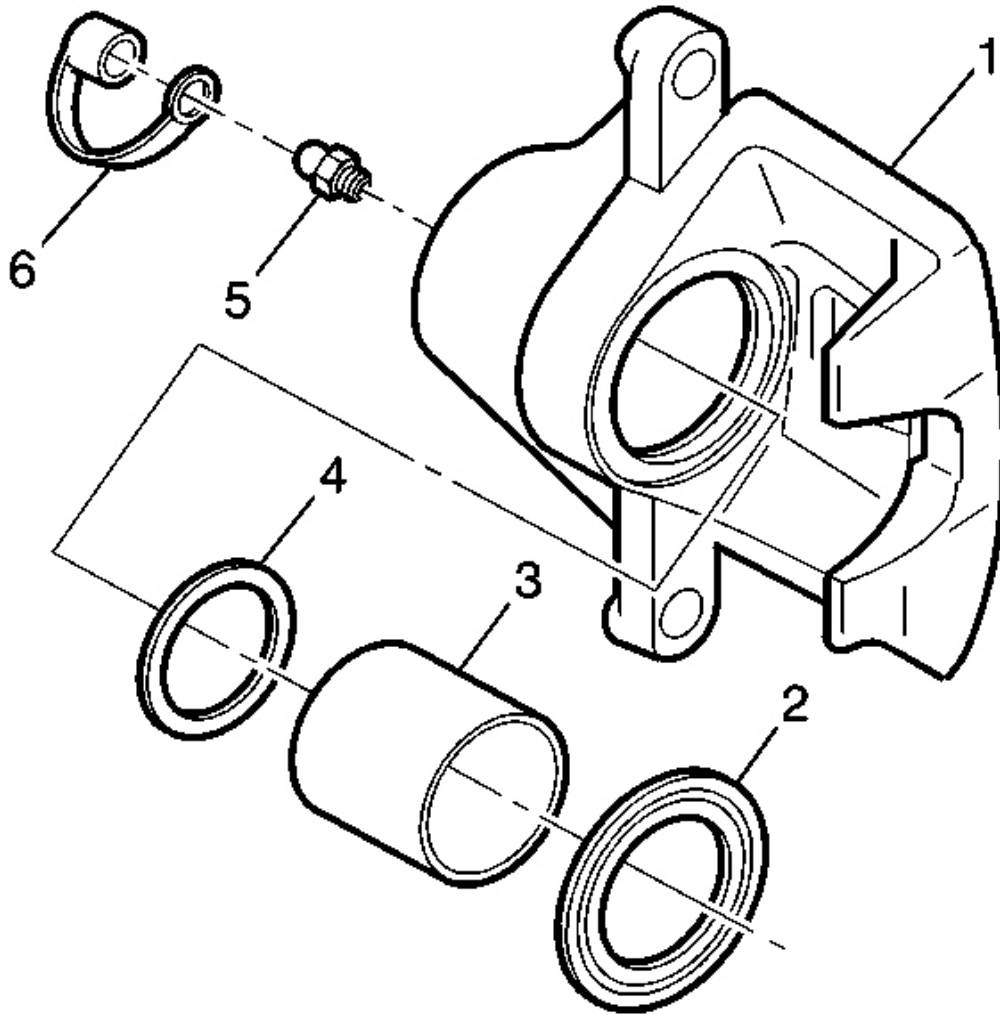


**Fig. 7: View Of Brake Pads & Audible Wear Sensors**  
**Courtesy of GENERAL MOTORS CORP.**

- Inspect the disc brake pads at regular intervals or whenever the tire and wheel assemblies are removed from the vehicle.
- If replacement is necessary, always replace disc brake pads in axle sets.
- Inspect both edges of the disc brake pad friction surfaces (3). The highest rate of wear normally occurs at the trailing edge of the disc brake pads.
- Inspect the thickness of the disc brake pads (3) in order to ensure that they have not worn prematurely. The disc brake pad wear should be approximately even per axle set.
- Both front and rear disc brake pads have integral, audible wear sensors (1). When the disc brake pad wear reaches the minimum allowable thickness, the wear sensor contacts the disc brake rotor (2). The wear indicator will then produce an audible, high-pitched warning noise during wheel rotation.
- Replace the disc brake pads when the friction surface (3) is worn to within 0.76 mm (0.030 in) of the mounting plates.
- Remove the brake calipers and inspect the friction surfaces of the inner and outer disc brake pads to ensure that they are level. Place the disc brake pad friction surfaces together and measure the gap between the surfaces. If more than 0.13 mm (0.005 in) gap exists midway between the length of the disc brake pads, replace the disc brake pads.
- Verify that any disc brake pad shims that may be required are in place and not damaged or excessively corroded. Replace any missing or damaged shims in order to preserve proper disc brake performance.
- Replace the disc brake pads if any have separated from the mounting plates.
- Inspect the disc brake pads friction surfaces for cracks, fractures or damage which may cause noise or otherwise impair disc brake performance.

**BRAKE CALIPER INSPECTION**

**CAUTION: Refer to Brake Dust Caution .**

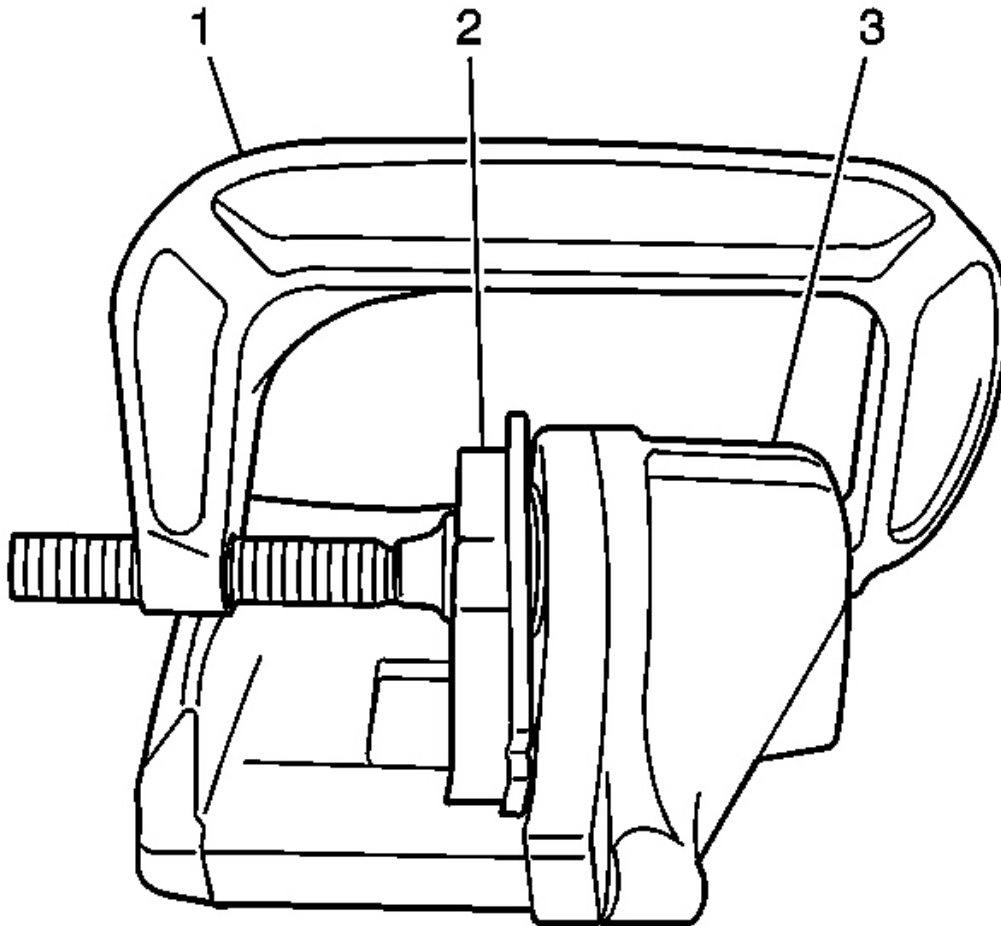


**Fig. 8: Exploded View Of Brake Caliper**  
Courtesy of GENERAL MOTORS CORP.

1. Inspect the brake caliper housing (1) for cracks, excess wear, and/or damage. If any of these conditions are present, the brake caliper requires replacement.
2. Inspect the caliper piston dust boot seal (2) for cracks, tears, cuts, deterioration and/or improper seating in the caliper body. If any of these conditions are present, the brake caliper requires overhaul or replacement.
3. Inspect for brake fluid leakage around the caliper piston dust boot seal (2) and on the disc



brake pads. If there is any evidence of brake fluid leakage, the brake caliper requires overhaul or replacement.



**Fig. 9: Compressing Caliper Piston**  
Courtesy of GENERAL MOTORS CORP.

4. Inspect for smooth and complete travel of the caliper pistons into the caliper bores:

The movement of the caliper pistons into the caliper bores should be smooth and even. If the caliper piston is frozen or difficult to bottom, the caliper requires overhaul or replacement.

- For single piston caliper applications, insert a discarded inner brake pad (2) or block

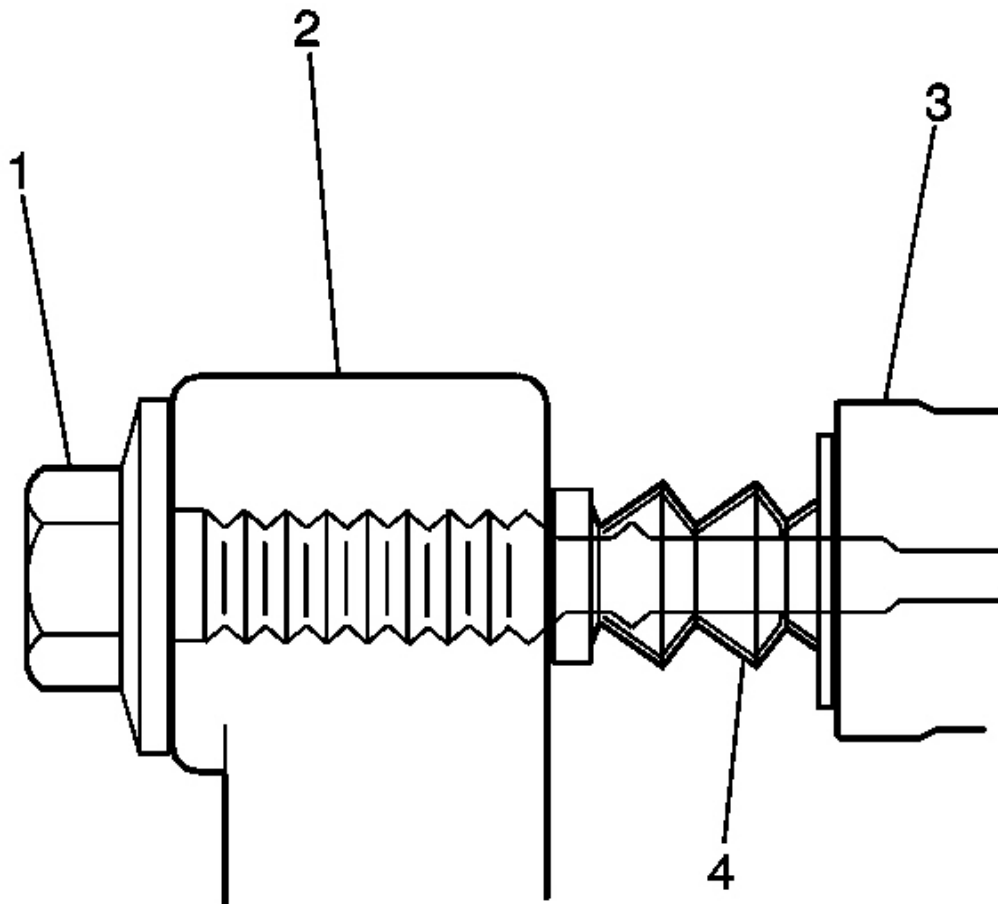
of wood in front of the piston. Using a large C-clamp (1) installed over the body of the caliper (3) and against the brake pad or block of wood, slowly bottom the piston in the bore.

- For dual piston caliper applications, insert a discarded inner brake pad (2) or block of wood in front of the pistons. Using 2 large C-clamps (1) installed over the body of the caliper (3) and against the brake pad or block of wood, slowly bottom the pistons evenly into the bores.

#### FRONT DISC BRAKE MOUNTING AND HARDWARE INSPECTION

##### **CAUTION: Refer to Brake Dust Caution .**

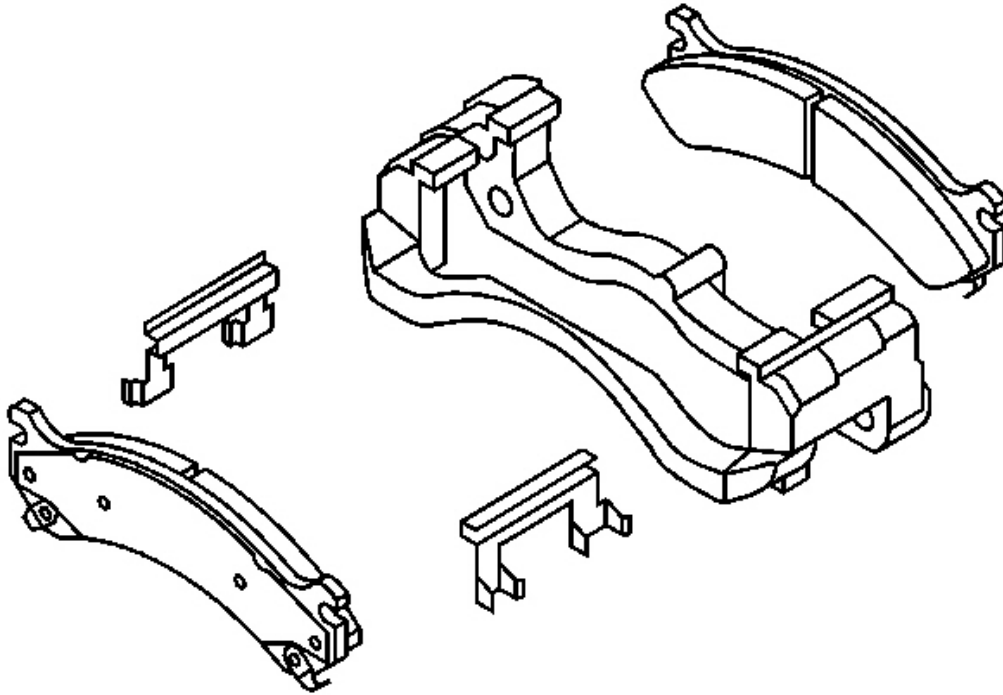
1. Inspect the fluid level in the brake master cylinder reservoir.
2. If the brake fluid level is midway between the maximum-full point and the minimum allowable level, then no brake fluid needs to be removed from the reservoir before proceeding.
3. If the brake fluid level is higher than midway between the maximum-full point and the minimum allowable level, then remove brake fluid to the midway point before proceeding.
4. Raise and support the vehicle. Refer **Lifting and Jacking the Vehicle** .
5. Remove the tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** .



**Fig. 10: View Of Caliper, Pin, Boots & Caliper Mounting Bracket**  
Courtesy of GENERAL MOTORS CORP.

6. Grasp the brake caliper housing and try to move the brake caliper housing up/down and forward/reverse in relation to the brake caliper mounting bracket. If excessive looseness is observed, the brake caliper bracket bushings and/or the brake caliper mounting bolts may need to be replaced.
7. Compress the front caliper pistons.
  - Install a large C-clamp over the top of the caliper housing and against the back of the outboard pad.
  - Slowly tighten the C-clamp until the pistons are pushed completely into the caliper bores.

