



# INSTRUCTIONS

J02669

2005-12-20



## FRONT PAD KIT

### GENERAL

#### Kit Number

42831-04A

#### Models

This kit fits all 2004 and later XL models.

#### Additional Parts Required

##### ⚠ WARNING

Rider and passenger safety depend upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333b)

##### NOTE

This instruction sheet references Service Manual information. A Service Manual for your model motorcycle is required for this installation and is available from a Harley-Davidson dealer.

#### Kit Contents

Table 1. Kit Contents

Qty	Description	Part Number
2	Front pad	Not Sold Separately
1	Retainer clip	Not Sold Separately

There are no Service Parts available with this kit.

### BRAKE PADS

##### ⚠ 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)

##### NOTE

See Figure 1. Replace brake pads (3) if brake pad friction material on either the front or rear caliper is worn to 0.04 in. (1.0 mm) or less above the backing plate (4).

See Figure 2. Always replace both pads in a caliper as a set, and the retainer clip that mounts to the bracket that is supplied in this kit. See BRAKE PAD REPLACEMENT-FRONT in Service Manual.

When checking the brake pads and discs, inspect the brake hoses for correct routing and any signs of damage.

### BRAKE DISC THICKNESS, LATERAL RUNOUT, AND WARPAGE

##### NOTE

The minimum brake disc thickness is stamped on the side of the disc. Replace disc if worn past minimum thickness or badly scored.

Maximum brake disc lateral runout and warpage is 0.008 in. (0.2 mm) when measured near the outside diameter.

To replace front brake disc(s), refer to FRONT WHEEL in Service Manual.

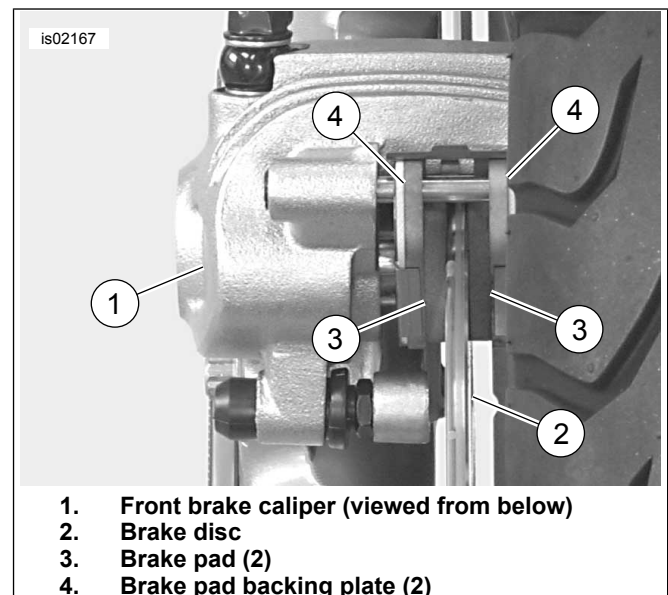


Figure 1. Brake Pad Inspection



Figure 2. Front Caliper Retainer Clip

## FRONT BRAKE PAD REPLACEMENT

### NOTE

Do not remove front caliper(s) from mounting bracket unless caliper mounting pins require service. Removing caliper from mounting bracket unnecessarily increases the risk of contaminants falling into mounting pin holes and damaging caliper during vehicle operation.

1. See Figure 3. Position motorcycle so that front master cylinder reservoir (1) is level.

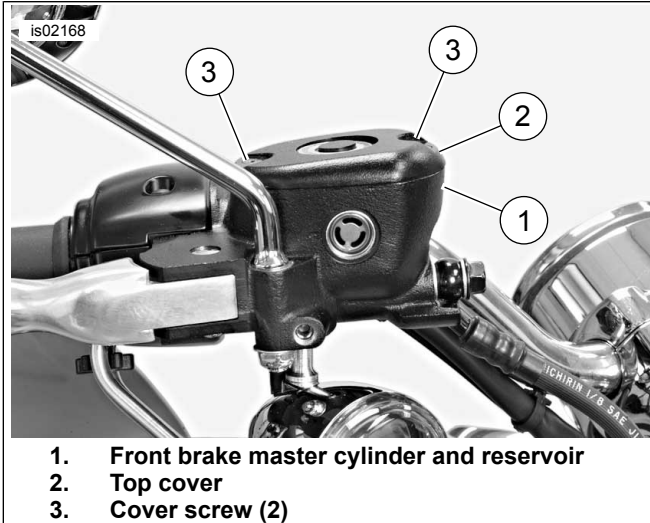


Figure 3. Front Brake Master Cylinder Reservoir

2. See Figure 4. Remove two screws (5), reservoir cover (4), diaphragm plate (3), and diaphragm (2) from master cylinder reservoir (1).

