

REAR DISC BRAKE / 1974 THROUGH 1976 FL, FX

Certain 1200cc motorcycles produced during the 1974, 1975 and 1976 model season may have a defective rear brake system. Brake failure can occur on affected motorcycles because of heat generated at the rear wheel brake caliper when brake pads drag on the brake disc. The heat generated may vaporize the brake fluid into a compressible gas, causing the loss of effective rear brake pedal upon application. Partial or total loss of rear braking could cause an accident with personal injury. This failure could occur without prior warning.

In compliance with the National Motor Vehicle Safety Act, this has been declared a safety defect, and the affected vehicles within the VIN ranges listed below will require the corrective action directed in this Bulletin.

The affected vehicles are within the following V.I.N. range:

<u>1974</u>	<u>1975</u>	<u>1976</u>
1A 16101 H4 to 1A 47393 H4	1A 10000 H5 to 1A 51760 H5	1A 10001 H6 to 1A 46589 H6
2A 16101 H4 to 2A 47393 H4	2A 10000 H5 to 2A 51760 H5	2A 10001 H6 to 2A 46589 H6
2C 16101 H4 to 2C 47393 H4	2C 10000 H5 to 2C 51760 H5	2C 10001 H6 to 2C 46589 H6
9D 16101 H4 to 9D 47393 H4	9D 10000 H5 to 9D 51760 H5	9D 10001 H6 to 9D 46589 H6

The following special services must be performed on affected vehicles to improve and maintain caliper to disc alignment, which will eliminate drag and resultant heat build-up in the rear disc brake. Also, installation of silicone type (D.O.T. 5) brake fluid will minimize the vaporization problems if excessive heat occurs.

1. Install a new retractor spring equipped piston assembly, dust boot and O-ring.
2. Install new stainless steel bushings in rear brake caliper mounting bracket.
3. Check brake caliper alignment.
4. Substitute silicone type brake fluid (D.O.T. 5) in brake system.

Servicing instructions are given at the end of this bulletin.

All owners of record are being notified of this safety defect and are being instructed to bring their motorcycles to your dealership for special servicing of the rear disc brake system. A copy of the customer letter is enclosed for your information. Each letter to the registered owner will include Dealer Service Card 031, which must be completed and signed by both the customer and you, the dealer, to verify service has been satisfactorily completed.

A list of registered owners and a list of unregistered vehicles involved in this campaign which have been delivered to your dealership are included with this bulletin.

It is your responsibility to perform the required service on all affected vehicles, and to contact owners of affected motorcycles sold by your dealership including those which may not show on enclosed lists. We are enclosing sufficient blank Dealer Cards for those vehicles.

To take care of your immediate requirements, we are shipping a quantity of Rear Brake Repair Kits, part No. 93202, to you now. This is approximately 40% of your total requirements based upon total number of affected motorcycles shipped to your dealership. A second 40% shipment will commence immediately after the first has been completed. This will provide 80% coverage of the units shipped to your dealership. Over and above these requirements you must order additional kits. The enclosed order blank can be used for additional kits. The \$25.50 dealer net price of each kit will be charged to your account in the regular way. We will prepay transportation.

Brake Repair Kit, part No. 93202, contains 1 each of the following items:

45821-75 Long Caliper Bushing (Steel)
 45822-75 Short Caliper Bushing (Steel)
 44129-73 Piston Assembly (Retractor Type)
 44127-72A Piston O-Ring
 44133-72 Dust Boot
 45105-77 Warning Label

The following additional items will be sent along with initial order:

1. A sufficient quantity of D.O.T. 5 brake fluid will be supplied to you to provide 80% coverage of units shipped to your dealership. Brake fluid is supplied in one gallon cans and your account will be charged \$32.00 net per gallon. Each gallon will service approximately 32 motorcycles at 4 oz. of brake fluid per motorcycle, and your account will receive a parts credit of \$1.00 per motorcycle serviced. The additional brake fluid you will need to service the balance of motorcycles must be ordered in the regular way under part No. 99901-77.
2. One set of special tools to be used in the procedure outlined in this bulletin: 97168-77 Gage and 97169-77 Aligning Tool. These tools will be supplied to you at no cost.

