# SERVICE BULLETIN

December 18, 1981



### **REAR BRAKE CALIPER ANTI-VIBRATION KIT**

The instruction sheet issued for the REAR BRAKE CALIPER ANTI-VIBRATION KIT, Part No. 41670-73, has been revised. The original instructions show the rear brake hose routing along the inside of the swing arm. The new revised instructions illustrate the correct brake hose routing along the outside of the swing arm, this

M-815A (Replaces Service Bulletin M-815)

will ensure brake hose wear is kept to a minimum.

The attached revised instruction sheet replaces any previous installation instructions. A copy of the instructions is also included in each kit. Discard any previously dated instruction sheets.

ROUTING:	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	CHIEF MECHANIC	MECHANIC NO. 1	MECHANIC NO. 2	MECHANIC NO. 3	RETURN THIS TO:
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## INSTRUCTIONS

41670-73 Rev. 12-81

## REAR BRAKE CALIPER ANTI-VIBRATION KIT

This kit is designed for use on all 1973 through 1980 FL/FX models.

ITEM	QTY.	DESCRIPTION
1	1	Spring, rear support
2	1	Washer, 3/16 in.
3	2	Washer, 1/16 in.
4	1	Bolt, 1-3/4 in.
5	1	Bolt, 1-1/2 in.
6	1	Locknut
7	1	Bushing
Я	1	Spring, pad (hold down)

### Disassembly

- 1. Support motorcycle on jiffy stand.
- 2. Remove brake hose clamp located on the swing arm
- 3. Remove four bridge bolts and washers from the right side of caliper. Grasp the left side of caliper and separate the caliper halves.
- 4. See Figure 2. Remove shim, (12) brake pads (11) and pad retainer pins (9).

Replace any parts that appear to be worn or damaged.

### Cleaning, Inspection and Repair

 If brake pads are worn to 1/16 in. or less, replace them as a set.

#### NOTE

Harley-Davidson recommends that you replace your brake pads when installing this kit.

#### **WARNING**

Brake pads must be replaced in sets for correct and safe brake operation.

- See Figure 2. If brake caliper stud (17) and/or mounting pin (10) appear to be worn and/or damaged, they must be replaced with CALIPER STUD MOUNTING PIN KIT, Part No. 44331-73, and/or MOUNTING PIN KIT, Part No. 44107-72.
- 3. Clean all metal parts in a non-flammable cleaning solvent and blow dry with compressed air.

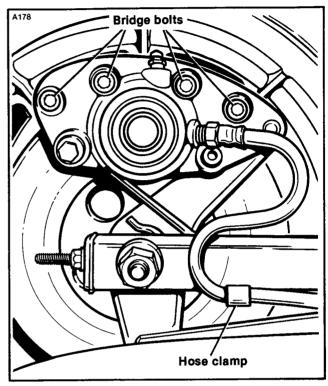


Figure 1. Completed Assembly

#### **WARNING**

Always use non-flammable solvent for cleaning metal parts. Do not use gasoline or other flammable substances.

#### WARNING

Always clean brake system rubber parts by washing in denatured alcohol or D.O.T. 5 brake fluid. Do not use mineral base cleaning solvents such as gasoline or paint thinner. Use of mineral base solvent will cause deterioration of parts during and after assembly which could cause component failure.

#### NOTE

Harley-Davidson recommends the use of ANTI-SEIZE, Part No. 99632-77, on all nuts, bolts, caliper stud and retainer pins.

### Installation—Rear Support Spring (Figure 2.)

Determine the size of the cored hole in the right caliper.

1. For 3/8 in, cored hole

- A. Use cored hole as guide. With a 3/8 in drill, drill through casting from inside out.
- B. Place a 1/16 in. washer (3) on 1-1/2 in. bolt (5) and insert into 3/8 in. hole from outside of casting.
- C. Place the other 1/16 in. washer (3) on bolt (5). Install spring (1) and locknut (6) on bolt (5). Tighten locknut to 25-30 ft-lbs torque.

#### NOTE

Spring must rest against underside of caliper housing.

- 2. For 5/8 in, cored hole
  - A . Insert bushing (7) in cored hole and use as a guide. With a 3/8 in. drill, drill through casting from inside.
  - B. Place 3/16 in. washer (2) on 1-3/4 in. bolt (4) and insert into 3/8 in. hole from outside of casting.
  - C. Push bolt (4) through bushing (7). Install spring (1) and locknut (6) on bolt (4). Tighten locknut to 25-30 ft-lbs torque.

#### NOTE

Spring must rest against underside of caliper housing.

### Installation — Pad Spring (Figure 2.)

1. Compress piston into bore. Care should be taken to protect piston dust boot from damage.

#### NOTE

Harley-Davidson recommends the use of Anti-Seize, Part No. 99626-77, on all nuts, bolts, caliper studs and retaining pins.