- Remove the C-clamp from the caliper.
8. With the pistons compressed into the caliper bores, grasp the brake caliper housing and slide it back and forth on the brake caliper mounting bolts. Check for smooth operation. If the brake caliper housing slide force is high or the brake caliper housing does not slide smoothly, inspect the brake caliper mounting bolts and/or the brake caliper mounting bracket bushings for wear or damage. If wear or damage conditions are found, replacement of the brake caliper mounting bolts and/or the brake caliper mounting bracket bushings is necessary.
  9. Remove the brake caliper mounting bolts from the brake caliper mounting bracket and support the brake caliper using heavy mechanic's wire. Do not remove the hydraulic brake hose from the caliper. Refer to **Front Brake Caliper Replacement**.
  10. Remove the disc brake pads from the brake caliper mounting bracket.
  11. Inspect the disc brake pad mounting hardware for the following:
    - Missing mounting hardware
    - Excessive corrosion
    - Bent mounting tabs
    - Looseness at the brake caliper mounting bracket
    - Looseness at the disc brake pads
    - Excessive contaminants in the brake caliper mounting bracket surface and threads
  12. If any of the conditions listed are found, the disc brake pad mounting hardware requires replacement.
  13. Ensure the disc brake pads are held firmly in place on the brake caliper mounting bracket, yet slide easily on the mounting hardware without binding.



**Fig. 11: View Of Disc Brake Pads & Brake Caliper Mounting Bracket**  
**Courtesy of GENERAL MOTORS CORP.**

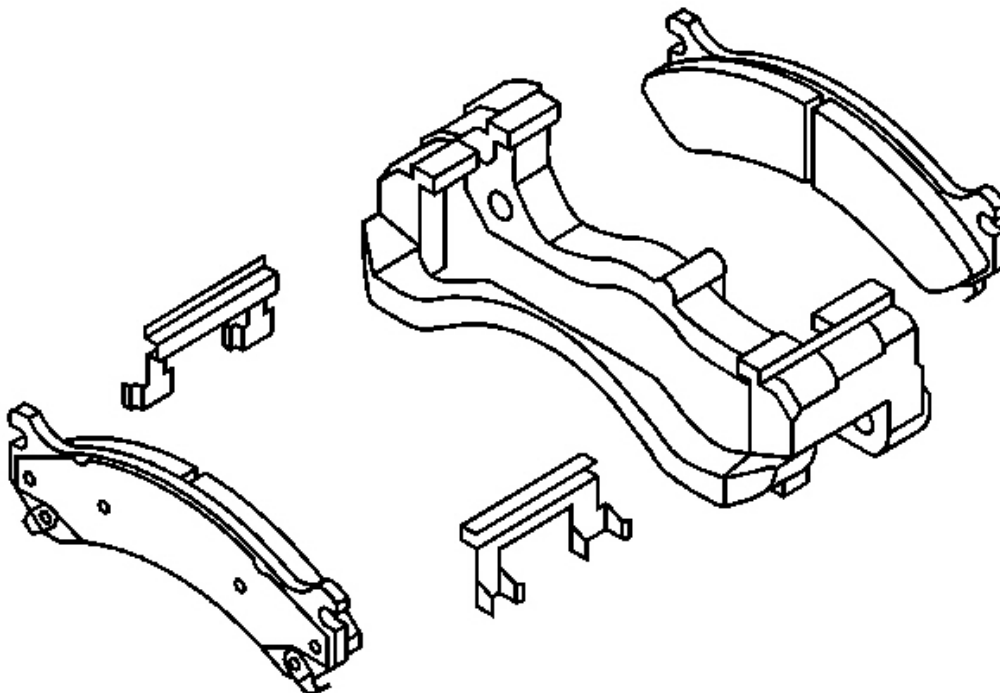
14. Inspect the caliper bolts (1) for the following:
  - Binding
  - Seizing
  - Looseness in the brake caliper mounting bracket (3)
  - Bent or damaged brake caliper mounting bolts
  - Cracked or torn boots (4)
  - Missing boots
  - Bent or damaged brake caliper mounting bracket (3)
15. If any of the conditions listed are found then the brake caliper mounting hardware requires replacement.
16. Install the disc brake pads to the brake caliper mounting bracket.
17. Install the disc brake caliper to the brake caliper mounting bracket. Refer to **Front Brake**

## Caliper Replacement.

### REAR DISC BRAKE MOUNTING AND HARDWARE INSPECTION

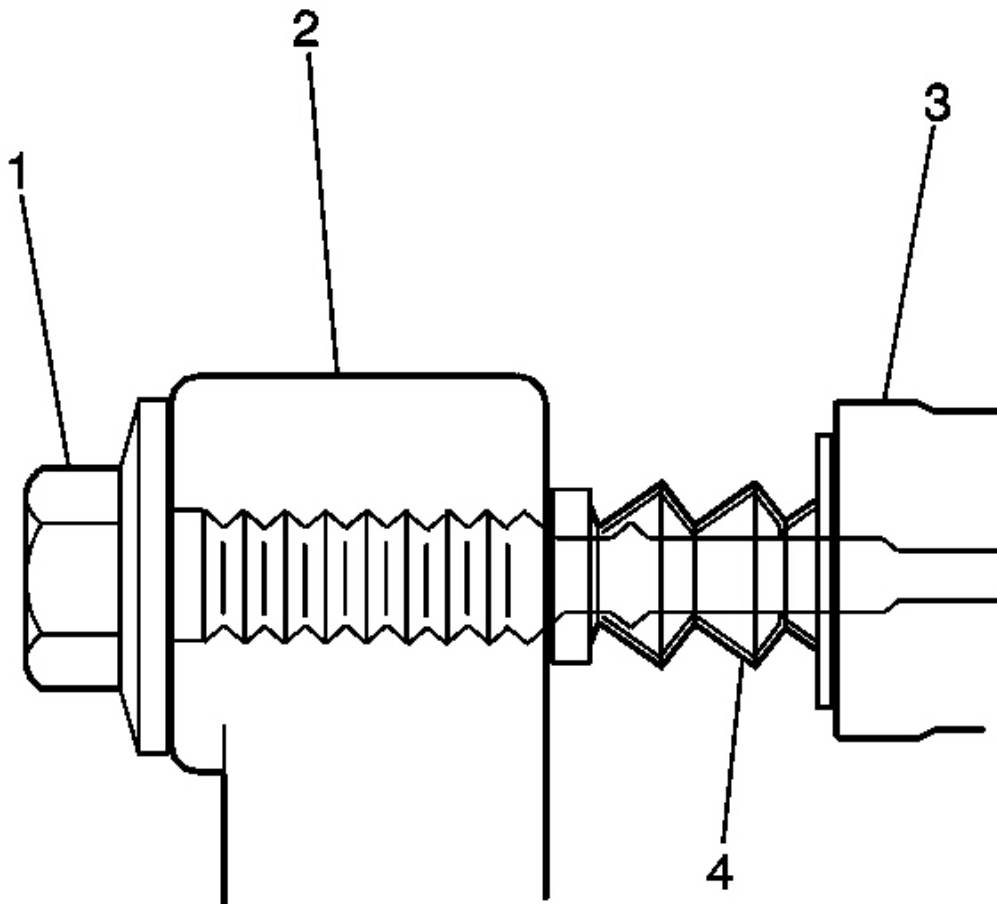
**CAUTION:** Refer to Brake Dust Caution .

1. Inspect the fluid level in the brake master cylinder reservoir.
2. If the brake fluid level is midway between the maximum-full point and the minimum allowable level then no brake fluid needs to be removed from the reservoir before proceeding.
3. If the brake fluid level is higher than midway between the maximum-full point and the minimum allowable level then remove brake fluid to the midway point before proceeding.
4. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
5. Remove the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation .



**Fig. 12: View Of Disc Brake Pads & Brake Caliper Mounting Bracket**  
**Courtesy of GENERAL MOTORS CORP.**

6. Grasp the brake caliper housing and try to move the brake caliper housing up/down and forward/reverse in relation to the brake caliper mounting bracket. If excessive looseness is observed, the brake caliper bracket bushings and/or the brake caliper mounting bolts may need to be replaced.
7. Compress the rear brake caliper pistons.
  - Install a large C-clamp over the top of the caliper housing and against the back of the outboard pad.
  - Slowly tighten the C-clamp until the pistons are pushed completely into the caliper bores.
  - Remove the C-clamp from the caliper.
8. With the pistons compressed into the caliper bores, grasp the brake caliper housing and slide it back and forth on the brake caliper mounting bolts. Check for smooth operation. If the brake caliper housing slide force is high or the brake caliper housing does not slide smoothly, inspect the brake caliper mounting bolts and/or the brake caliper mounting bracket bushings for wear or damage. If wear or damage conditions are found, replacement of the brake caliper mounting bolts and/or the brake caliper mounting bracket bushings is necessary.
9. Remove the brake caliper mounting bolts from the brake caliper mounting bracket and support the brake caliper using heavy mechanic's wire. Do not remove the hydraulic brake hose from the caliper. Refer to **Rear Brake Caliper Replacement**.
10. Remove the disc brake pads from the brake caliper mounting bracket.
11. Inspect the disc brake pad mounting hardware for the following:
  - Missing mounting hardware
  - Excessive corrosion
  - Bent mounting tabs
  - Looseness at the brake caliper mounting bracket
  - Looseness at the disc brake pads
  - Excessive contaminants in the brake caliper mounting bracket surface and threads
12. If any of the conditions listed are found, the disc brake pad mounting hardware requires replacement.
13. Ensure the disc brake pads are held firmly in place on the brake caliper mounting bracket, yet slide easily on the mounting hardware without binding.



**Fig. 13: View Of Caliper, Pin, Boots & Caliper Mounting Bracket**  
**Courtesy of GENERAL MOTORS CORP.**

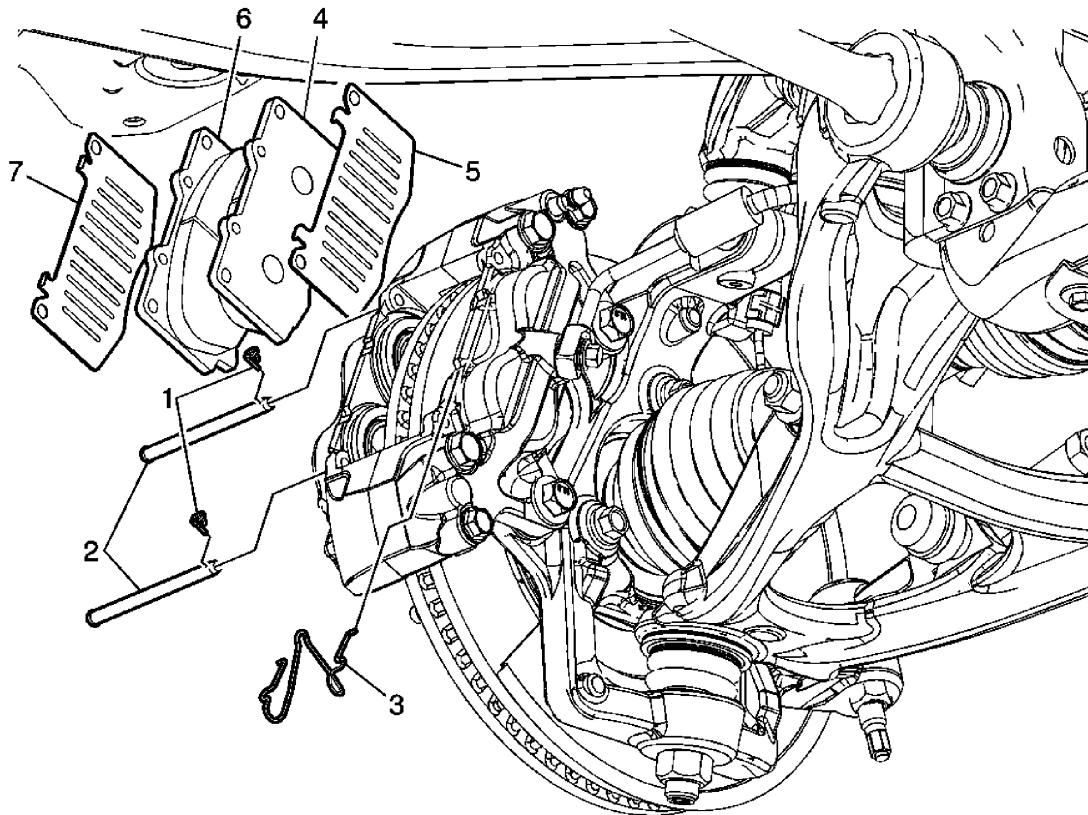
14. Inspect the caliper bolts (1) for the following:
- Binding
  - Seizing
  - Looseness in the brake caliper mounting bracket (3)
  - Bent or damaged brake caliper mounting bolts
  - Cracked or torn boots (4)
  - Missing boots
  - Bent or damaged brake caliper mounting bracket (3)



15. If any of the conditions listed are found then the brake caliper mounting hardware requires replacement.
16. Install the disc brake pads to the brake caliper mounting bracket.
17. Install the disc brake caliper to the brake caliper mounting bracket. Refer to **Rear Brake Caliper Replacement**.

## REPAIR INSTRUCTIONS

### FRONT DISC BRAKE PADS REPLACEMENT



**Fig. 14: Brake Pads Replacement - Front**  
 Courtesy of GENERAL MOTORS CORP.

### Front Disc Brake Pads Replacement

Callout	Component Name
<b>CAUTION:</b> Refer to <b><u>Brake Dust Caution</u></b> .	

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#### CAUTION:

Refer to Brake Fluid Irritant Caution .

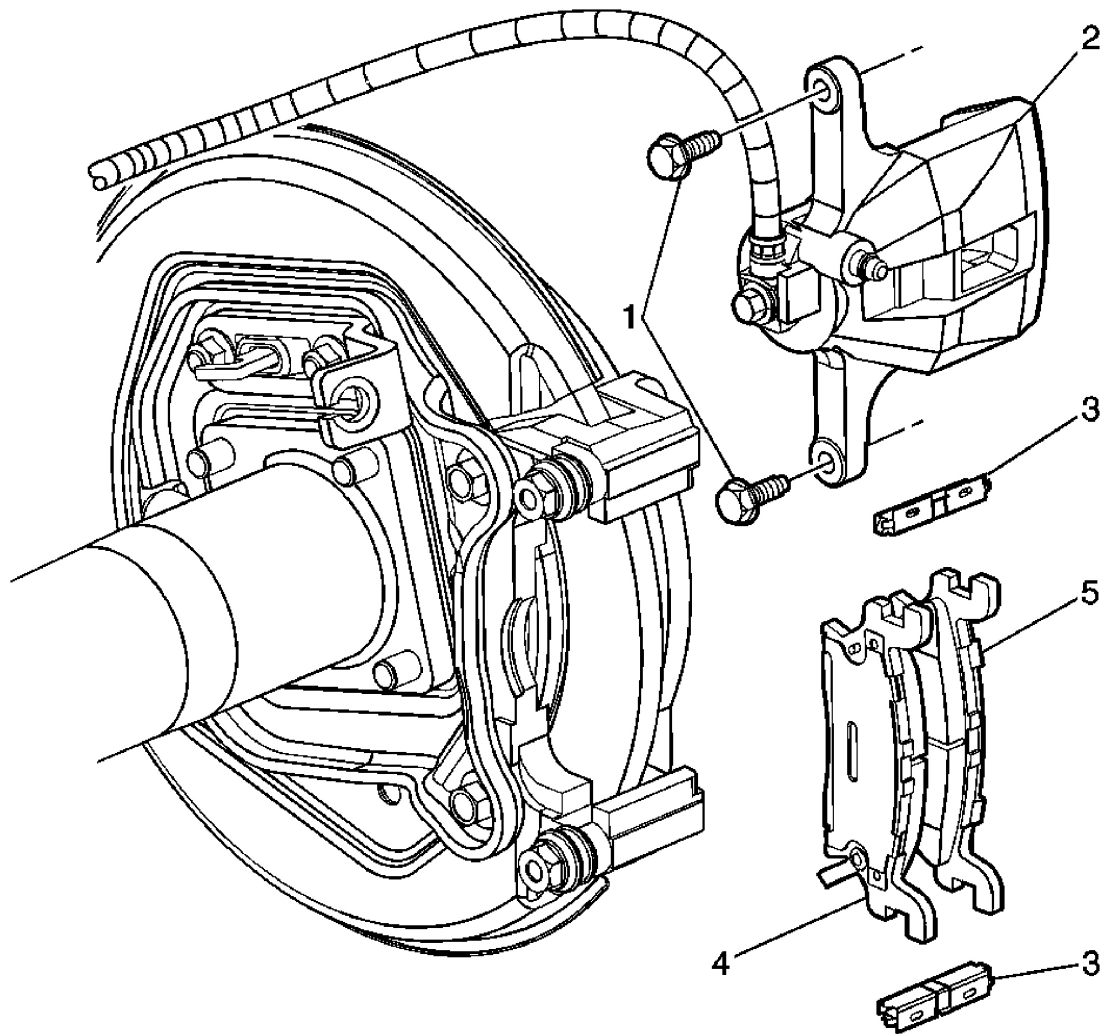
**Fastener Tightening Specifications:** Refer to Fastener Tightening Specifications.