Immediately after service has been performed, return completed Service Card 031. You will receive \$26.50 credit for the total net price of parts for each motorcycle, plus 0.9 hours labor per FX/FXE model and 1.0 hours labor per FL/FLK model at your certified retail labor rate for each unit serviced.

SERVICING INSTRUCTIONS

Referring to Figure 1, perform following steps as they apply to the affected vehicle being serviced.

1. Remove right saddlebag and left saddlebag supports.
2. Loosen fitting of hydraulic brake line (9) connected to outer caliper half (3).
3. Remove both outer and inner caliper halves (3 and 5) from rear brake mounting bracket (22).
4. Complete removal of brake line (9) from caliper half (3) by turning caliper counterclockwise.
5. Remove brake fluid presently in rear brake hydraulic system by pumping it out open end of brake line (9). Do this by stroking rear brake pedal until fluid ceases to flow.
6. Remove brake piston assembly (8A) from outer caliper half (3) by applying high pressure air into hydraulic line (9) hole.

CAUTION: Piston assembly (8A) may blow out forcefully, therefore, caution should be used.

If piston assembly (8A) cannot be blown out with air alone, two screw drivers can be inserted into piston boot groove on opposite sides of piston and piston assembly pried out.

7. Remove piston boot (10) from caliper half (3) and insert new piston boot (10), part No. 44133-72, into its groove in caliper half (3).
8. Install new O-ring (15), part No. 44127-72A, on new piston assembly (8A), part No. 44129-73.

NOTE: The new piston assembly can be identified by its having a retractor spring. The retractor spring is a thin blue colored wave washer located near inner end of piston assembly.

9. Carefully insert new piston assembly (8A) through new piston boot (10) and into caliper half (3). Then install piston assembly (8A) by tapping with a soft hammer into caliper half (3) while at the same time positioning piston boot (10) into narrow groove of piston assembly.

NOTE: Check all pistons in your existing stock of calipers to see that they all have retraction springs. Return those that don't have spring to factory for credit following normal warranty claim procedure.

10. Determine whether bushings (17 and 18) in brake mounting bracket (22) are Teflon or stainless steel. If they are stainless steel and in satisfactory condition, they need not be replaced; in this case, proceed to step 16. If they are Teflon, or stainless steel in worn condition, they must be replaced; in this case, perform step 11 through 15, below.

