



# INSTRUCTIONS

-J02948

REV. 05-02-2003

Kit Number 44090-04

## DUAL DISC FRONT BRAKE KIT

### General

This Dual Disc Front Brake Kit fits 2004 and later XL 883 (Sportster®) standard model motorcycles fitted with cast wheels.

See the Service Parts illustration for kit contents.

#### ⚠ WARNING

Brakes are a critical safety component. Contact a Harley-Davidson dealer for brake repair or replacement. Improperly serviced brakes can adversely affect brake performance, which could result in death or serious injury. (00054a)

#### ⚠ WARNING

A Service Manual is necessary for installation of this kit. The rider's safety depends upon the correct installation of this kit. Special tools are required for the installation of this kit.

We recommend that this kit be installed by a factory-trained technician at your Harley-Davidson dealership. Improper installation of this kit could result in death or serious injury.

#### NOTE

A Service Manual for your model motorcycle is available from any Harley-Davidson dealer.

### Special Tools and Materials Required

The following tools and materials are needed in order to complete this project. The last three items are available for purchase at any Harley-Davidson Dealer:

- A dial indicator with a magnetic base.
- Fork Seal and Bushing Installation Tool; part number H-D-36583.
- Type "E" Fork Oil, 10.2 fl oz (302 ml); H-D part number 99884-80, 16 fl oz (0.47L) bottle.
- D.O.T. 5 Silicone Brake Fluid; H-D part number 99902-77, 12 fl oz (355 mL); 99901-77, 1 gal (3.785L)

### Installation

Drain the oil from the right-side front fork only. See FRONT FORK OIL, CHANGING in the Service Manual. Do not refill at this time.

#### Remove and Disassemble the Front Brake System

1. Block the motorcycle underneath the frame so that the front wheel is raised slightly off the ground.

#### ⚠ CAUTION

Direct contact of D.O.T. 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 D.O.T. 5 brake fluid can cause digestive discomfort. If swallowed, obtain medical attention. Use in well ventilated area. KEEP OUT OF REACH OF CHILDREN. (00144a)

2. Remove the front brake master cylinder cover. Install one end of a length of plastic tubing over the caliper bleeder valve. Place the free end of the tubing into a suitable container.

Open the bleeder valve about 1/2-turn and allow the fluid to drain out of the front brake system. Do not reuse brake fluid.

3. Refer to the FRONT BRAKE LINE section of the Service Manual. Remove the original brake line from the left front caliper. Discard the brake line sealing washers, but retain the banjo bolt.

4. Disconnect the brake line from the front brake master cylinder assembly. Unfasten the brake line clamps at the right side of the front fork upper bracket and the underside of the front fork lower bracket, and remove the brake line assembly from the vehicle.

Save the upper clamp and all attaching parts, but discard the brake line.

5. Remove the right-side mirror and right front turn-signal lamp assembly from the original front brake master cylinder casting. Save all components and fasteners for re-installation.

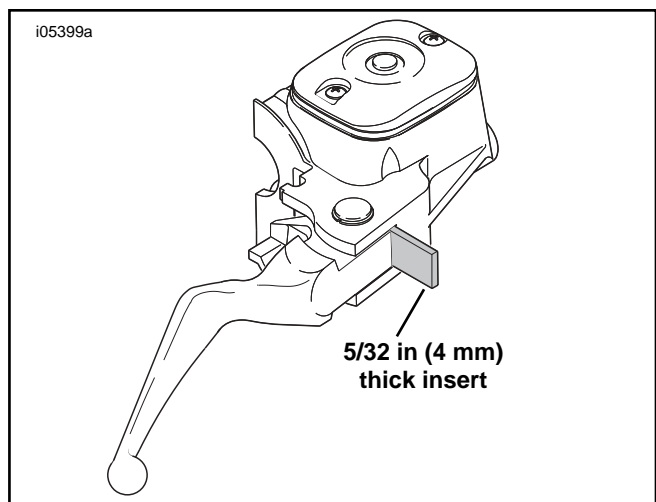


Figure 1. Position Insert Before Removing Master Cylinder

### CAUTION

Do not remove or install the master cylinder assembly without first positioning a 5/32-inch (4 mm) thick insert between the brake lever and lever bracket. Removing or installing the master cylinder assembly without the insert in place may result in damage to the rubber boot and plunger on the front stoplight switch.

