



# INSTRUCTIONS

-J01264

2009-04-03

## SPORTSTER BRAIDED REAR BRAKE LINE KIT

### GENERAL

#### Kit Number

44800-00A, 44438-87C

#### Models

This kit fits 1988-2003 XL models.

#### ▲ 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

Rider and passenger safety depend upon the correct installation of this kit. 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. (00308b)

#### Additional Parts Required

Proper installation of this kit requires Loctite® 565 Thread Sealant and D.O.T. 5 Silicone Hydraulic Brake Fluid.

#### Kit Contents

See Figure 6 and Table 1.

### INSTALLATION

#### ▲ 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)

#### Drain Brake Fluid

1. Remove bleed screw cap on rear brake caliper.
2. Install one end of a length of plastic tubing over caliper bleeder valve. Place free end of the tubing in a suitable container.

#### NOTICE

Remove brake line components carefully. Damage to seating surfaces can cause leakage. (00320a)

3. Open the bleeder valve about one-half turn and pump the brake pedal to drain the brake fluid out of the rear brake system. Do not re-use brake fluid.

#### Remove Existing Rear Brake Line

1. Disconnect wiring harness connectors from brake light switch spade terminals.
2. See Figure 1. Remove screws from the three P-clamps and one bracket used to secure brake line to motorcycle.
  - a. Save all screws except bracket screw and save stock P-clamp, located at the right side sprocket cover, for later use.
  - b. Do not mix up the screws. The screws must go back into the same threaded hole in which they were removed.
  - c. Discard remaining two P-clamps.

#### NOTE

This kit contains clamps to replace the original equipment clamps removed, except for the small clamp on the right side sprocket cover.

3. Note brake line routing, then remove existing brake line.

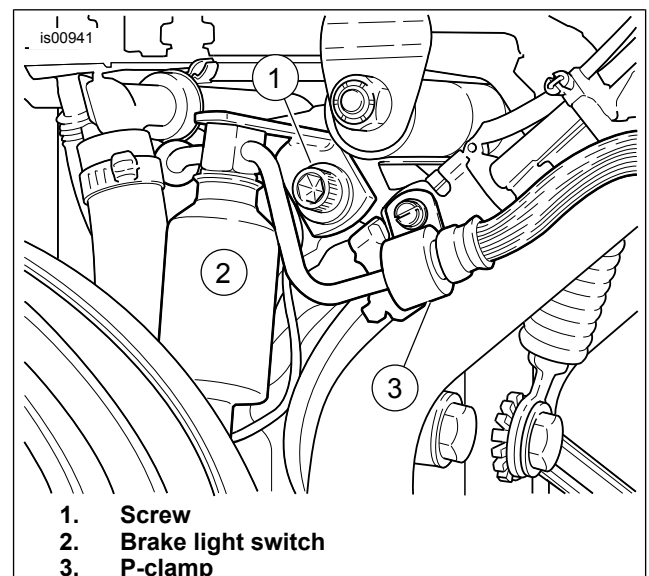


Figure 1. Existing Rear Brake Line Routing (left side)

4. Remove brake light switch from brake line. Save switch for later use.

## Install Braided Rear Brake Line Kit

### NOTE

Before installing brake light switch into new braided brake line manifold, clean pipe threads and apply Loctite® 565 Thread Sealant (99818-97) to the threads. To prevent brake fluid contamination, be careful not to allow excess sealant to seep into the manifold (do not apply thread sealant too close to end of thread).

### NOTE

Make sure banjo fittings on braided brake line are oriented the same as fittings on existing brake line.

1. See Figure 2. Install rear brake light switch as follows: **72023-51C Brake Light Switch (stock on 1988-2003 XL models):** Install switch (1) into threaded hole in manifold of braided brake line. Tighten switch to 84-120 in-lbs (9.5-13.6 Nm). **72023-51D Brake Light Switch (replacement on 1988-2003 XL models):** Install switch (2) into threaded hole in manifold of braided brake line. Tighten switch to 12-15 ft-lbs (16.3-20.3 Nm).



Figure 2. Rear Brake Light Switches

### ⚠ WARNING

Replace brake line gaskets. Re-using original gaskets can cause brake failure and loss of vehicle control, which could result in death or serious injury. (00318a)

### NOTICE

Avoid leakage. Be sure gaskets, banjo bolt(s) and brake line are clean and undamaged before assembly. (00323a)

2. See Figure 6. Run braided brake line (1) along the same route as existing brake line.
  - a. Lubricate brake line gaskets (steel/rubber washers) (2) from kit with D.O.T. 5 Silicone Brake Fluid.
  - b. Use stock banjo bolts and new gaskets (one gasket on each side of brake line banjo fitting) to fasten braided rear brake line at rear master cylinder and rear brake caliper.

- c. Tighten banjo bolts to 17-22 ft-lbs (23-30 Nm).
- d. See Figure 3 for orientation of brake light switch.