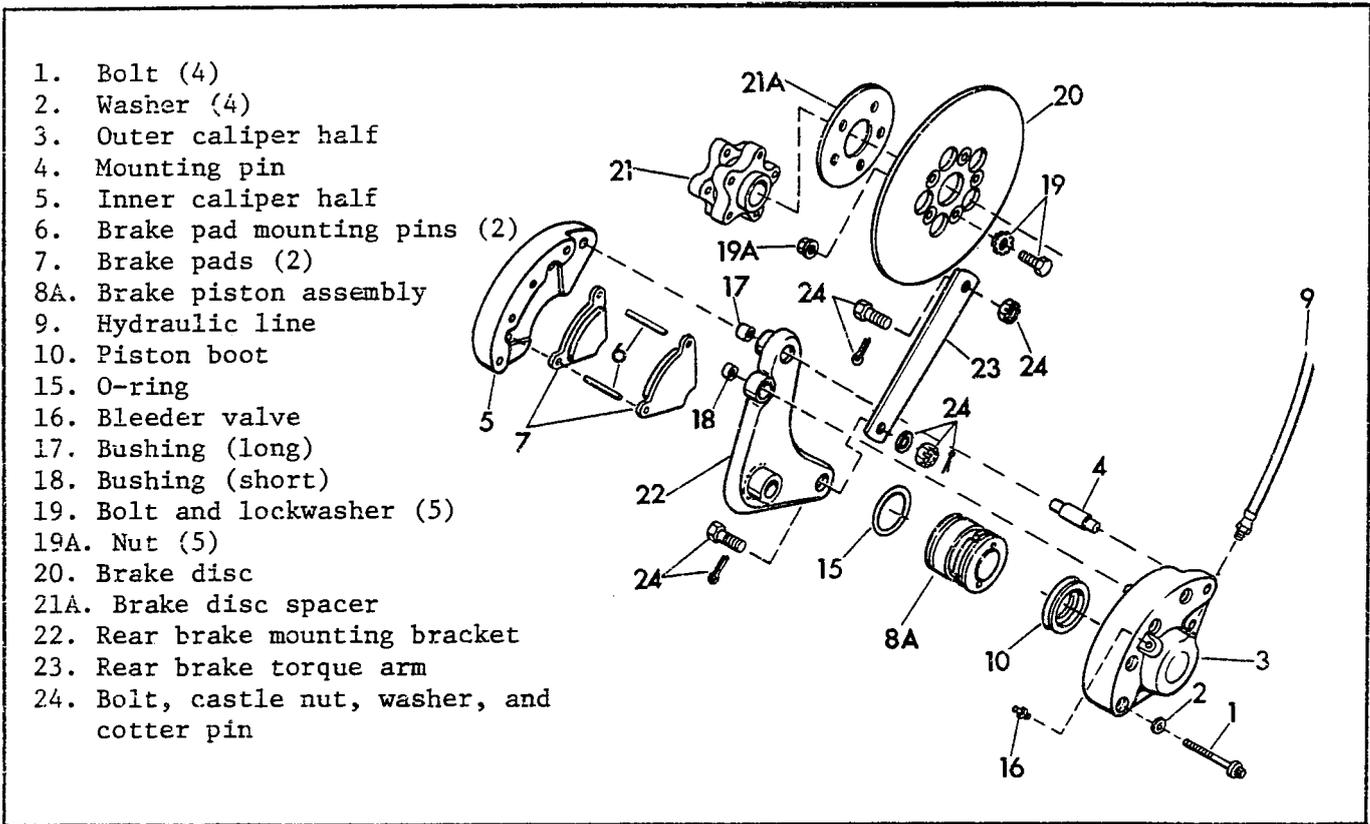


Figure 1. Rear Disc Brake

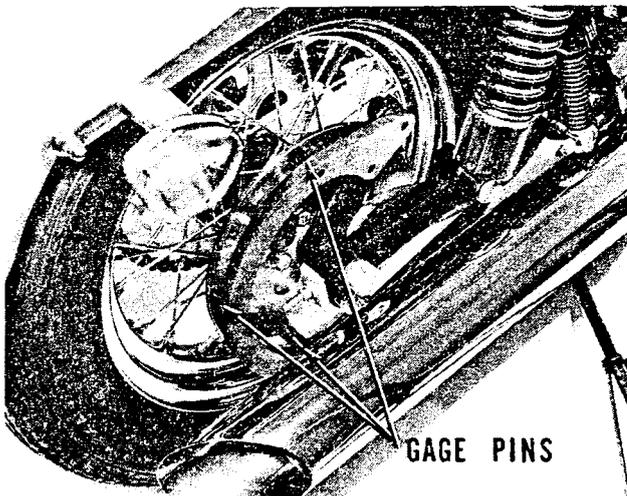


Figure 2. Gage Tool

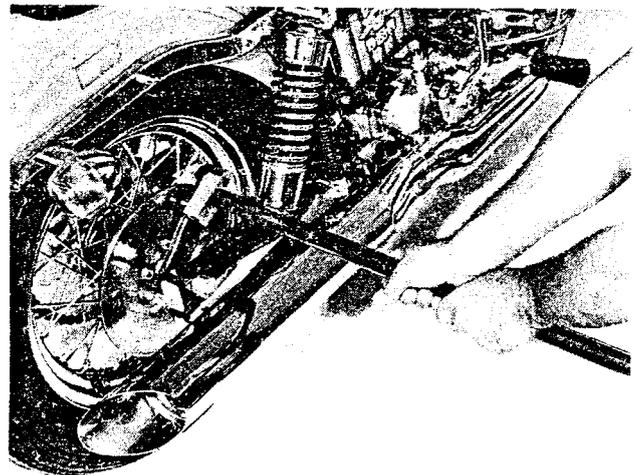


Figure 3. Bending Tool

NOTE: Before proceeding, make the following routine maintenance check. Inspect brake disc for warpage and excessive deep grooving. Rotate wheel and check to see if disc runout appears to be excessive. If it does, check with a dial indicator. Maximum allowable runout is .030".

11. Remove muffler.
12. Remove brake mounting bracket (22) as follows: Free lower end of bracket from torque arm (23) by removing cotter pin, nut, washer and bolt (items (24) from torque arm (23). Support rear wheel and tap axle out through hub until bracket (22) can be pulled completely free.
13. Press out Teflon bushings (17 and 18) with piston pin driver or other 11/16" dia. rod and press in new set of stainless steel bushings, part No.'s 45821-75 and 45822-75. For easy insertion, a slight chamfer can be ground on edge of each new bushing. Also, take care not to bend or distort bracket (22) while pressing bushings.
14. Reinstall brake caliper mounting bracket (22).
15. Align rear wheel and adjust rear chain if necessary. When all adjustments have been completed, tighten axle nut to 50 ft.-lbs. torque and anchor arm nut (24) to 10 ft.-lbs. torque. Secure nut (24) with cotter pin.
16. The rear brake caliper pads (7) must be in parallel alignment with brake disc (20). This is insured by having brake mounting bracket (22) correctly aligned. Check alignment and correct as follows:

Insert alignment gage, part No. 97168-77, into caliper mounting bushings as shown in figure 2. Check to see that all three pins of gage contact surface of brake disc (20). If one or more pins do not contact surface, note which ones and remove gage. Insert bending tool, part No. 97169-77, into bracket holes. Then, using bending tool with a 3/4" I.D. pipe extension as shown in Figure 3, bend bracket (22) until all three pins of gage do contact surface of brake disc (20) when gage is again inserted into bushings.

NOTE: Before reassembly, make the following routine maintenance check. Inspect brake pad thickness. Replace pads if friction material is worn to less than 3/16" thickness. Note that replacement is considered normal maintenance and is not covered by this safety defect unless warranty is in effect.

17. Reinstall hydraulic line (9) on caliper half (3).
18. Apply "Never Seez" to mounting pins of calipers and reinstall inner and outer calipers (3 and 5) on motorcycle. Torque four mounting bolts (1) to 35 ft.-lbs.
19. Insure that all D.O.T. 3 fluid has been removed from rear brake hydraulic system (see step 5). Refill rear hydraulic system with D.O.T. 5 brake fluid. Access to master brake cylinder on the FL

model requires loosening front footboard and removal of chrome cover. Affix warning label to motorcycle on frame front down tube of FL's and frame rear down tube of FX's.

20. Bleed rear brake system and add D.O.T. 5 hydraulic fluid to fill master cylinder. Recheck brake pedal free play adjustment.
21. Replace muffler, right saddlebag support and saddlebag. Note that right bag support should be spaced out as necessary using spacers, part No. 90908-58, to eliminate any interference with caliper throughout total rear suspension travel.

IMPORTANT! After work has been completed, check for correct assembly and proper operation of both front and rear brakes.

The 1974 vehicles in this campaign, if not inspected previously for front brake caliper leakage, should be inspected per our Service Letter dated August 5, 1976.

HARLEY-DAVIDSON MOTOR CO., INC.