### NOTE

A small section of corrugated cardboard or the eyelet of an ordinary cable strap can be used for this purpose.

6. See Figure 1. Squeeze the brake lever and place the insert between the brake lever and lever bracket.
7. Using a T27 TORX® drive head, remove the two screws with flat washers securing the handlebar clamp to the master cylinder housing. Remove the brake lever/ master cylinder assembly and clamp from the handlebar.
8. Discard the brake lever/ master cylinder assembly (stamped "1/2"). Save the screws and clamp for re-installation.

### Remove and Disassemble the Front Wheel

1. Remove the front wheel. Refer to FRONT WHEEL, REMOVAL in the Service Manual.

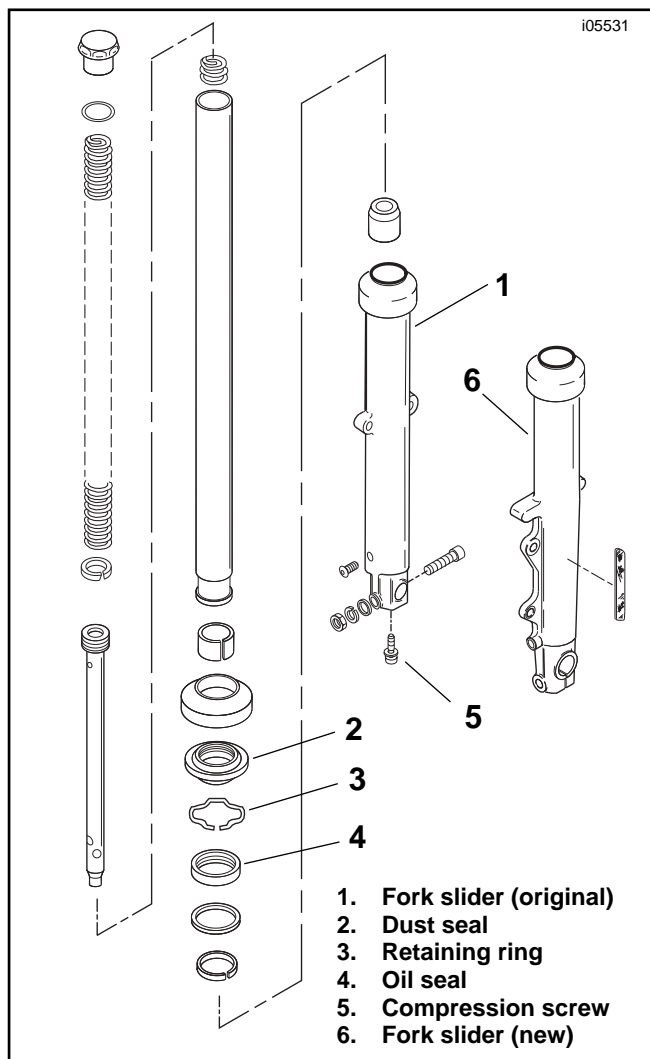


Figure 2. Right-Side Front Fork Slider-and-Tube Assembly  
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### CAUTION

Do not reuse brake disc screws. New Torx screws are provided for disc installation. Loss of torque on Torx fasteners could result in damage to rotor and/ or brake assembly.

2. Remove and discard the five T-40 TORX screws which secure the hub plate to the right side of the wheel hub. Remove and discard the hub plate.
3. Inspect the front wheel bearings per the procedures in the Service Manual.

### Remove and Disassemble the Right-Side Front Fork Slider Tube

1. Remove the right-side front fork slider-and-tube assembly from the front fork upper and lower brackets. See FRONT FORK, REMOVAL in the Service Manual.

### NOTE

Note the orientation of the parts disassembled in the following steps. They will need to be reassembled in the same order in a later procedure.

2. See Figure 2. Disassemble the slider (1) from the right-side front fork slider-and-tube assembly according to FRONT FORK, DISASSEMBLY instructions in the Service Manual. Discard the slider, compression screw (5), fork seal (4), dust seal (2) and retaining ring (3); save all other components and fasteners for re-installation.