#### Preliminary Procedures

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
2. Remove the tire and wheel. Refer to Tire and Wheel Removal and Installation .

1	Retainer, Front Disc Brake Pad (Qty: 2) <b>Tip:</b> The front disc pad retainers (Qty: 2) secure the front disc brake pad pins (Qty: 2) into the caliper and hold the pad assembly and hardware together.
2	Pin, Front Disc Brake Pad (Qty: 2)
3	Clip, Front Disc Brake Caliper Damping
4	Pad Assembly, Front Disc Brake Inner <b>Tip:</b> <ol style="list-style-type: none"><li>1. Compress the pistons into the caliper bores.</li><li>2. Pump the brake pedal in order to seat the new brake pads, then road test the vehicle in order to burnish the brake pads. Refer to <u>Brake Pad and Rotor Burnishing</u>.</li></ol>
5	Shim, Front Brake Pad Vibration
6	Pad Assembly, Front Disc Brake Outer
7	Insulator, Front Disc Brake Outer Pad

#### REAR DISC BRAKE PADS REPLACEMENT



**Fig. 15: Brake Pads Replacement - Rear**  
 Courtesy of GENERAL MOTORS CORP.

**Rear Disc Brake Pads Replacement**

Callout	Component Name
<b>CAUTION:</b>	Refer to <u>Brake Dust Caution</u> .
<b>CAUTION:</b>	Refer to <u>Brake Fluid Irritant Caution</u> .
<b>NOTE:</b>	Refer to <u>Fastener Notice</u> .

**Preliminary Procedure:** Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** .

1	Rear Disc Brake Caliper Bolt (Qty: 2) <b>Tip:</b> Pump the brake pedal in order to seat the new brake pads, then road test the vehicle in order to burnish the brake pads. Refer to <b><u>Brake Pad and Rotor Burnishing</u></b> .  <b>Tighten:</b> 36 N.m (27 lb ft).
2	Rear Disc Brake Caliper
3	Rear Disc Brake Caliper Bracket Retainer (Qty: 2)
4	Rear Disc Brake Inner Pad Assembly <b>Tip:</b> Compress the pistons into the caliper bores.
5	Rear Disc Brake Outer Pad Assembly

#### BRAKE PAD AND ROTOR BURNISHING

**CAUTION:** Refer to **ROAD TEST CAUTION** .

Burnishing the brake pads and brake rotors is necessary in order to ensure that the braking surfaces are properly prepared after service has been performed on the disc brake system.

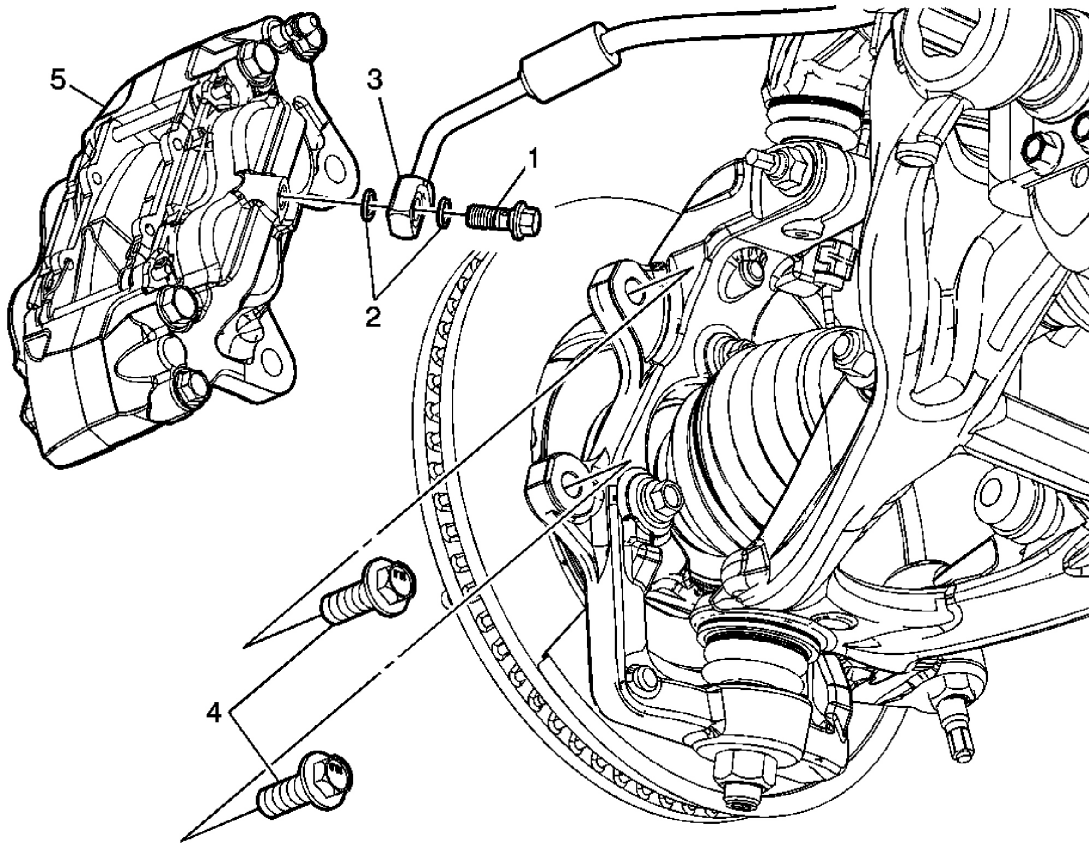
This procedure should be performed whenever the disc brake rotors have been refinished or replaced, and/or whenever the disc brake pads have been replaced.

1. Select a smooth road with little or no traffic.
2. Accelerate the vehicle to 48 km/h (30 mph).

**IMPORTANT:** Use care to avoid overheating the brakes while performing this step.

3. Using moderate to firm pressure, apply the brakes to bring the vehicle to a stop. Do not allow the brakes to lock.
4. Repeat steps 2 and 3 until approximately 20 stops have been completed. Allow sufficient cooling periods between stops in order to properly burnish the brake pads and rotors.

#### FRONT BRAKE CALIPER REPLACEMENT



**Fig. 16: Brake Caliper Replacement - Front**  
 Courtesy of GENERAL MOTORS CORP.

**Front Brake Caliper Replacement**

Callout	Component Name
<p><b>CAUTION:</b>                      Refer to <u>Bleed Procedure Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Dust Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Fluid Irritant Caution</u> .</p>	
<p><b>NOTE:</b>                      Refer to <u>Brake Fluid Effects on Paint and Electrical Components Notice</u> .</p>	
<p><b>NOTE:</b></p>	

Refer to Fastener Notice .

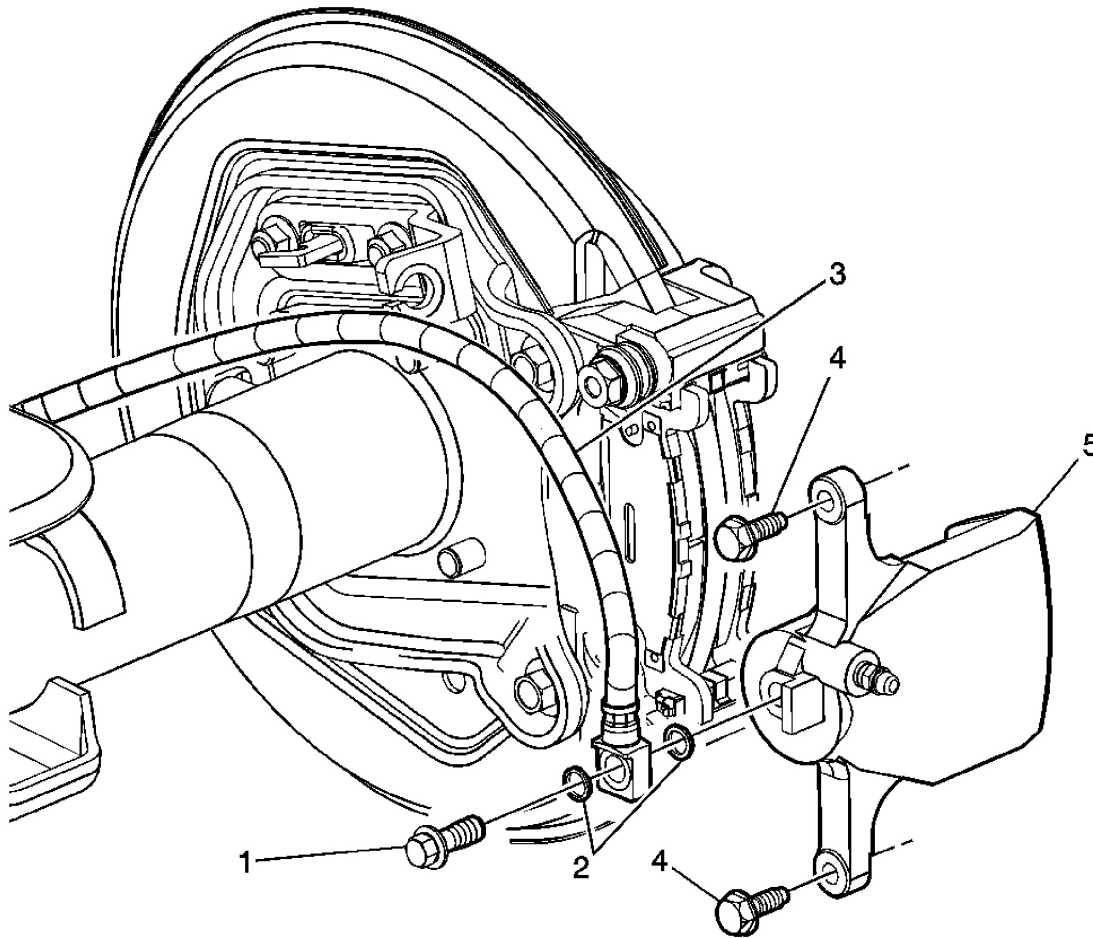
**Fastener Tightening Specifications:** Refer to Fastener Tightening Specifications.

### Preliminary Procedures

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
2. Remove the tire and wheel. Refer to Tire and Wheel Removal and Installation .

1	<p>Brake Hose Banjo Bolt</p> <p><b>Tip:</b> If removing the brake caliper to service another part of the brake system, DO NOT remove the brake hose. Reposition the brake caliper to the side and secure with mechanics wire or the equivalent.</p> <p><b>Tighten:</b> 40 N.m (30 lb ft)</p>
2	<p>Brake Hose Banjo Bolt Washer (Qty: 2)</p> <p><b>Tip:</b> Install the new brake hose banjo bolt washers. Do not reuse the brake hose banjo bolt washers.</p>
3	<p>Front Brake Hose</p> <p><b>Tip:</b></p> <ul style="list-style-type: none"> <li>• Cap or plug the brake hose to prevent fluid loss and contamination.</li> <li>• Bleed the brake system anytime the system is opened for repairs. Refer to <u>Hydraulic Brake System Bleeding (Manual)</u> or <u>Hydraulic Brake System Bleeding (Pressure)</u> .</li> </ul>
4	<p>Brake Caliper Bolt (Qty: 2)</p> <p><b>Tighten:</b> 195 N.m (144 lb ft)</p>
5	<p>Front Brake Caliper</p>

### REAR BRAKE CALIPER REPLACEMENT



**Fig. 17: Brake Caliper Replacement - Rear**  
 Courtesy of GENERAL MOTORS CORP.

**Rear Brake Caliper Replacement**

Callout	Component Name
<p><b>CAUTION:</b>                      Refer to <u>Bleed Procedure Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Dust Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Fluid Irritant Caution</u> .</p>	
<p><b>NOTE:</b>                      Refer to <u>Brake Fluid Effects on Paint and Electrical Components Notice</u> .</p>	

**NOTE:**

Refer to Fastener Notice .

**Fastener Tightening Specifications:** Refer to Fastener Tightening Specifications.

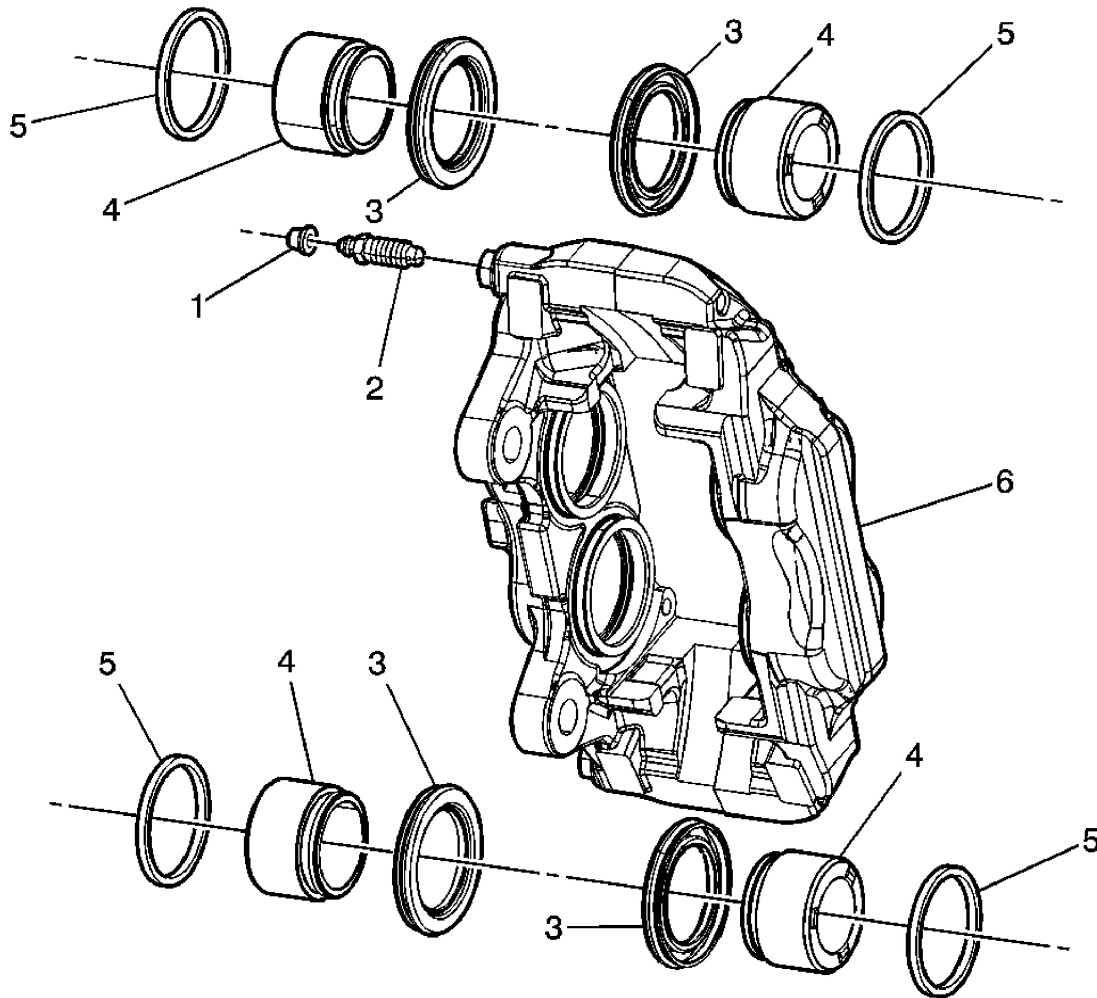
**Preliminary Procedure**

- Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
- Remove the tire and wheel. Refer to Tire and Wheel Removal and Installation .