### NOTE

As the pistons are pushed back into the caliper, fluid level may rise higher than fluid level mark at about 1/4 in. (6.4 mm) below top of reservoir. You may have to remove fluid to allow for this.

3. Press against the side of the brake caliper body to push the inside brake pad (pad closest to caliper pistons) back. This pushes the caliper pistons back into their bores.

### NOTE

See Figure 5. When replacing front brake pads, make sure caliper pad spring (42829-04) does not become dislodged and fall out. If it does, you will have to reinstall it before installing new pads.

The front left and front right (not present on all vehicles) calipers do not use the same brake pad set as the rear brake caliper.

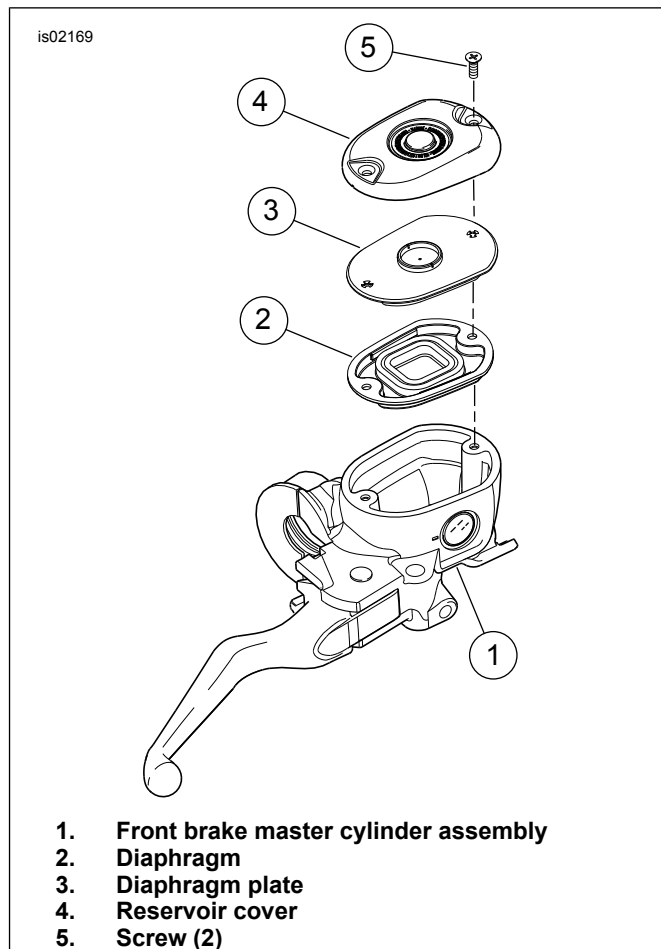


Figure 4. Front Brake Master Cylinder Cover Assembly

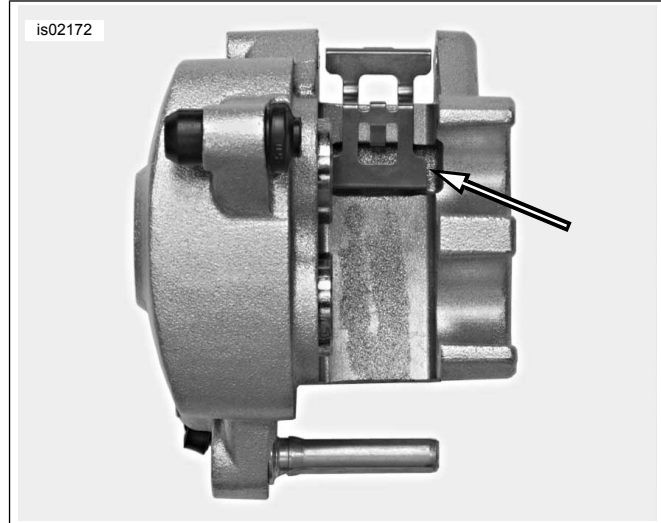
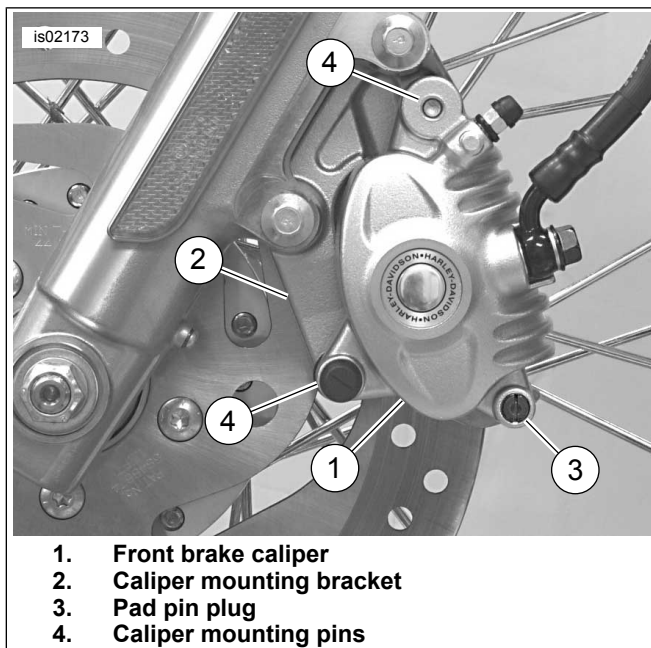
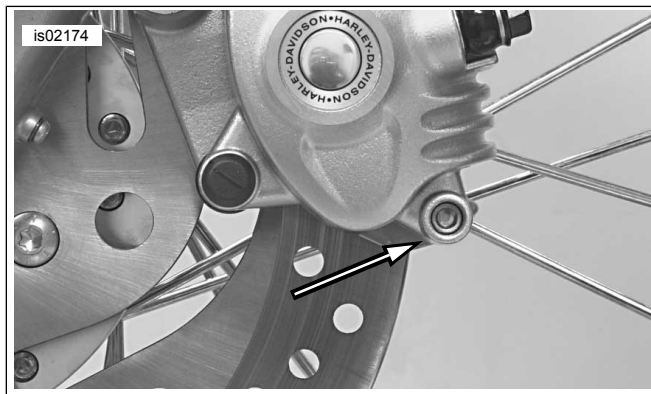


Figure 5. Front Caliper Pad Spring