Clean and inspect all components, and repair or replace items as needed.

### Assemble and Install the New Right-Side Front Fork Slider Tube

1. See Figure 2 and the FRONT FORK, ASSEMBLY instructions in the Service Manual. Assemble the new right-side fork slider (6) to the original front fork right tube assembly using the new fork seal (4), dust seal (2) and retaining ring (3) from the kit.

Fasten with the new M8-1.25 x 27 mm hex socket head compression screw (5) from the kit. Fill the fork slider-and-tube assembly with the proper amount of Harley-Davidson Type E Fork Oil.

2. Install the right-side front fork slider-and-tube assembly through the front fork lower and upper brackets. See FRONT FORK, INSTALLATION in the Service Manual.

### Assemble the New Right-Side Brake Disc, and Install the Front Wheel and Brake Calipers

1. Verify that the new front brake disc from the kit is clean. With the counterbored side of the brake disc mounting holes facing away from the wheel, assemble the brake disc to the right (valve-stem) side of the front wheel hub using five new 5/16-18 pan head screws from the kit.

Use a T-40 TORX drive head to tighten each screw to 16-24 ft-lbs (22-33 Nm).

2. Place the front wheel into position between the forks with the valve stem on the right side of the vehicle. Follow the procedures in the Service Manual under FRONT WHEEL INSTALLATION to install the wheel and brake calipers.

## Install the New Front Brake Controls

### CAUTION

Do not remove or install the master cylinder assembly without first positioning a 5/32-inch (4 mm) thick insert between the brake lever and lever bracket. Removing or installing the master cylinder assembly without the insert in place may result in damage to the rubber boot and plunger on the front stoplight switch.

### NOTE

A small section of corrugated cardboard or the eyelet of an ordinary cable strap can be used for this purpose.

1. See Figure 3. Squeeze the brake lever on the new brake lever/ master cylinder assembly (stamped "14") from the kit, and place the insert between the brake lever and lever bracket.

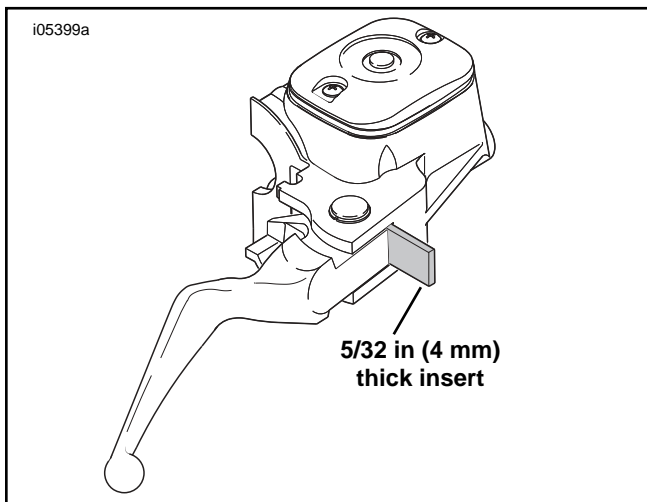


Figure 3. Position Insert Before Installing Master Cylinder

2. See Figure 4. Position the brake lever/ master cylinder assembly inboard of the right-side handlebar switch housing assembly, engaging the tab (2) on the lower switch housing (1) with the groove (3) at the top of the brake lever bracket (4).