1	Brake Hose Bolt <b>Tighten:</b> 40 N.m (30 lb ft)
2	Brake Hose Washer (Qty: 2) <b>Tip:</b> Install the new brake hose bolt washers. Do not reuse the brake hose bolt washers.
3	Rear Brake Hose <b>Tip:</b> Cap or plug the brake hose to prevent fluid loss and contamination for the brake system.
4	Brake Caliper Bolt (Qty: 2) <b>Tip:</b> If removing the brake caliper to service the brake system, note that the rear or trailing slide bolt for the brake caliper bolt has an O-ring and is a smaller size bolt. DO NOT interchange the front or rear slide bolts. <b>Tighten:</b> 36 N.m (27 lb ft)
5	Rear Brake Caliper <b>Tip:</b> Bleed the brake system anytime the system is opened for repairs. Refer to <u>Hydraulic Brake System Bleeding (Manual)</u> or <u>Hydraulic Brake System Bleeding (Pressure)</u> .

**FRONT BRAKE CALIPER OVERHAUL (WITHOUT RPO BRM)**





**Fig. 18: Brake Caliper Overhaul - Front**  
 Courtesy of GENERAL MOTORS CORP.

**Front Brake Caliper Overhaul (without RPO BRM)**

Callout	Component Name
<p><b>CAUTION:</b>                      Refer to <u>Bleed Procedure Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Dust Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Fluid Irritant Caution</u> .</p>	

## 2007 Hummer H3

2007 BRAKES Disc Brakes - H3

### CAUTION:

Refer to Eye Protection Caution .

### NOTE:

Refer to Brake Fluid Effects on Paint and Electrical Components Notice .

### NOTE:

Refer to Fastener Notice .

**Fastener Tightening Specifications:** Refer to Fastener Tightening Specifications.

### Preliminary Procedure

1. Raise the vehicle. Refer to Lifting and Jacking the Vehicle .
2. Remove the front disc brake caliper. Refer to Front Brake Caliper Replacement.

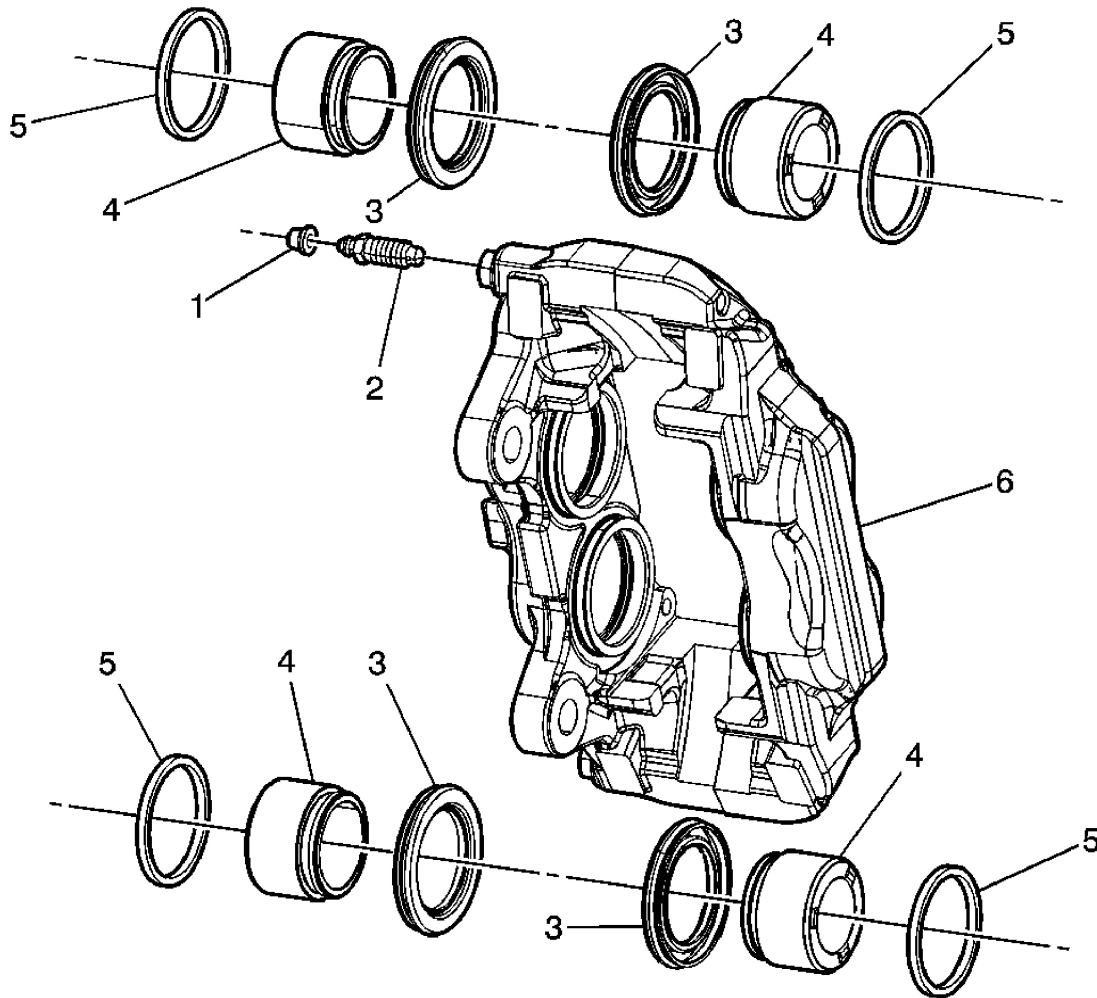
1	Front Brake Bleeder Valve Cap
2	Front Brake Bleeder Valve Screw <b>Tighten:</b> 10 N.m (89 lb in)
3	Front Disc Brake Caliper Piston Boot (Qty: 4)
4	Front Disc Brake Caliper Piston (Qty: 4) <b>Tip:</b> <ul style="list-style-type: none"><li>• Wear eye protection while performing these steps.</li><li>• Do not use abrasives to clean the brake caliper piston or the disc brake caliper bore.</li><li>• Place a block of wood against the inside of the caliper body, opposite of the caliper piston, then direct low pressure compressed air through the caliper inlet port to remove the caliper piston. Repeat for each of the pistons, until all the pistons are removed from the caliper bores.</li><li>• During installation apply a thin coat of Delco® Supreme 11 GM P/N 12377967 (Canadian P/N 992667) or equivalent DOT-3 brake fluid from a clean, sealed brake fluid container onto the outer surface area of the caliper pistons.</li></ul>
5	Front Disc Brake Caliper Piston Seal (Qty: 4) <b>Tip:</b> <ol style="list-style-type: none"><li>1. Use a small wooden or plastic tool, carefully remove the rear disc brake caliper piston seal from the groove in the caliper seal bore.</li></ol>

## 2007 Hummer H3

### 2007 BRAKES Disc Brakes - H3

	<p>2. During installation lubricate the new piston seals with Delco® Supreme 11 GM P/N 12377967 (Canadian P/N 992667) or equivalent DOT-3 brake fluid from a clean, sealed brake fluid container.</p>
6	<p>Front Disc Brake Caliper</p> <p><b>Tip:</b></p> <ul style="list-style-type: none"><li>• Inspect the caliper bore and housing for cracks, scoring, pitting, excessive rust, and/or excessive corrosion. If any of these conditions are present in the caliper bore or housing, replace the caliper assembly.</li><li>• If light rust or light corrosion are present in the caliper bore, attempt to remove the imperfection with a fine emery paper. If the imperfection cannot be removed, replace the caliper assembly.</li><li>• Clean the brake caliper piston bore and seal counterbore, the caliper piston and the caliper sleeves with denatured alcohol or equivalent.</li><li>• Bleed the brake system anytime the system is opened for repairs. Refer to <b><u>Hydraulic Brake System Bleeding (Manual)</u></b> or <b><u>Hydraulic Brake System Bleeding (Pressure)</u></b> .</li></ul>

#### FRONT BRAKE CALIPER OVERHAUL (WITH RPO BRM)



**Fig. 19: Brake Caliper Overhaul - Front**  
 Courtesy of GENERAL MOTORS CORP.

**Front Brake Caliper Overhaul (with RPO BRM)**

Callout	Component Name
<p><b>CAUTION:</b>                      Refer to <u>Bleed Procedure Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Dust Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Fluid Irritant Caution</u> .</p>	

## 2007 Hummer H3

2007 BRAKES Disc Brakes - H3

### CAUTION:

Refer to Eye Protection Caution .

### NOTE:

Refer to Brake Fluid Effects on Paint and Electrical Components Notice .

### NOTE:

Refer to Fastener Notice .

**Fastener Tightening Specifications:** Refer to Fastener Tightening Specifications.

### Preliminary Procedure

1. Raise the vehicle. Refer to Lifting and Jacking the Vehicle .
2. Remove the front disc brake caliper. Refer to Front Brake Caliper Replacement.

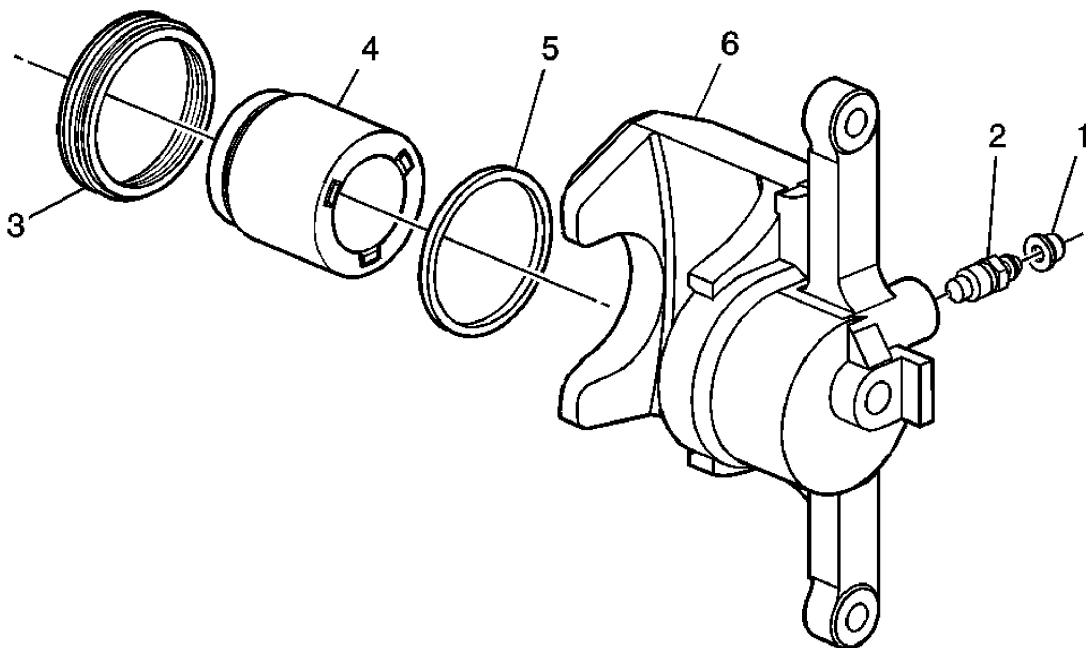
1	Front Brake Bleeder Valve Cap
2	Front Brake Bleeder Valve Screw <b>Tighten:</b> 10 N.m (89 lb in)
3	Front Disc Brake Caliper Piston Boot (Qty: 4)
4	Front Disc Brake Caliper Piston (Qty: 4) <b>Tip:</b> <ul style="list-style-type: none"><li>• Wear eye protection while performing these steps.</li><li>• Do not use abrasives to clean the brake caliper piston or the disc brake caliper bore.</li><li>• Place a block of wood against the inside of the caliper body, opposite of the caliper piston, then direct low pressure compressed air through the caliper inlet port to remove the caliper piston. Repeat for each of the pistons, until all the pistons are removed from the caliper bores.</li><li>• During installation apply a thin coat of Delco® Supreme 11 GM P/N 88958860 (Canadian P/N 88901244) or equivalent DOT-4 brake fluid from a clean, sealed brake fluid container onto the outer surface area of the caliper pistons.</li></ul>
	Front Disc Brake Caliper Piston Seal (Qty: 4) <b>Tip:</b> <ol style="list-style-type: none"><li>1. Use a small wooden or plastic tool, carefully remove the rear disc brake caliper piston seal from the groove in the caliper seal bore.</li></ol>

## 2007 Hummer H3

### 2007 BRAKES Disc Brakes - H3

5	2. During installation lubricate the new piston seals with Delco® Supreme 11 GM P/N 88958860 (Canadian P/N 88901244) or equivalent DOT-4 brake fluid from a clean, sealed brake fluid container.
6	<p>Front Disc Brake Caliper</p> <p><b>Tip:</b></p> <ul style="list-style-type: none"><li>• Inspect the caliper bore and housing for cracks, scoring, pitting, excessive rust, and/or excessive corrosion. If any of these conditions are present in the caliper bore or housing, replace the caliper assembly.</li><li>• If light rust or light corrosion are present in the caliper bore, attempt to remove the imperfection with a fine emery paper. If the imperfection cannot be removed, replace the caliper assembly.</li><li>• Clean the brake caliper piston bore and seal counterbore, the caliper piston and the caliper sleeves with denatured alcohol or equivalent.</li><li>• Bleed the brake system anytime the system is opened for repairs. Refer to <b><u>Hydraulic Brake System Bleeding (Manual)</u></b> or <b><u>Hydraulic Brake System Bleeding (Pressure)</u></b> .</li></ul>

### REAR BRAKE CALIPER OVERHAUL



**Fig. 20: Brake Caliper Overhaul - Rear**

Courtesy of GENERAL MOTORS CORP.