**Figure 6. Front Brake Caliper Assembly**



**Figure 7. Brake Pad Pin (Plug Removed)**

4. See Figure 6. Remove pad pin plug (3).
5. See Figure 7. Loosen, but do not remove, brake pad pin.

**NOTE**

*Do not completely remove brake pad pin from caliper during the next step. Completely removing pad pin at this time may cause difficulty during assembly.*

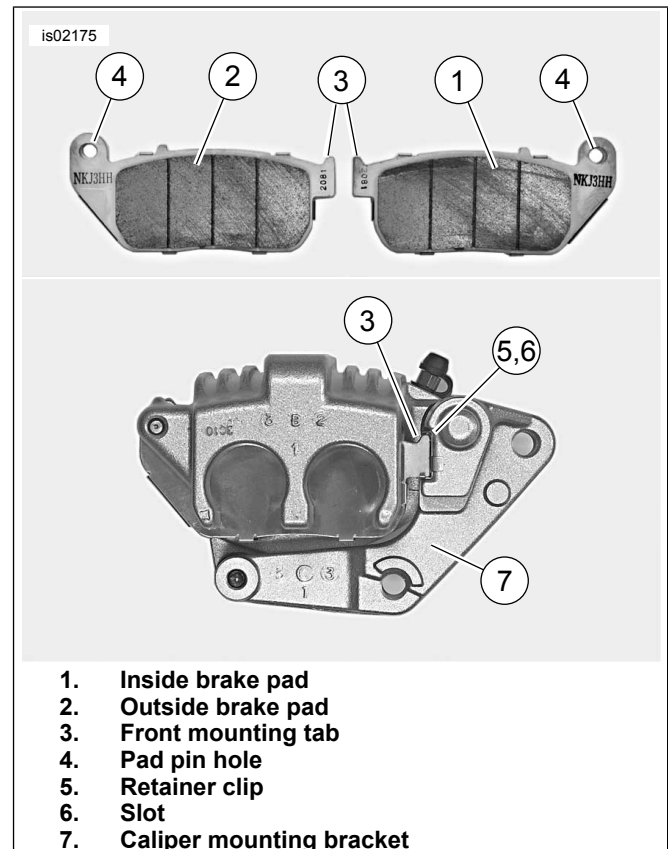
6. Once the pistons have been fully retracted into their bores, pull pad pin part way until outside pad drops free. Note the pad's original orientation for replacement purposes.
7. See Figure 8. Install new inside brake pad (1) using same orientation as pad previously removed. Make sure front mounting tab (3) is seated in retainer clip (5), which is seated in slot (6) in caliper mounting bracket (7), and pad friction material faces brake disc.
8. While holding new inside pad (1) in place, pull pad pin out and remove outside brake pad (2). Note the pad's original orientation for replacement purposes.