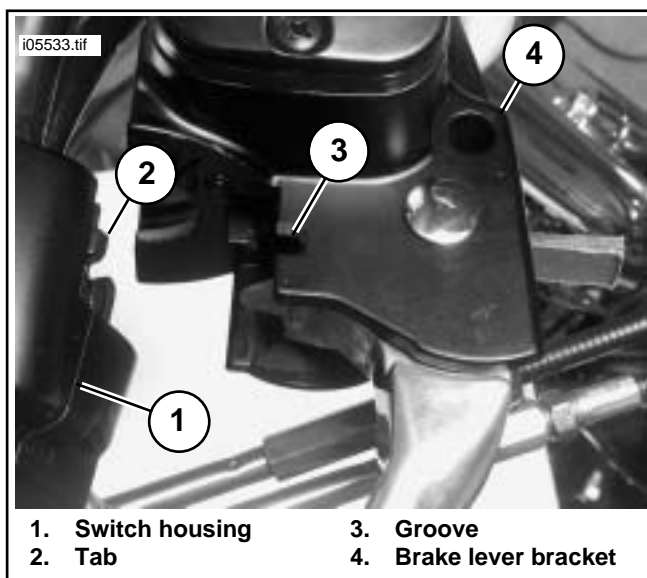


Figure 4. Fitting Master Cylinder To Switch Housing

3. Align the holes in the original handlebar clamp with those in the master cylinder housing and start the two screws with washers (saved earlier). Position for rider comfort.

Beginning with the top screw, tighten the screws to 60-80 in-lbs (6.8-9.0 Nm) using a T-27 TORX drive head.

## Install the New Front Brake Line

1. Carefully inspect the new brake line for dents, cuts or other defects, and replace the brake line if damaged.

### WARNING

Do not re-use brake-line sealing washers. Use of original washers could cause front brake failure and loss of control which could result in death or serious injury.

### CAUTION

To avoid brake fluid leakage, verify that the sealing washers, banjo bolt and brake line are completely clean.

2. See the Service Parts illustration. Using only the new brake-line sealing washers from the kit, lubricated with D.O.T. 5 Silicone Brake Fluid, follow the installation instructions in the FRONT BRAKE LINE section of the Service Manual to install the new brake line. Do not tighten any of the fasteners at this time.
3. Assemble the upper brake line to the front brake master cylinder. See FRONT BRAKE MASTER CYLINDER, INSTALLATION in the Service Manual.
4. Attach the upper brake line to the front fork upper bracket with the clamp and fasteners removed earlier.
5. Using the screw saved earlier and the guide (7) from the kit, fasten the brake line manifold to the front fork lower bracket.
6. Attach the lower brake lines to the brake calipers using the new banjo bolt (10) from the kit on one side, and the saved banjo bolt on the other side. See FRONT BRAKE CALIPER, INSTALLATION in the Service Manual.
7. Tighten the fasteners per the installation instructions in the FRONT BRAKE LINE section of the Service Manual.
8. Bleed the front brake system per the instructions in the Service Manual.

### WARNING

Federal Motor Vehicle Safety Standard (FMVSS) 108 requires all motorcycles to be equipped with side reflectors. Visibility is a major concern for motorcyclists. Failure to have side reflectors properly installed could result in death or serious injury.

9. Remove the adhesive backing and install a reflector (17) on the right side fork slider as shown. The bottom of the reflector should be two inches (50 mm) above the center of the axle. Press the reflector firmly in place to activate the adhesive.
10. Re-install the original right-side mirror onto the new brake master cylinder housing. Adjust the mirrors for proper field of vision and tighten the acorn nut to 12 ft-lbs (16 Nm). Check mirror adjustment and reposition if necessary.

**WARNING**

Whenever a caliper is installed, BEFORE moving motorcycle, you must pump brake fluid until the pistons push the pads against the brake discs. If you don't pump fluid pressure up the brake will not be available to stop the motorcycle, which could result in death or serious injury.

11. Test the brake system. Turn the Ignition/ Light/ Key switch to ON. Pump the brake hand lever to verify operation of the brake lamp.

**WARNING**

Whenever the brake system is serviced, always test the brakes on dry, clean pavement at slow speeds before putting the motorcycle to regular use. Failure to comply may lead to an accident which could result in death or serious injury.