## Rear Brake Caliper Overhaul

Callout	Component Name
<p><b>CAUTION:</b> Refer to <u>Bleed Procedure Caution</u> .</p> <p><b>CAUTION:</b> Refer to <u>Brake Dust Caution</u> .</p> <p><b>CAUTION:</b> Refer to <u>Brake Fluid Irritant Caution</u> .</p> <p><b>NOTE:</b> Refer to <u>Brake Fluid Effects on Paint and Electrical Components Notice</u> .</p> <p><b>NOTE:</b> Refer to <u>Fastener Notice</u> .</p>	<p><b>Fastener Tightening Specifications:</b> Refer to <u>Fastener Tightening Specifications</u>.</p>
<p><b>Preliminary Procedure</b></p> <ol style="list-style-type: none"> <li>1. Raise the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> .</li> <li>2. Remove the rear disc brake caliper. Refer to <u>Rear Brake Caliper Replacement</u>.</li> </ol>	
1	Cap, Rear Brake Bleeder Valve
2	Screw, Rear Brake Bleeder Valve <b>Tighten:</b> 10 N.m (86 lb in)
3	Boot, Rear Disc Brake Caliper Piston
4	<p>Piston, Rear Disc Brake Caliper <b>Tip:</b></p> <ul style="list-style-type: none"> <li>• Do not use abrasives to clean the brake caliper piston or the disc brake caliper bore.</li> <li>• Place a block of wood against the inside of the caliper body, opposite of the caliper piston, then direct low pressure compressed air through the caliper inlet port to remove the caliper piston.</li> <li>• During installation apply a thin coat of Delco® Supreme 11 GM P/N</li> </ul>

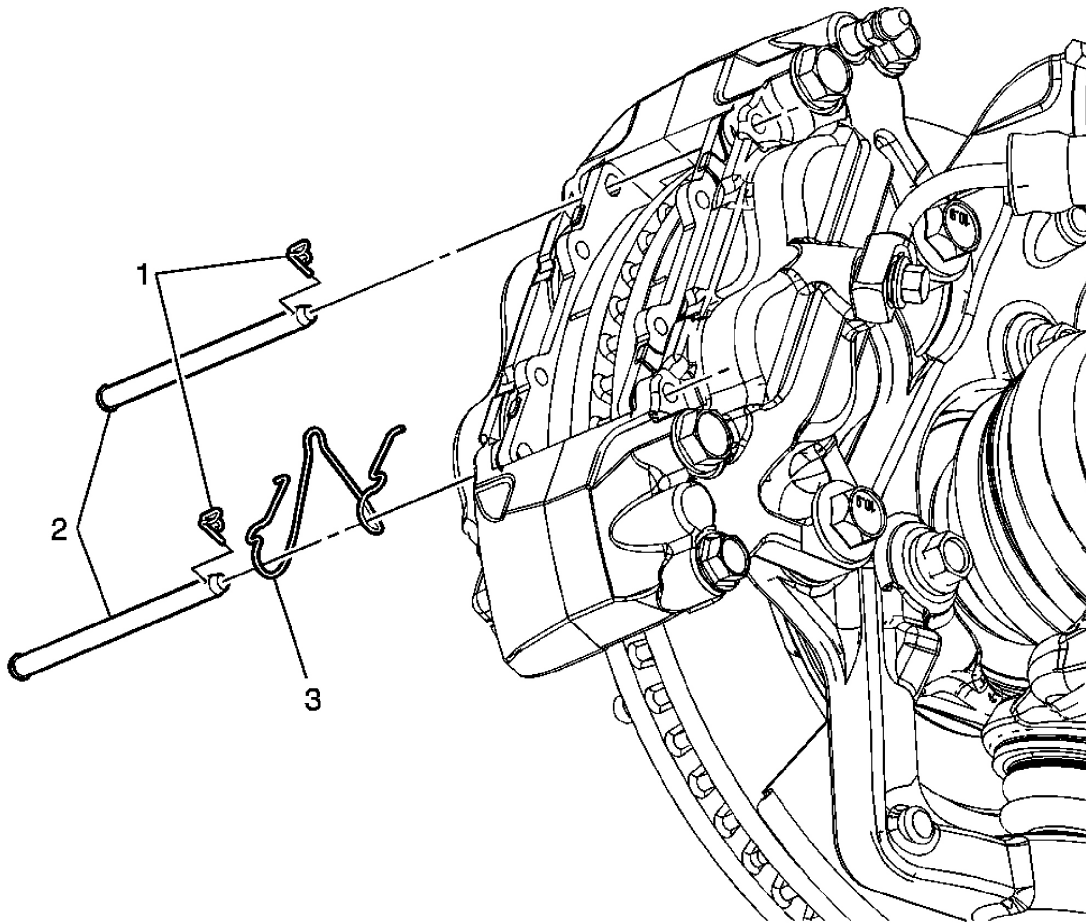
## 2007 Hummer H3

### 2007 BRAKES Disc Brakes - H3

	<p>12377967 (Canadian P/N 992667) or equivalent DOT-3 brake fluid from a clean, sealed brake fluid container onto the outer surface area of the caliper piston.</p>
5	<p>Seal, Rear Disc Brake Caliper Piston</p> <p><b>Tip:</b></p> <ol style="list-style-type: none"><li>1. Use a small wooden or plastic tool, carefully remove the rear disc brake caliper piston seal from the groove in the caliper seal bore.</li><li>2. During installation lubricate the new piston seal with Delco® Supreme 11 GM P/N 12377967 (Canadian P/N 992667) or equivalent DOT-3 brake fluid from a clean, sealed brake fluid container.</li></ol> <p>Use a small wooden or plastic tool, carefully remove the rear disc brake caliper piston seal from the groove in the caliper seal bore.</p>
6	<p>Caliper, Rear Disc Brake</p> <p><b>Tip:</b></p> <ol style="list-style-type: none"><li>1. Inspect the caliper bore and housing for cracks, scoring, pitting, excessive rust, and/or excessive corrosion. If any of these conditions are present in the caliper bore or housing, replace the caliper assembly.</li><li>2. If light rust or light corrosion are present in the caliper bore, attempt to remove the imperfection with a fine emery paper. If the imperfection cannot be removed, replace the caliper assembly.</li><li>3. Clean the brake caliper piston bore and seal counterbore, the caliper piston and the caliper sleeves with denatured alcohol or equivalent.</li><li>4. Bleed the brake system anytime the system is opened for repairs. Refer to <b><u>Hydraulic Brake System Bleeding (Manual)</u></b> or <b><u>Hydraulic Brake System Bleeding (Pressure)</u></b> .</li></ol>

## FRONT DISC BRAKE HARDWARE REPLACEMENT





**Fig. 21: Disc Brake Hardware Replacement - Front**  
 Courtesy of GENERAL MOTORS CORP.

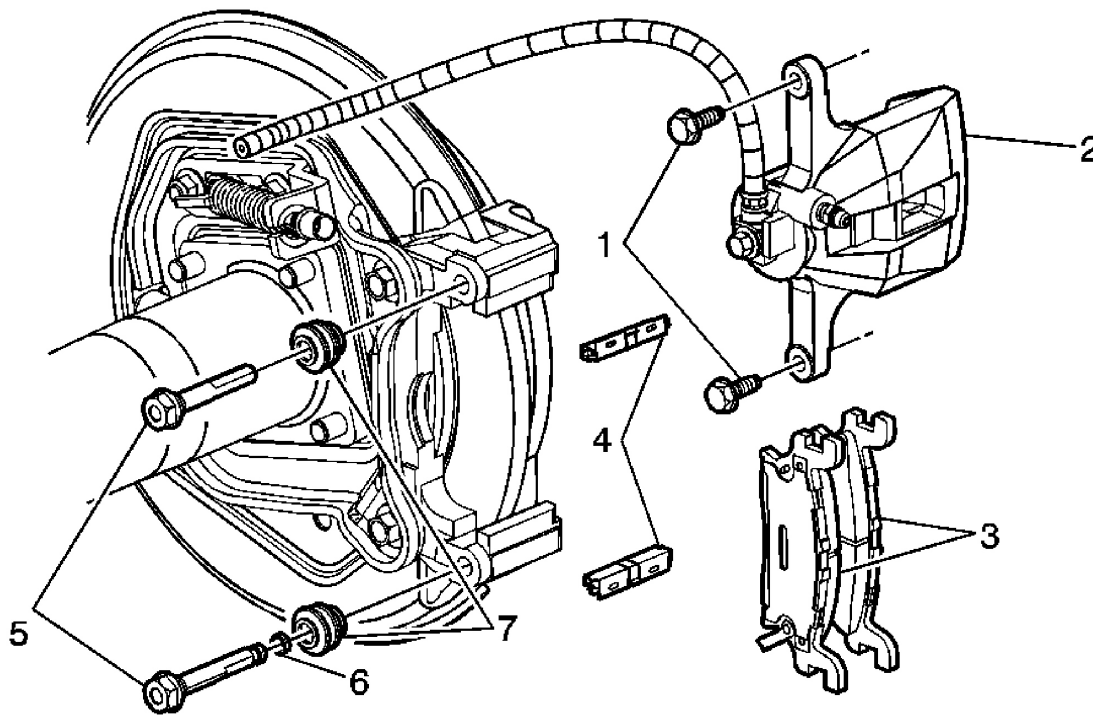
**Front Disc Brake Hardware Replacement**

Callout	Component Name
<p><b>CAUTION:</b>                      Refer to <u>Brake Dust Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Fluid Irritant Caution</u> .</p>	
<p><b>Fastener Tightening Specifications:</b> Refer to <u>Fastener Tightening Specifications</u>.</p>	
<p><b>Preliminary Procedure</b></p>	
<p>1. Raise and support the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> .</p>	

2. Remove the tire and wheel. Refer to **Tire and Wheel Removal and Installation** .

1	Retainer, Front Disc Brake Pad (Qty: 2)
2	Pin, Front Disc Brake Pad (Qty: 2)
3	Clip, Front Disc Brake Caliper Damping

**REAR DISC BRAKE HARDWARE REPLACEMENT**



**Fig. 22: Disc Brake Hardware Replacement - Rear**  
 Courtesy of GENERAL MOTORS CORP.

**Rear Disc Brake Hardware Replacement**

Callout	Component Name
<b>CAUTION:</b> Refer to <b><u>Brake Dust Caution</u></b> .	
<b>NOTE:</b> Refer to <b><u>Fastener Notice</u></b> .	
<b>NOTE:</b> Refer to <b><u>Brake Caliper Notice</u></b> .	

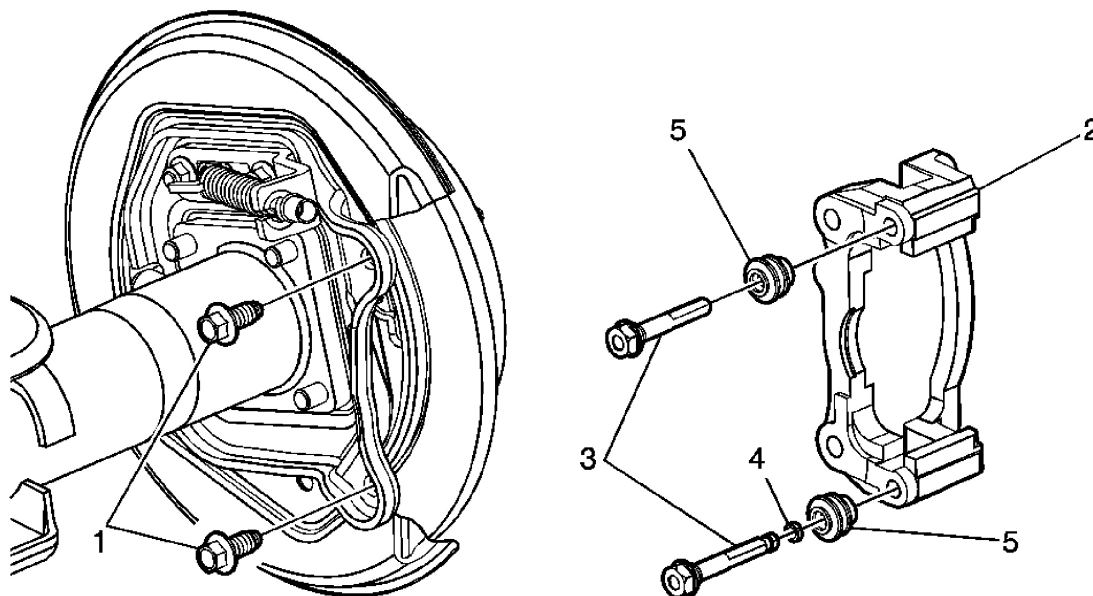
**Fastener Tightening Specifications:** Refer to Fastener Tightening Specifications.

### Preliminary Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
2. Remove the tire and wheel. Refer to Tire and Wheel Removal and Installation .

1	Rear Brake Caliper Guide Pin Bolt (Qty: 2) <b>Tip:</b> DO NOT reuse the brake caliper bracket bolts. Replace with NEW bolts.  <b>Tighten:</b> 36 N.m (27 lb ft)
2	Rear Disc Brake Caliper <b>Tip:</b> Do NOT disconnect the hydraulic brake flexible hose from the caliper.
3	Rear Disc Brake Pad (Qty: 2)
4	Rear Disc Brake Caliper Bracket Retainer (Qty: 2)
5	Rear Disc Brake Caliper Guide Pin (Qty: 2)
6	Rear Brake Caliper Guide Pin Seal
7	Rear Brake Caliper Guide Pin Boot (Qty: 2)

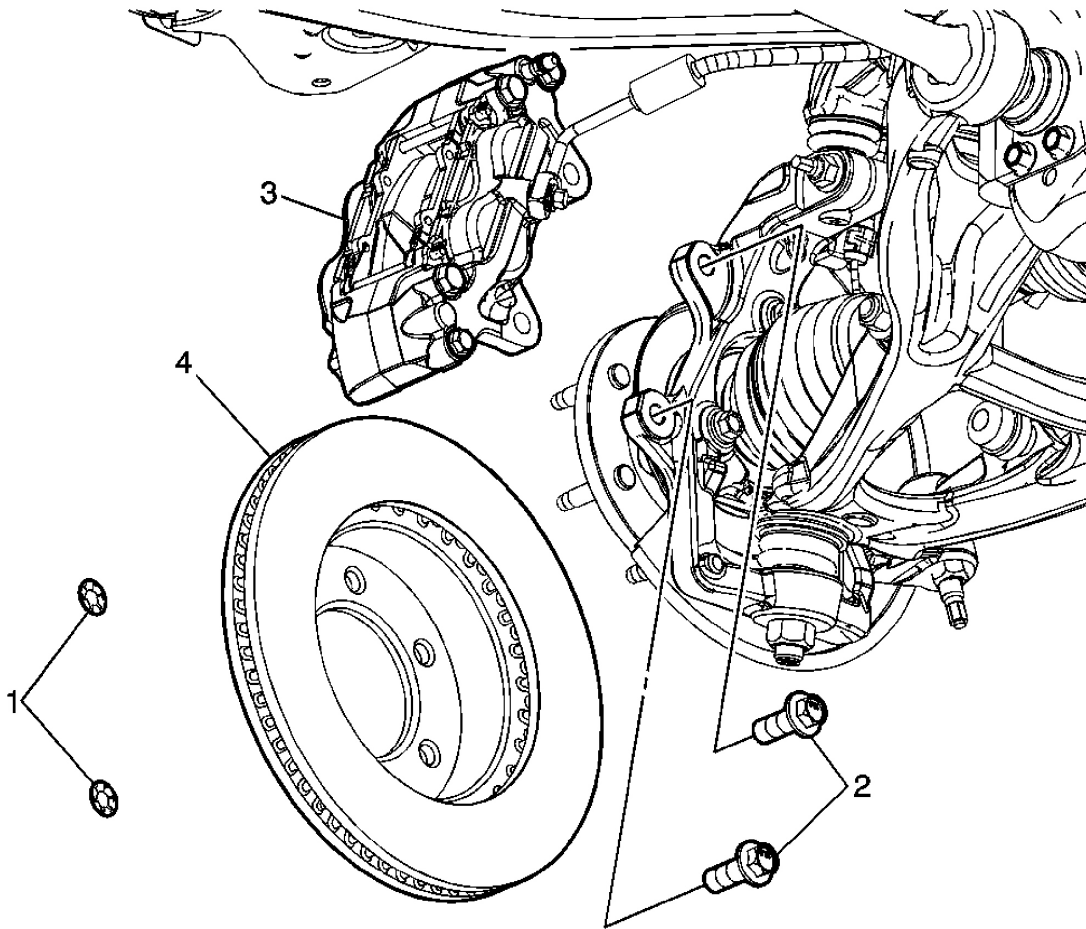
### REAR BRAKE CALIPER BRACKET REPLACEMENT



