No. M-767 March 4, 1980

SQUARE SEAL BRAKE CALIPER/1980 FL, FX MODELS

All 1980 FL and FX motorcycles above VIN 26625-J0 (approximately 11/14/79) have the new square seal calipers installed on both the front and rear brake systems of the FL and the rear brake system of the FX models. This type of brake caliper is much simpler with fewer components. Instead of a spring retractor system, the caliper now features a square cross section seal (see Figure 1).

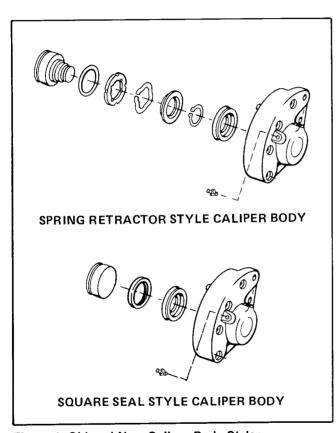


Figure 1. Old and New Caliper Body Styles Exploded View

To make the square seal calipers distinguishable from the old style spring retractor units, the front caliper assembly, Part No. 44000-78C, is marked with an additional letter "F" on the piston side subassembly. The rear caliper assembly, Part No. 44001-78B, is marked with an additional letter "R" on the piston side subassembly, along with the stamping already found on the top of all caliper assemblies (see Figure 2). There is a slight difference between the front and rear square seal grooves which causes different retraction amounts. These markings help keep the units separated.

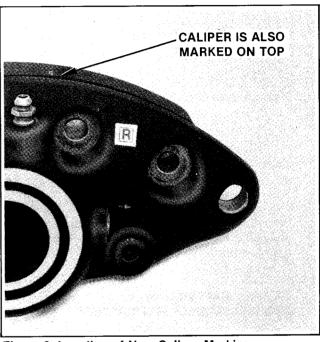


Figure 2. Location of New Caliper Marking

CAUTION

Front and rear calipers are not interchangeable. Braking can be affected if calipers are not installed as marked.

These new calipers are more easily maintained and contain fewer moving parts (see Figures 3 and 4). The square seal sits in a machined groove in the caliper bore. As the piston is forced out, the seal moves against the chamfer of the caliper groove. When the brake lever is released, the seal springs back, retracting the piston.

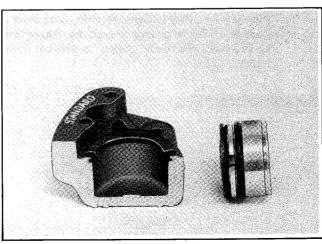


Figure 3. Old Style Caliper and Piston

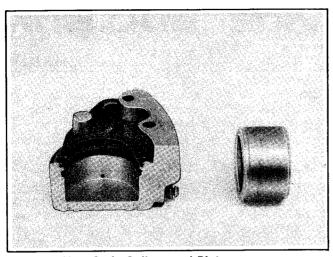


Figure 4. New Style Caliper and Piston

NOTE

Conversion of old style caliper to new style caliper is not covered under warranty.

With this system, installation is the same as the old style calipers but the assembly and disassembly of the caliper body is different.

CALIPER BODY ASSEMBLY AND DISASSEMBLY INSTRUCTIONS

- To remove piston from caliper base, first place caliper assembly on workbench with piston facing down.
- 2. Put a shop towel or cloth under the piston and apply low air pressure to the inlet hole forcing the piston out. If piston is tight in the bore, tap lightly around caliper side while applying air pressure. Caution should be used because the piston comes out easily since there is no press ring. Hold several inches from the work surface to avoid damage to the piston.

CAUTION

Piston may develop considerable force from pressure build up and care should be taken to keep hands out from under piston to prevent personal injury.

CAUTION

Be sure to place shop towel or cloth in area of workbench on which piston will land to prevent damage to the piston.

- Remove dust boot, Part No. 44133-72, and seal, Part No. 44007-80.
- Clean all parts with clean DOT 5 hydraulic brake fluid

CAUTION

Do not use any petroleum based liquid.

Inspect parts for wear and replace if necessary.

5. To reassemble, first lubricate the piston and piston boot in DOT 5 Hydraulic Brake Fluid to prevent scoring of the caliper wall and mispositioning of the seal during installation.

WARNING

Use only DOT 5 Hydraulic Brake Fluid which is approved for use in hydraulic brake systems.

- 6. Apply a film of clean DOT 5 brake fluid and install new piston seal into groove in cylinder bore.
- 7. Apply a film of clean DOT 5 brake fluid to dust boot and insert into caliper.
- 8. Apply a film of clean DOT 5 brake fluid to piston and push straight down until it bottoms.

CAUTION

When installing piston, make sure seal does not roll or come out of groove in bore.

9. Seat dust boot in piston bore.

All other instructions on disassembly and assembly of the caliper assemblies are the same as those found in your 1978½ FL/FX Service Manual.

HARLEY-DAVIDSON MOTOR CO., INC.

1	SERVICE MANAGER	PARTS MANAGER	CHIEF MECHANIC	MECHANIC NO. 1	MECHANIC NO. 2	MECHANIC NO. 3	RETURN THIS TO:
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