12. Test ride the motorcycle. If the brakes feel spongy, bleed the front brake system again.



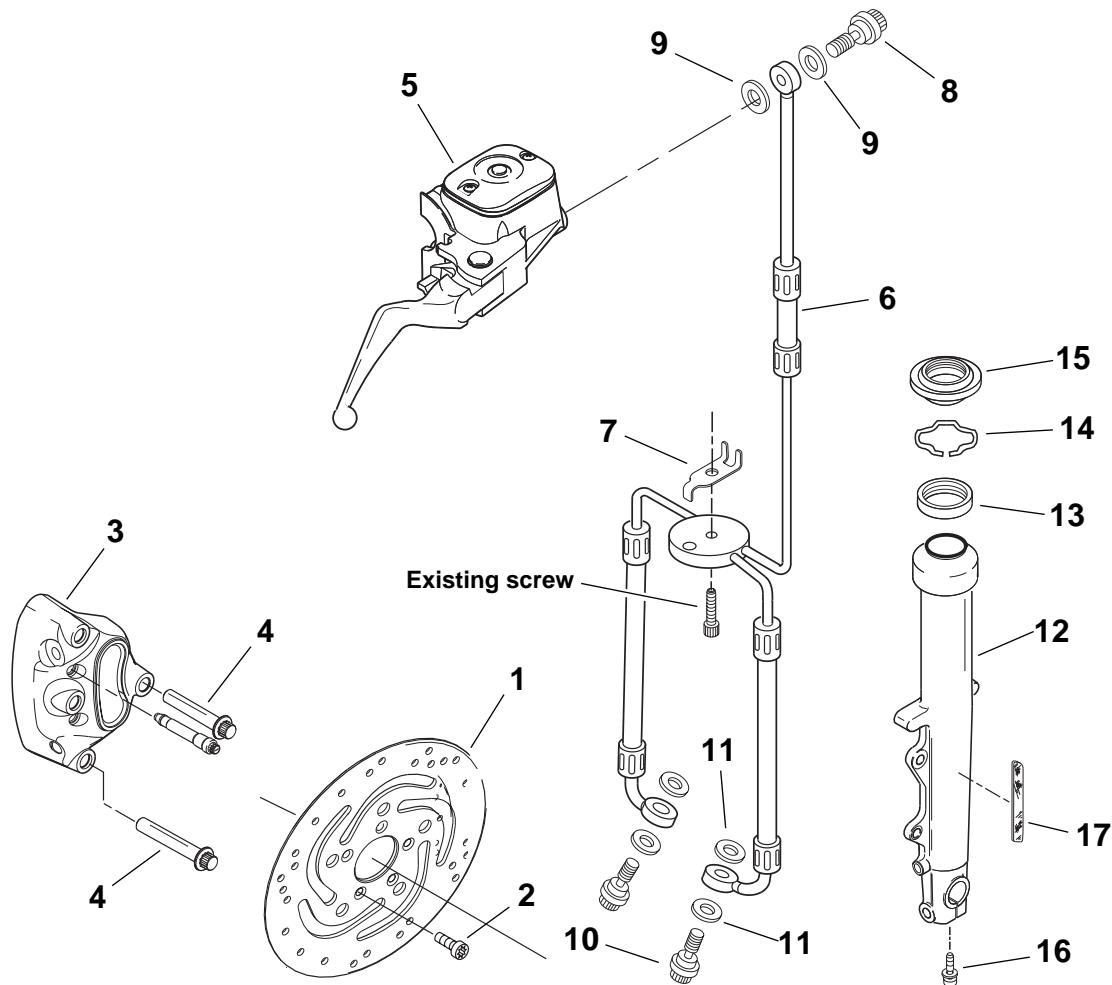
# Service Parts

Part No. 44090-04

Date 05/03

Dual Disc Front Brake Kit

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Item	Description (Quantity)	Part No.
1	Disc, front brake, right	44136-00
2	Screw, pan head, TORX®, 5/16-18 x 7/8 in (5)	3655A
3	Brake caliper assembly, front, right	44119-04
4	Bolt, caliper mounting (2)	44160-00
5	Brake master cylinder assembly, front	45052-04
6	Brake line assembly, dual, front	45320-04
7	Guide, anti-rotation	45074-95
8	Bolt, banjo, 12 mm	41737-04

Item	Description (Quantity)	Part No.
9	Sealing washer brake line, 12 mm (2)	41743-04
10	Bolt, banjo, 10 mm	41736-04
11	Sealing washer, brake line, 10 mm (4)	41732-04
12	Slider, front fork, right	45922-00
13	Oil seal	45378-87
14	Stopper ring, slider	45905-87
15	Dust seal	45401-87
16	Bolt, slider compression	45405-75A
17	Reflector, front, right (Amber)	59481-00