**Fig. 23: Brake Caliper Bracket Replacement - Rear**  
Courtesy of GENERAL MOTORS CORP.

**Rear Brake Caliper Bracket Replacement**

Callout	Component Name
<p><b>CAUTION:</b> Refer to <u>Brake Dust Caution</u> .</p>	
<p><b>Preliminary Procedures</b></p>	
<p>1. Raise and support the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> .</p> <p>2. Remove the tire and wheel. Refer to <u>Tire and Wheel Removal and Installation</u> .</p>	
<p><b>IMPORTANT:</b> If removing the brake caliper bracket to access other vehicle components, remove the disc brake caliper, disc brake pads and the caliper bracket as an assembly.</p>	
<p>3. Remove the rear disc brake pads. Refer to <u>Rear Disc Brake Pads Replacement</u>.</p>	
1	<p>Brake Caliper Bracket Bolt (Qty: 2)</p> <p><b>NOTE:</b> Refer to <u>Fastener Notice</u> .</p> <p><b>Tip:</b></p> <ul style="list-style-type: none"> <li>• Do NOT reuse the brake caliper bracket mounting bolts. Replace the bolts.</li> <li>• Replace the brake caliper bracket bolts each time the bolts are removed.</li> </ul> <p><b>Tighten:</b> 135 N.m (100 lb ft)</p>
2	Rear Brake Caliper Bracket
3	<p>Rear Disc Brake Caliper Guide Pin (Qty: 2)</p> <p><b>Tip:</b> The disc brake caliper guide pins are not interchangeable. Note the location of the guide pins.</p>
4	<p>Rear Brake Caliper Guide Pin Seal</p> <p><b>Tip:</b> The guide pin seal is installed on the lower disc brake caliper guide pin.</p>
5	Rear Brake Caliper Guide Pin Boot (Qty: 2)



**Fig. 24: Brake Rotor Replacement - Front**  
 Courtesy of GENERAL MOTORS CORP.

**Front Brake Rotor Replacement**

Callout	Component Name
<p><b>CAUTION:</b>                      Refer to <u>Brake Dust Caution</u> .</p>	
<p><b>CAUTION:</b>                      Refer to <u>Brake Fluid Irritant Caution</u> .</p>	
<p><b>NOTE:</b>                      Refer to <u>Fastener Notice</u> .</p>	
<p><b>NOTE:</b>                      Refer to <u>Brake Caliper Notice</u> .</p>	

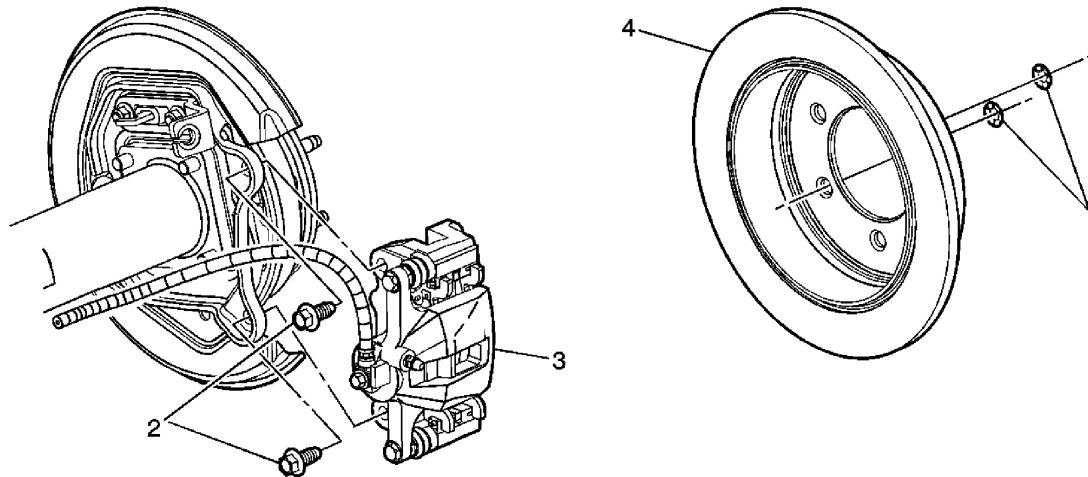
**Fastener Tightening Specifications:** Refer to Fastener Tightening Specifications.

**Preliminary Procedures**

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
2. Remove the tire and wheel. Refer to Tire and Wheel Removal and Installation .

1	Front Disc Brake Rotor Retainer (Qty: 2)
2	Brake Caliper Bolt (Qty: 2) <b>Tighten:</b> 195 N.m (144 lb ft)
3	Front Brake Caliper <b>Tip:</b> Do NOT disconnect the hydraulic brake flexible hose from the caliper.
4	Front Brake Rotor <b>Tip:</b> Road test the vehicle in order to burnish the brake pads. Refer to <u>Brake Pad and Rotor Burnishing</u> .

**REAR BRAKE ROTOR REPLACEMENT**



**Fig. 25: Brake Rotor Replacement - Rear**  
 Courtesy of GENERAL MOTORS CORP.

**Rear Brake Rotor Replacement**

Callout	Component Name
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**CAUTION:**  
 Refer to Brake Dust Caution .

## 2007 Hummer H3

### 2007 BRAKES Disc Brakes - H3

#### NOTE:

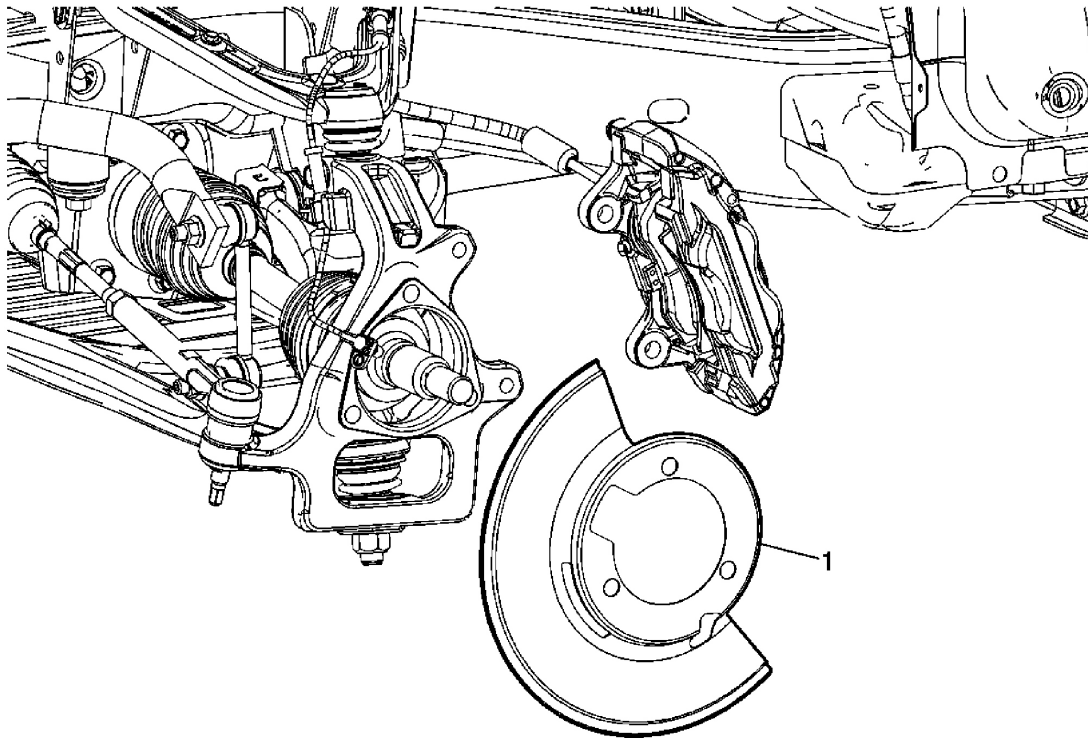
Support the brake caliper with heavy mechanic wire or equivalent, whenever it is separated from its mount and the hydraulic flexible brake hose is still connected. Failure to support the caliper in this manner will cause the flexible brake hose to bear the weight of the caliper, which may cause damage to the brake hose and in turn may cause a brake fluid leak.

#### Preliminary Procedures

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** .
2. Remove the tire and wheel. Refer to **Tire and Wheel Removal and Installation** .

1	Disc Brake Rotor Retainer (Qty: 2)
2	Brake Caliper Bracket Bolt (Qty: 2)  <b>NOTE:</b> Refer to <b><u>Fastener Notice</u></b> .  <b>Tip:</b> Do NOT reuse the brake caliper bracket mounting bolts. Replace the bolts.  <b>Tighten:</b> 135 N.m (100 lb ft)
3	Brake Caliper and Bracket Assembly <b>Tip:</b> <ul style="list-style-type: none"><li>• Position the brake caliper and bracket assembly aside and support with heavy mechanics wire or equivalent.</li><li>• It is not necessary to disconnect the flexible brake hose.</li></ul>
4	Disc Brake Rotor <b>Tip:</b> <ul style="list-style-type: none"><li>• If the disc brake rotor will not slide over the park brake shoes, remove the rubber access plug on the backing plate and rotate the park brake shoe adjuster screw to provide clearance.</li><li>• Burnish the brake pads and rotors. Refer to <b><u>Brake Pad and Rotor Burnishing</u></b>.</li></ul>

#### FRONT BRAKE SHIELD REPLACEMENT



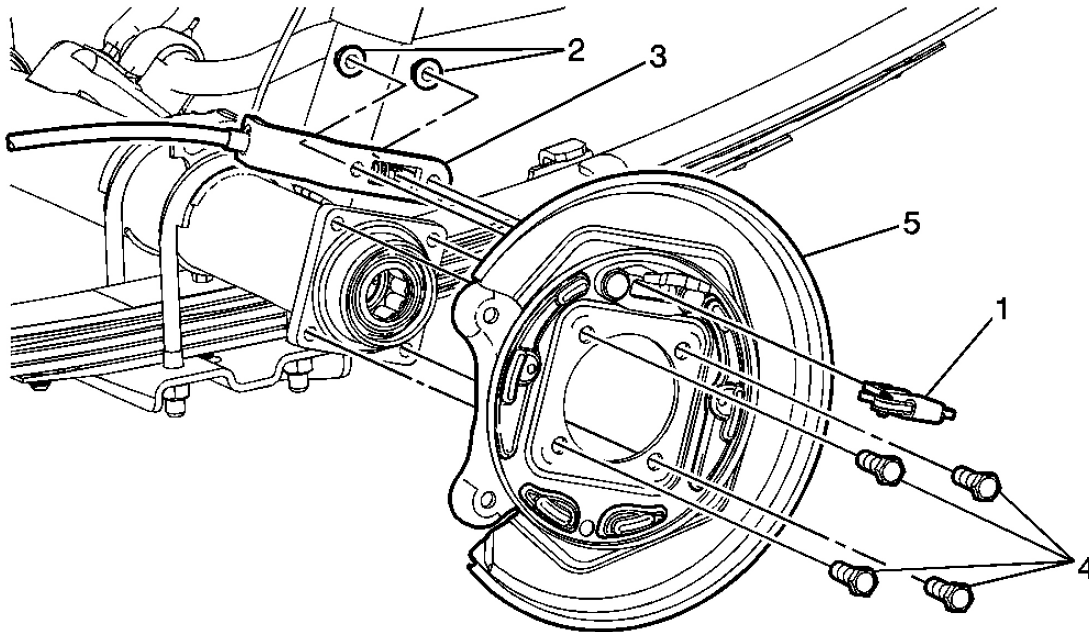
**Fig. 26: Disc Brake Splash Shield Replacement - Front**  
 Courtesy of GENERAL MOTORS CORP.

**Front Brake Shield Replacement**

Callout	Component Name
<p><b>CAUTION:</b>                      Refer to <u>Brake Dust Caution</u> .</p> <p><b>CAUTION:</b>                      Refer to <u>Brake Fluid Irritant Caution</u> .</p> <p><b>Fastener Tightening Specifications:</b> Refer to <u>Fastener Tightening Specifications</u>.</p> <p><b>Preliminary Procedures</b></p> <ol style="list-style-type: none"> <li>1. Raise and support the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> .</li> <li>2. Remove the tire and wheel. Refer to <u>Tire and Wheel Removal and Installation</u> .</li> <li>3. Remove the wheel hub assembly. Refer to <u>Front Wheel Hub, Bearing and Seal Replacement</u> .</li> </ol>	
1	Front Brake Shield



**REAR DISC BRAKE BACKING PLATE REPLACEMENT**



**Fig. 27: Disc Brake Backing Plate Replacement - Rear**  
 Courtesy of GENERAL MOTORS CORP.

**Rear Disc Brake Backing Plate Replacement**

Callout	Component Name
<p><b>CAUTION:</b>                      Refer to <u>Brake Dust Caution</u> .</p>	
<p><b>Preliminary Procedure</b></p>	
<p>1. Raise and support the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> .</p> <p>2. Remove the tire and wheel. Refer to <u>Tire and Wheel Removal and Installation</u> .</p> <p>3. Remove the axle shaft. Refer to <u>Rear Axle Shaft Replacement</u> .</p> <p>4. Remove the park brake shoe. Refer to <u>Parking Brake Shoe Replacement</u> .</p>	
1	Park Brake Actuator
2	Park Brake Cable Anchor Pin Nut (Qty: 2)  <b>NOTE:</b> Refer to <u>Fastener Notice</u> .

## 2007 Hummer H3

### 2007 BRAKES Disc Brakes - H3

	<b>Tighten:</b> 72 N.m (530 lb ft)
3	Park Brake Rear Cable Bracket
4	Rear Brake Backing Plate Bolt (Qty: 4) <b>Tighten:</b> 135 N.m (100 lb ft)
5	Rear Brake Backing Plate

#### BRAKE ROTOR ASSEMBLED LATERAL RUNOUT CORRECTION

##### IMPORTANT:

- **Brake rotor thickness variation MUST be checked BEFORE checking for assembled lateral runout (LRO). Thickness variation exceeding the maximum acceptable level can cause brake pulsation. Refer to Brake Rotor Thickness Variation Measurement.**
- **Brake rotor assembled lateral runout (LRO) exceeding the maximum allowable specification can cause thickness variation to develop in the brake rotor over time, usually between 4 800-11 300 km (3,000-7,000 mi). Refer to Brake Rotor Assembled Lateral Runout Measurement.**

Review the following acceptable methods for bringing the brake rotor assembled LRO to within specifications. Determine which method to use for the specific vehicle being repaired.

- **Brake Rotor Assembled Lateral Runout Correction - Indexing**

The indexing method of correcting assembled LRO is most effective when the LRO specification is only exceeded by a relatively small amount: 0.025-0.127 mm (0.001-0.005 in). Indexing is used to achieve the best possible match of high spots to low spots between related components.

- **Brake Rotor Assembled Lateral Runout Correction - On Vehicle Lathe**

The on-vehicle brake lathe method is used to bring the LRO to within specifications through compensating for LRO while refinishing the brake rotor.

If the assembled LRO cannot be corrected using these methods, then other components must be suspected as causing and/or contributing to the LRO concern.