9. Install new outside brake pad (2) using same orientation as pad previously removed. Make sure front mounting tab (3) is seated in retainer clip (5), which is seated in slot (6) in caliper mounting bracket (7), and pad friction material faces brake disc.
10. Temporarily insert a 1/8 in. (3.175 mm) drill bit in caliper pad pin hole to hold both pads in place.
11. Inspect pad pin for grooving and wear. Measure pad pin diameter in an unworn area, and then in the area of any grooving or wear. If wear is more than 0.011 in. (0.28 mm), replace pin.
12. Press brake pads firmly against caliper pad spring, remove drill bit, and install pad pin. Tighten to 131-173 **in-lbs** (14.7-19.6 Nm).

**NOTE**

*If pad pin does not fit, check the following:*

- You are using a set of pads, not two identical pads.
- Caliper pad spring orientation must match Figure 5.
- See Figure 8. Pad front mounting tabs (3) must be fully seated in retaining clip (5), which is seated in mounting bracket slot (6).
- Pads must be pushed tight against caliper pad spring before pad pin is installed.



**Figure 8. Front Brake Pads**

13. See Figure 6. Install pad pin plug (3). Tighten to 18-25 **in-lbs** (2.0-2.9 Nm).

**⚠ WARNING**

After servicing brakes and before moving motorcycle, pump brakes to build brake system pressure. Insufficient pressure can adversely affect brake performance, which could result in death or serious injury. (00279a)

14. Pump brake lever to move pistons out until they contact inside brake pad. Verify piston location against pad.

**⚠ CAUTION**

Direct contact of DOT 5 brake fluid with eyes can cause eye irritation, swelling, and redness. Avoid eye contact. In case of eye contact flush with large amounts of water and get medical attention. Swallowing large amounts of DOT 5 brake fluid can cause digestive discomfort. If swallowed, obtain medical attention. Use in well ventilated area. **KEEP OUT OF REACH OF CHILDREN.** (00144b)

15. See Figure 9. Check brake fluid level in master cylinder. Add enough D.O.T. 5 Silicone Hydraulic Brake Fluid to reservoir to bring fluid level even with ridge (1) cast into inside of reservoir, about 1/4 in. (6 mm) below top edge. Install master cylinder reservoir cover.
16. See Figure 4. Install diaphragm (2), diaphragm plate (3), reservoir cover (4), and screws (5) on front brake master cylinder reservoir. Tighten cover screws to 9-17 **in-lbs** (1.0-2.0 Nm).

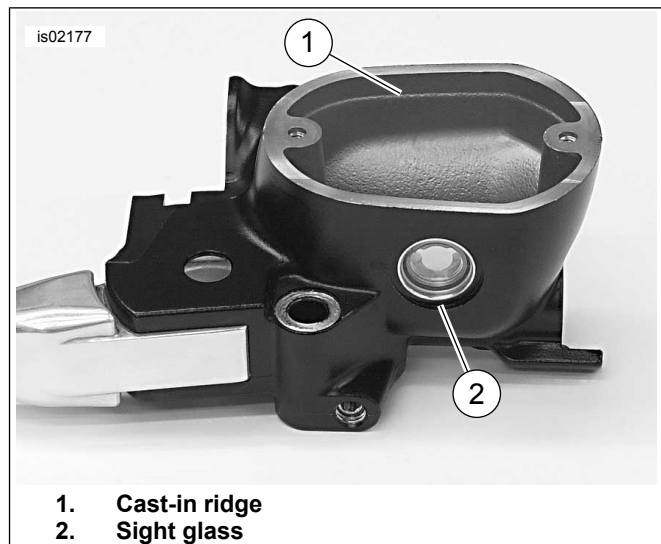
**⚠ WARNING**

After repairing the brake system, test brakes at low speed. If brakes are not operating properly, testing at high speeds can cause loss of control, which could result in death or serious injury. (00289a)

17. Test brake system.
  - a. Turn ignition switch ON. Pump brake lever to verify operation of the brake lamp.
  - b. Test ride the motorcycle. If the brakes feel spongy, bleed the system. Refer to BLEEDING HYDRAULIC BRAKE SYSTEM in Service Manual.

**NOTE**

Avoid making hard stops for the first 100 miles (160 km). This allows the new pads to become conditioned to the brake discs.



**Figure 9. Filling Front Master Cylinder Reservoir**