- Install the pad retainer pins (9) in the right side of caliper assembly (16). Slide the shim (12) on the pins and put the piston side brake pad (11) on the pins. (Friction material faces the rotor when installed.)
- Install the right side of the caliper (16) onto the brake mounting bracket. Push down on the caliper to compress the spring (1). After positioning the stud (17) into the bracket hole, install the mounting pin (10) through the other bracket hole and into the brake caliper (16).

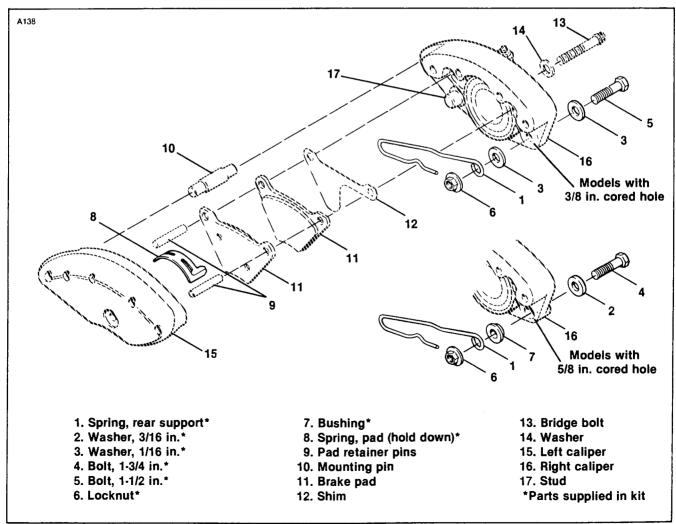


Figure 2. Rear Brake Caliper — Exploded View

- 4. Install the left brake pad (11) on pins, friction material facing rotor.
- 5. Insert spring (8) on top of pads (11). Insert the spring (8) with the arc toward the top and the prongs toward the right side of caliper.
- Place the left side of brake caliper (15) on the mounting pin (10). While holding the left brake pad against the rotor with a long screwdriver, swing the left side of caliper (15) down and squeeze the halves together.
- 7. While squeezing on the caliper halves, push up on the forward retaining pin with a screwdriver until it slips into the hole in the left side of caliper.
- 8. Repeat Step 7 for the rear pad retaining pin (9).
- 9. The brake caliper halves should now be together. If there is any gap, recheck Steps 1 through 8.

#### **WARNING**

Do not use bridge bolts to draw calipers together. Caliper halves must be together before tightening bolts to prevent misalignment of caliper halves.

Misalignment of the caliper halves could result in a cracked caliper causing loss of brake.

- 10. Install bridge bolts (13) and washers (14). Tighten bolts to 30-35 ft-lbs torque.
- 11. See Figure 1. Install brake hose clamp on outboard side of swing arm. Note brake hose routing.
- 12. Refer to the latest applicable service manual for rear brake bleeding procedures.

#### CAUTION

The following must be checked before operation of the motorcycle:

- 1. There must be a minimum of one thread protruding beyond the end of locknut (6).
- 2. There must be clearance between the end of the bolt (4, 5) and the rotor.
- 3. See Figure 3. Rear support spring must be centered between weld and swing arm.
- There must be slight play along axis of rotor, check this by shaking caliper left and right.
- 5. Brake pad must not sit tightly on rotor.
- 6. Raise the rear wheel off the ground. Rotate wheel, there should not be any brake drag other than slight pad contact.

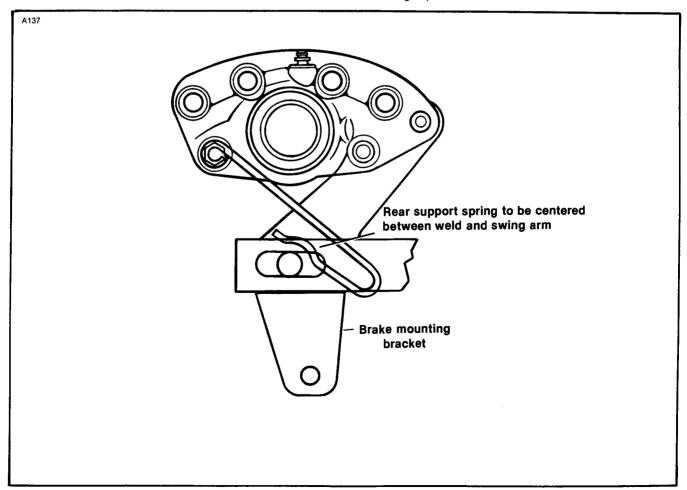


Figure 3. Support Spring Position