#### BRAKE ROTOR ASSEMBLED LATERAL RUNOUT CORRECTION - INDEXING

## 2007 Hummer H3

### 2007 BRAKES Disc Brakes - H3

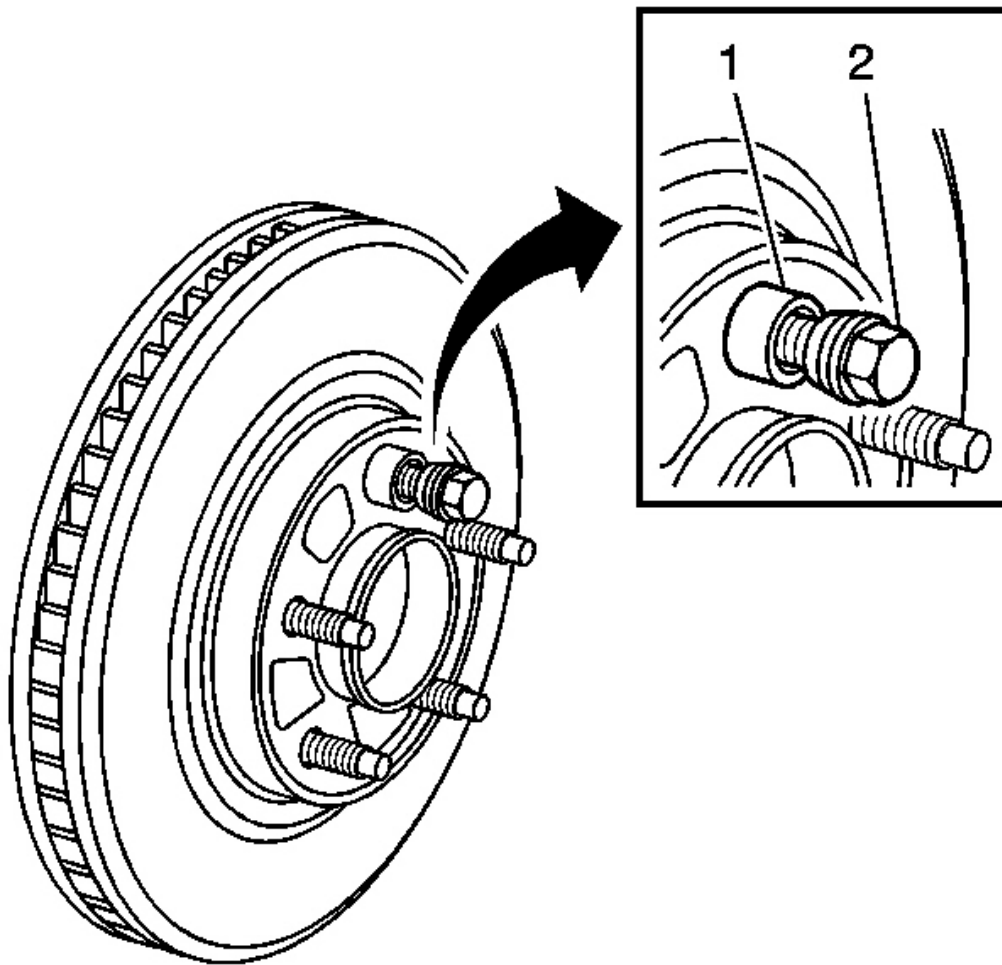
#### Tools Required

- **J 39544-KIT** Complete Torque Socket Set-10 Pieces or equivalent. See **Special Tools**.
- **J 45101-100** Conical Brake Rotor Washers. See **Special Tools**.

**CAUTION:** Refer to **Brake Dust Caution** .

- IMPORTANT:**
- **Brake rotor thickness variation MUST be checked BEFORE checking for assembled lateral runout (LRO). Thickness variation exceeding the maximum acceptable level can cause brake pulsation. Refer to Brake Rotor Thickness Variation Measurement.**
  - **Brake rotor assembled lateral runout (LRO) exceeding the maximum allowable specification can cause thickness variation to develop in the brake rotor over time, usually between 4 800-11 300 km (3,000-7,000 mi). Refer to Brake Rotor Assembled Lateral Runout Measurement.**

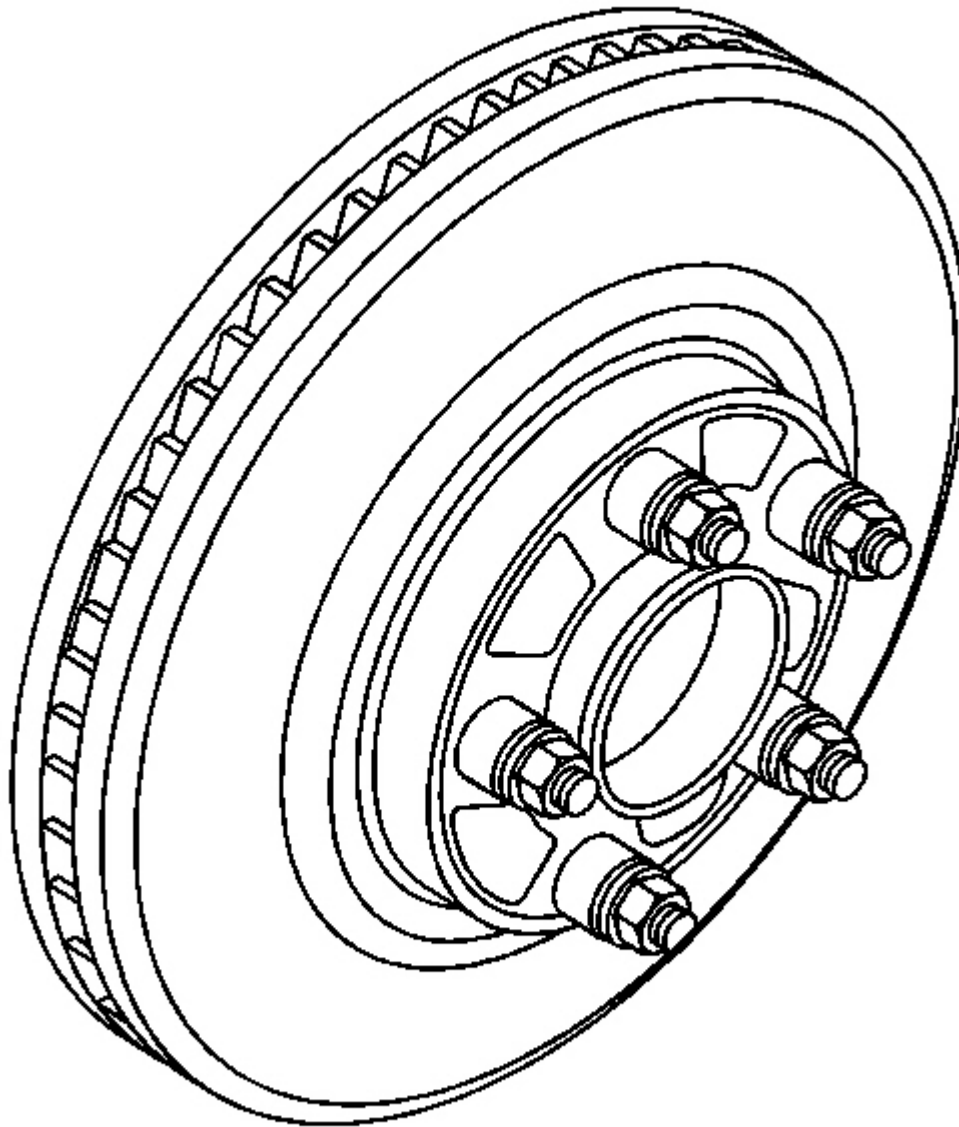
#### Procedure



**Fig. 28: Identifying J 45101-100 & Lug Nut**  
Courtesy of GENERAL MOTORS CORP.

1. Remove the **J 45101-100** and the lug nuts that were installed during the assembled LRO measurement procedure. See **Special Tools**.
2. Inspect the mating surface of the hub/axle flange and the brake rotor to ensure that there are no foreign particles or debris remaining.
3. Index the brake rotor in a different orientation to the hub/axle flange.
4. Hold the rotor firmly in place against the hub/axle flange and install one of the **J 45101-100** (1) and one lug nut (2) onto the upper-most wheel stud.

5. Continue to hold the rotor secure and tighten the lug nut firmly by hand.



**Fig. 29: Identifying Brake Rotor**  
Courtesy of GENERAL MOTORS CORP.

6. Install the remaining **J 45101-100** and lug nuts onto the wheel studs and tighten the nuts

firmly by hand in a star-pattern. See **Special Tools**.

7. Using the **J 39544-KIT** or equivalent, tighten the lug nuts in a star-pattern to specification, in order to properly secure the rotor. See **Special Tools**. Refer to **Tire and Wheel Removal and Installation**.
8. Measure the assembled LRO of the brake rotor. Refer to **Brake Rotor Assembled Lateral Runout Measurement**.
9. Compare the amount of change between this measurement and the original measurement.
10. If this measurement is within specifications, proceed to step 14.
11. If this measurement still exceeds specifications, repeat steps 1-9 until the best assembled LRO measurement is obtained.
12. Matchmark the final location of the rotor to the wheel studs if the orientation is different than it was originally.
13. If the brake rotor assembled LRO measurement still exceeds the maximum allowable specification, refer to **Brake Rotor Assembled Lateral Runout Correction**.
14. If the brake rotor assembled LRO is within specification, install the brake caliper and depress the brake pedal several times to secure the rotor in place before removing the **J 45101-100** and the lug nuts. See **Special Tools**.

#### **BRAKE ROTOR ASSEMBLED LATERAL RUNOUT CORRECTION - ON VEHICLE LATHE**

##### **Tools Required**

- **J 39544-KIT** Complete Torque Socket Set-10 Pieces or equivalent. See **Special Tools**.
- **J 41013** Rotor Resurfacing Kit. See **Special Tools**.
- **J 42450-A** Wheel Hub Resurfacing Kit. See **Special Tools**.
- **J 45101** Hub and Wheel Runout Gage. See **Special Tools**.
- **J 45101-100** Conical Brake Rotor Washers. See **Special Tools**.

**CAUTION: Refer to Brake Dust Caution.**

##### **IMPORTANT:**

- **Brake rotor assembled lateral runout (LRO) exceeding the maximum allowable specification can cause thickness variation to develop in the brake rotor over time, usually between 4 800-11 300 km (3,000-7,000 mi).**
- **Brake rotor thickness variation MUST be checked BEFORE**

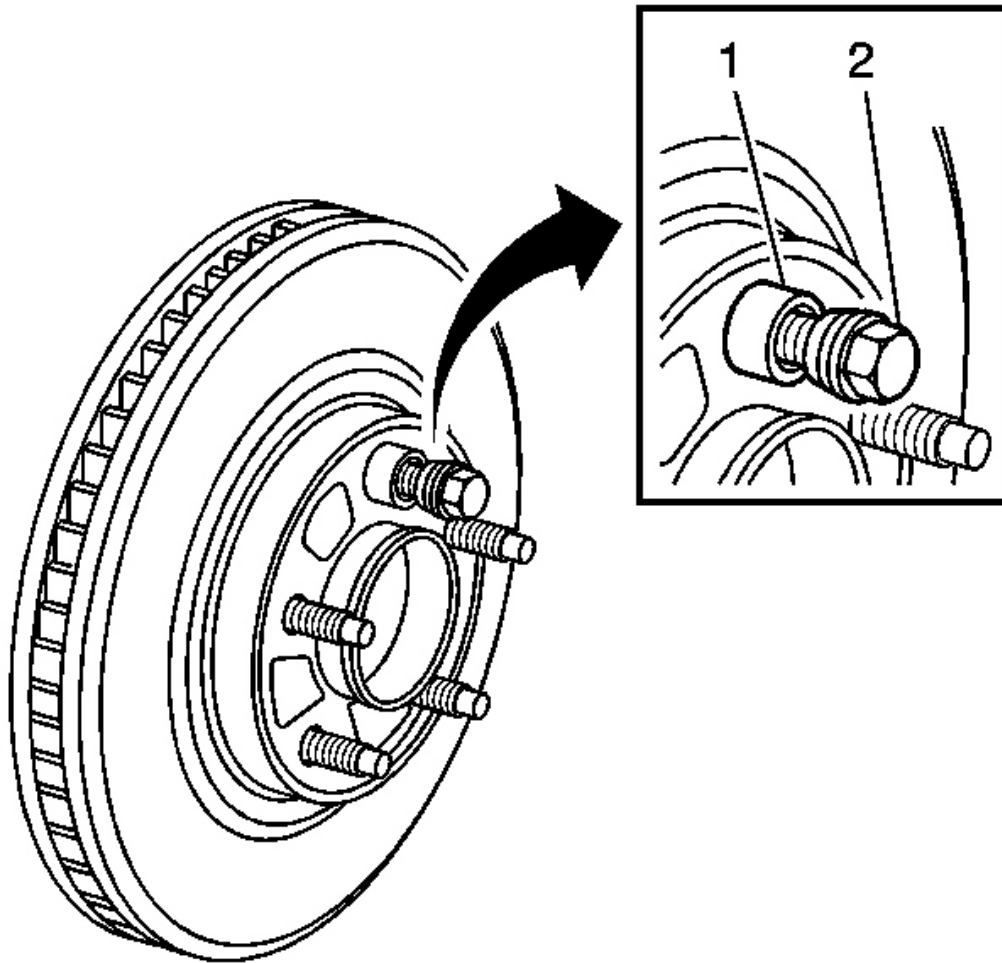
**checking for assembled lateral runout (LRO). Thickness variation exceeding the maximum acceptable level can cause brake pulsation. Refer to Brake Rotor Thickness Variation Measurement.**

#### Procedure

1. Matchmark the position of the brake rotor to the wheel studs if this has not been done already.

**IMPORTANT: Whenever the brake rotor has been separated from the hub/axle flange, any rust or contaminants should be cleaned from the hub/axle flange and the brake rotor mating surfaces. Failure to do this may result in excessive assembled lateral runout (LRO) of the brake rotor, which could lead to brake pulsation.**

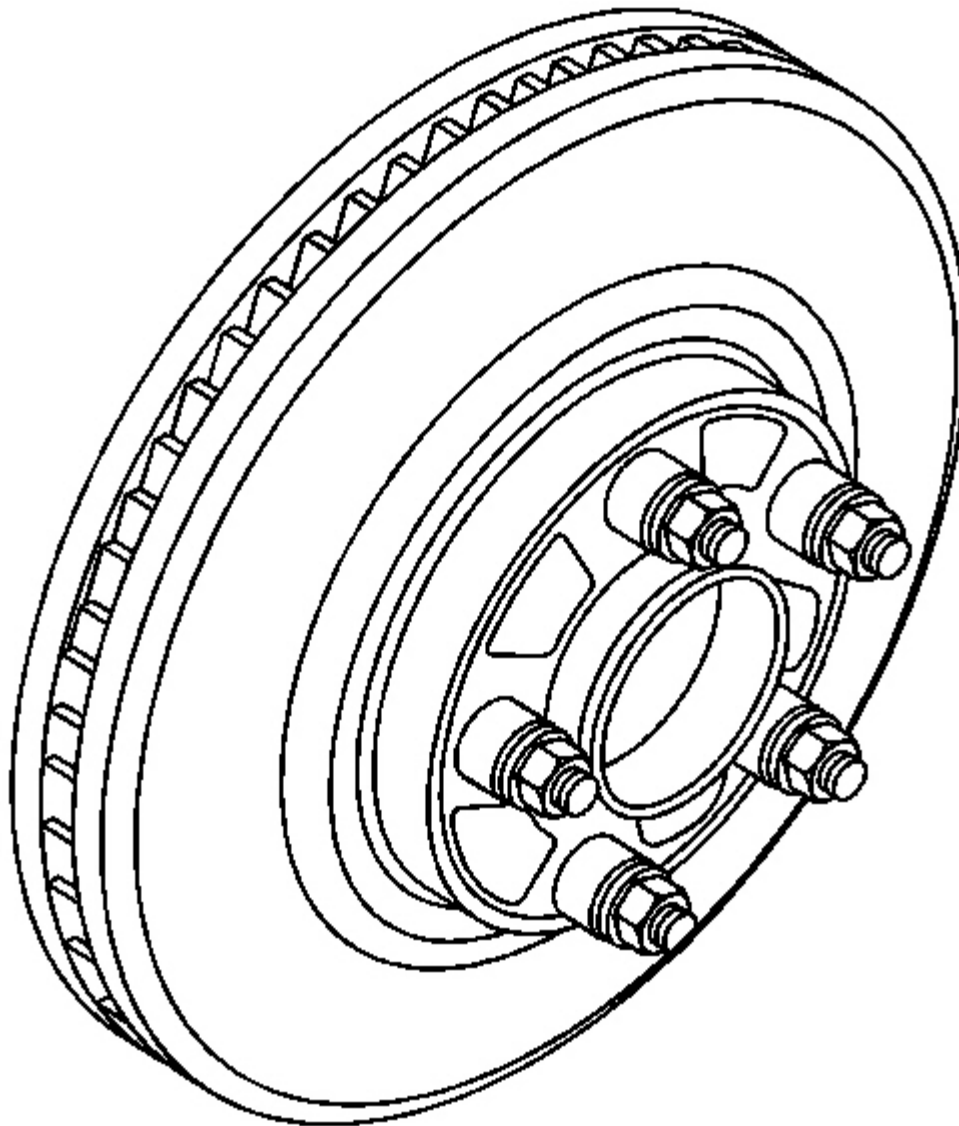
2. Inspect the mating surface of the hub/axle flange and the brake rotor to ensure that there are no foreign particles, corrosion, rust or debris remaining. If the wheel hub/axle flange and/or if the brake rotor mating surfaces exhibit these conditions, perform the following steps:
  1. Remove the brake rotor from the vehicle. Refer to Front Brake Rotor Replacement and/or Rear Brake Rotor Replacement .
  2. Using the **J 42450-A** , thoroughly clean any rust or corrosion from the mating surface of the hub/axle flange. See Special Tools.
  3. Using the **J 41013** , thoroughly clean any rust or corrosion from the mating surface of the brake rotor.
  4. Clean the friction surfaces of the brake rotor with denatured alcohol or an equivalent approved brake cleaner.
3. Install the rotor to the hub/axle flange using the matchmark made prior to removal.



**Fig. 30: Identifying J 45101-100 & Lug Nut**  
Courtesy of GENERAL MOTORS CORP.

4. Hold the rotor firmly in place against the hub/axle flange and install one of the **J 45101-100** (1) and one lug nut (2) onto the upper-most wheel stud. See **Special Tools**.
5. Continue to hold the rotor secure and tighten the lug nut firmly by hand.



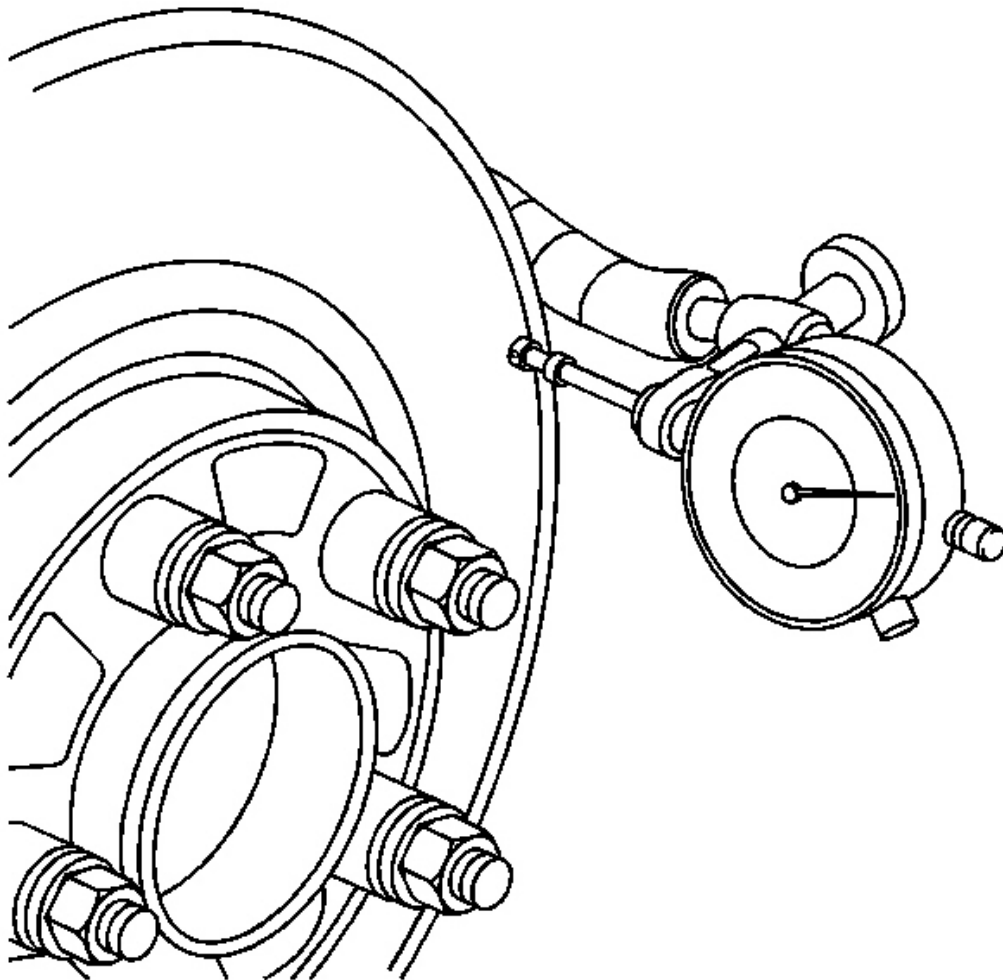


**Fig. 31: Identifying Brake Rotor**  
Courtesy of GENERAL MOTORS CORP.

6. Install the remaining **J 45101-100** and lug nuts onto the wheel studs and tighten the nuts firmly by hand in a star-pattern.
7. Using the **J 39544-KIT** or equivalent, tighten the lug nuts in a star-pattern to specification,

in order to properly secure the rotor. Refer to **Tire and Wheel Removal and Installation** .

8. If the brake rotor has been REFINISHED or REPLACED with a new rotor, proceed to step 14.
9. If the brake rotor meets the following criteria, proceed to step 10.
  - The rotor is within specifications and is being REUSED
  - The rotor has NOT been refinished
  - The rotor does NOT exhibit thickness variation exceeding the maximum allowable level



**Fig. 32: Mounting Dial Indicator To Measure Lateral Runout**  
**Courtesy of GENERAL MOTORS CORP.**

10. Mount a dial indicator, **J 45101** or equivalent, to the steering knuckle and position the indicator button so it contacts the brake rotor friction surface at a 90 degree angle, approximately 13 mm (0. See **Special Tools**.5 in) from the outer edge of the rotor.
11. Measure and record the assembled LRO of the brake rotor.
  1. Rotate the rotor until the lowest reading is displayed on the indicator dial, then set the dial to zero.
  2. Rotate the rotor until the highest reading is displayed on the dial.
  3. Mark the location of the high spot relative to the nearest wheel stud or studs.
  4. Measure and record the amount of LRO.
12. Compare the brake rotor assembled LRO to the following specification:

**Specification:**

- Front brake rotor maximum allowable assembled lateral runout: 0.13 mm (0.005 in)
- Rear brake rotor maximum allowable assembled lateral runout: 0.13 mm (0.005 in)

13. If the brake rotor assembled LRO is within specifications, proceed to step 18.

If the brake rotor assembled LRO exceeds the specification, refinish the rotor to ensure true parallelism, refer to **Brake Rotor Refinishing**. After refinishing the rotor, proceed to step 14.

14. Mount a dial indicator, **J 45101** or equivalent, to the steering knuckle and position the indicator button so it contacts the brake rotor friction surface at a 90 degree angle, approximately 13 mm (0. See **Special Tools**.5 in) from the outer edge of the rotor.
15. Measure and record the assembled LRO of the brake rotor.
  1. Rotate the rotor until the lowest reading is displayed on the indicator dial, then set the dial to zero.
  2. Rotate the rotor until the highest reading is displayed on the dial.
  3. Mark the location of the high spot relative to the nearest wheel stud or studs.
  4. Measure and record the amount of LRO.
16. Compare the brake rotor assembled LRO to the following specification:

**Specification:**

- Front brake rotor maximum allowable assembled lateral runout: 0.13 mm (0.005 in)

- Rear brake rotor maximum allowable assembled lateral runout: 0.13 mm (0.005 in)
17. If the brake rotor assembled LRO measurement exceeds the specification, bring the LRO to within specifications. Refer to **Brake Rotor Assembled Lateral Runout Correction**.
  18. If the brake rotor assembled LRO measurement is within specification, install the brake caliper and depress the brake pedal several times to secure the rotor in place before removing the **J 45101-100** and the lug nuts. See **Special Tools**.

## **BRAKE ROTOR REFINISHING**

### **Tools Required**

- **J 41013** Rotor Resurfacing Kit. See **Special Tools**.
- **J 42450-A** Wheel Hub Resurfacing Kit. See **Special Tools**.

**CAUTION:** Refer to **Brake Dust Caution** .

- IMPORTANT:**
- The disc brake rotors do not require refinishing as part of routine brake system service. New disc brake rotors do not require refinishing.

**Do not refinish disc brake rotors in an attempt to correct the following conditions:**

- Brake system noise - squeal, growl, groan
- Uneven and/or premature disc brake pad wear
- Superficial or cosmetic corrosion/rust of the disc brake rotor friction surface
- Scoring of the disc brake rotor friction surface less than the maximum allowable specification
- Before refinishing a brake rotor, the rotor **MUST** first be checked for adequate thickness to allow the rotor to be refinished and remain above the minimum allowable thickness after refinish specification. Refer to **Brake Rotor Thickness Measurement**.

**Disc brake rotors should only be refinished if they have**

**adequate thickness to be refinished and if one or more of the following conditions exist:**

- **Thickness variation in excess of the maximum allowable specification**
- **Excessive corrosion/rust and/or pitting**
- **Cracks and/or heat spots**
- **Excessive blueing discoloration**
- **Scoring of the disc brake rotor surface in excess of the maximum allowable specification**
- **Disc brake rotors may need to be refinished as part of the process for correcting brake rotor assembled lateral runout (LRO) that exceeds the maximum allowable specification.**

#### Procedure

**IMPORTANT:** Whenever the brake rotor has been separated from the hub/axle flange, clean any rust or contaminants from the hub/axle flange and the brake rotor mating surfaces. Failure to do this may result in increased assembled lateral runout (LRO) of the brake rotor, which could lead to brake pulsation.

1. Using the **J 42450-A** , thoroughly clean any rust or corrosion from the mating surface of the hub/axle flange. See **Special Tools**.
2. Using the **J 41013** , thoroughly clean any rust or corrosion from the mating surface and mounting surface of the brake rotor.
3. Inspect the mating surfaces of the hub/axle flange and the rotor to ensure that there are no foreign particles or debris remaining.
4. Mount the brake rotor to the brake lathe according to the lathe manufacturer's instructions, ensuring that all mounting attachments and adapters are clean and free of debris.
5. Ensure that any vibration dampening attachments are securely in place.
6. With the brake lathe running, slowly bring in the cutting tools until they just contact the brake rotor friction surfaces.
7. Observe the witness mark on the brake rotor. If the witness mark extends approximately three-quarters or more of the way around the brake rotor friction surface on each side, the brake rotor is properly mounted to the lathe.
8. If the witness mark does not extend three-quarters or more of the way around the brake

rotor, re-mount the rotor to the lathe.

9. Following the brake lathe manufacturer's instructions, refinish the brake rotor.
10. After each successive cut, inspect the brake rotor thickness. Refer to **Brake Rotor Thickness Measurement**.
11. If at any time the brake rotor exceeds the minimum allowable thickness after refinish specification, the brake rotor must be replaced.
12. After refinishing the brake rotor, use the following procedure in order to obtain the desired non-directional finish:
  1. Follow the brake lathe manufacturer's recommended speed setting for applying a non-directional finish.
  2. Using moderate pressure, apply the non-directional finish:
    - If the lathe is equipped with a non-directional finishing tool, apply the finish with 120 grit aluminum oxide sandpaper.
    - If the lathe is not equipped with a non-directional finishing tool, apply the finish with a sanding block and 150 grit aluminum oxide sandpaper.
  3. After applying a non-directional finish, clean each friction surface of the brake rotor with denatured alcohol or an equivalent approved brake cleaner.
13. Remove the brake rotor from the brake lathe.
14. Measure the assembled lateral runout (LRO) of the brake rotor to ensure optimum performance of the disc brakes. Refer to **Brake Rotor Assembled Lateral Runout Measurement**.
15. If the brake rotor assembled LRO measurement exceeds the specification, bring the LRO to within specifications. Refer to **Brake Rotor Assembled Lateral Runout Correction**.

## DESCRIPTION AND OPERATION

### DISC BRAKE SYSTEM DESCRIPTION AND OPERATION

#### System Component Description

The disc brake system consists of the following components:

#### Disc Brake Pads

Applies mechanical output force from the hydraulic brake calipers to friction surfaces of brake rotors.

#### Disc Brake Rotors

Uses mechanical output force applied to friction surfaces from the disc brake pads to slow speed of tire and wheel assembly rotation.

**Disc Brake Pad Hardware**

Secures disc brake pads firmly in proper relationship to the hydraulic brake calipers. Enables a sliding motion of brake pads when mechanical output force is applied.

**Disc Brake Caliper Hardware**

Provides mounting for hydraulic brake caliper and secures the caliper firmly in proper relationship to caliper bracket. Enables a sliding motion of the brake caliper to the brake pads when mechanical output force is applied.

**System Operation - Rear**

Mechanical output force is applied from the hydraulic brake caliper pistons to the inner brake pads. As the pistons press the inner brake pads outward, the caliper housings draw the outer brake pads inward. This allows the output force to be equally distributed. The brake pads apply the output force to the friction surfaces on both sides of the brake rotors, which slows the rotation of the tire and wheel assemblies. The correct function of both the brake pad and brake caliper hardware is essential for even distribution of braking force.

**System Operation - Front**

Mechanical output force is applied from the hydraulic brake caliper inboard and outboard pistons to the inner and outer brake pads. The brake calipers are a fixed, opposed-piston design, allowing the output force to be equally distributed through the distribution of the pressurized brake fluid within the caliper. The brake pads apply the output force to the friction surfaces on both sides of the brake rotors, which slows the rotation of the tire and wheel assemblies. The correct function of the brake pad hardware and of the brake caliper inboard and outboard pistons is essential for even distribution of braking force.

**SPECIAL TOOLS AND EQUIPMENT**

**SPECIAL TOOLS**

**Special Tools**

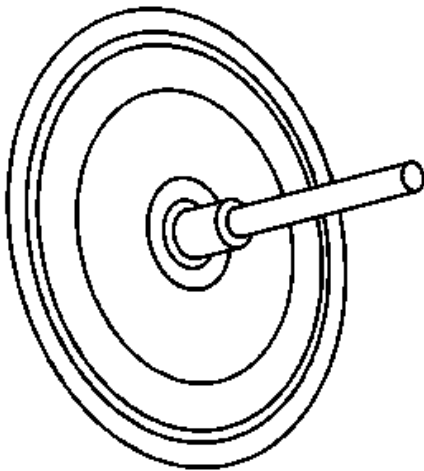
Illustration	Tool Number/Description

2007 Hummer H3

2007 BRAKES Disc Brakes - H3



J-39544-KIT  
Complete Torque Socket Set-10 Pieces



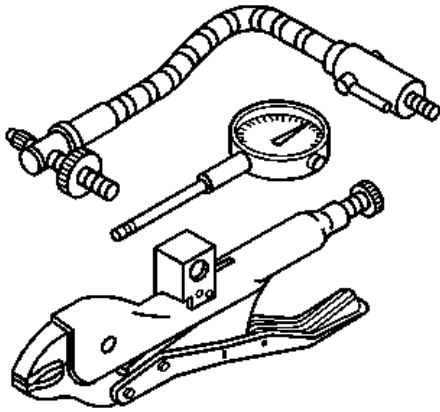
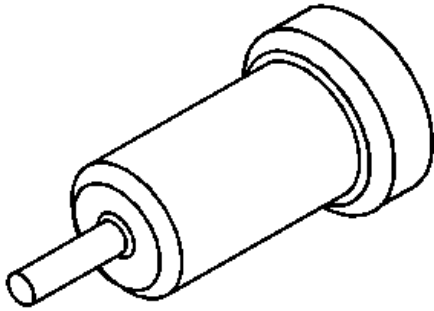
J-41013  
Rotor Resurfacing Kit

J-42450-A  
Wheel Hub Resurfacing Kit



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J-45101  
Hub and Wheel Runout Gage

J-45101-100  
Conical Brake Rotor Washers

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