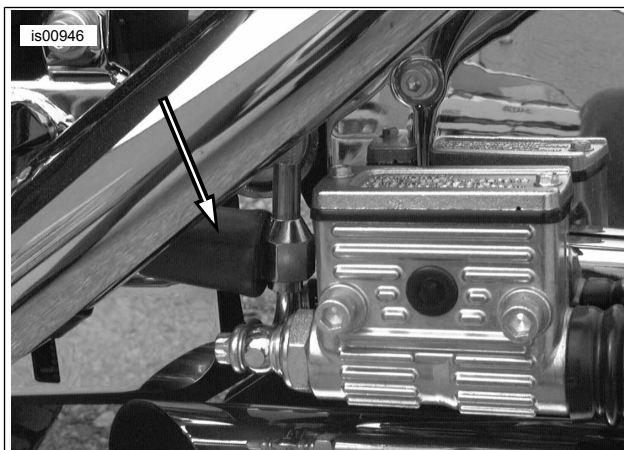
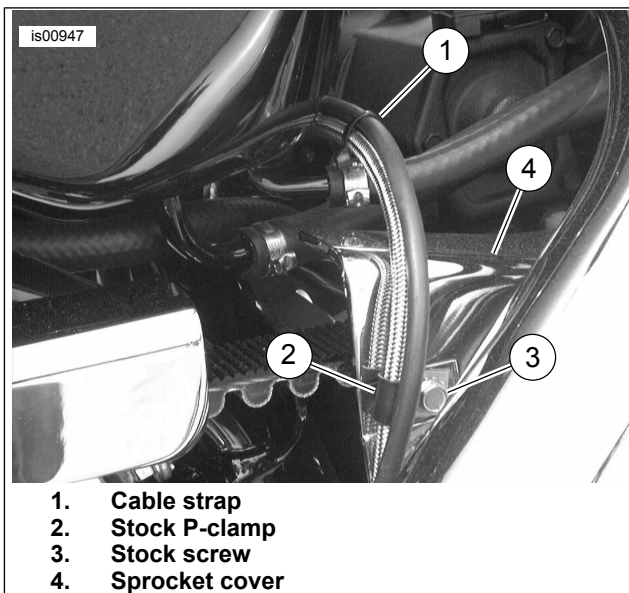
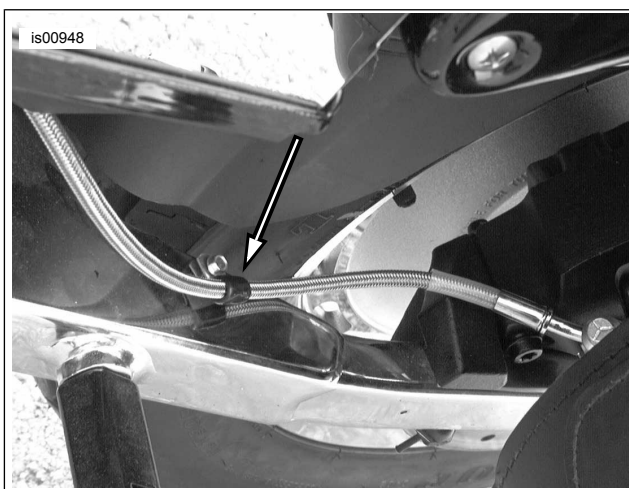


Figure 3. Brake Light Switch (shown covered by rubber boot)

3. See Figure 6. Use cable extension (5) from kit to connect brake light switch to original connector locations. **Cable Extension and Switch Connections:** See Figure 2. The cable extension has right angle (90°) female connectors for installation onto the stock 72023-51C and earlier brake light switch terminals. If the stock brake light switch (1) is replaced with a 72023-51D brake light switch (2), the right angle (90°) female connectors must be removed (cut off) from the cable extension and replaced with the straight connectors that are part of the 72023-51D kit. When removed, the wire should be cut as close to the connector body as possible. See a Harley-Davidson Dealer for the proper crimp tool for terminating the straight connectors onto the wires. If connecting to the 72023-51D rear brake light switch (2) (replacement on 1988-2003 XL models) align female wiring harness connector with brake light switch terminals so the flat side of the metal receptacle inside connector housing faces the isolator wall (3). This will prevent interference with the switch terminal isolator wall.
  - a. Connect male spade connectors on cable extension to female connectors on wiring harness.
  - b. Attach female connectors on other end of cable extension to brake light switch spade terminals.
  - c. Use cable straps (6) in kit to neatly bundle cable extension to braided brake line as shown in Figure 4.
4. Install P-clamps from kit along with the saved stock P-clamp from sprocket cover location to secure brake line in place.
  - a. P-clamp from kit with larger mounting hole (see Figure 6, item 3) is used at the location specified in Figure 1, along with stock screw previously removed from that location.
  - b. P-clamp from kit with smaller mounting hole (see Figure 6, item 4) is used at the location specified in Figure 5, along with stock screw previously removed from that location.
  - c. Stock P-clamp and screw removed from the right side sprocket cover is re-used at the sprocket cover location.



**Figure 4. Braided Brake Line Routing and Components (right side)**



**Figure 5. P-Clamp From Kit (with small mounting hole)**

### Bleed and Test Rear Brake Line

1. Remove rear brake master cylinder cover.
2. Stand motorcycle upright so master cylinder is in a level position.
3. Add D.O.T. 5 Silicone Hydraulic Brake Fluid **only** to master cylinder reservoir until fluid level is 1/8 in (3.2 mm) from the top. Do not re-use brake fluid. Use only brake fluid from a sealed container.

#### ⚠ WARNING

**Be sure the master cylinder relief port is not plugged. A plugged relief port can cause brake drag or lockup and loss of vehicle control, which could result in death or serious injury. (00317a)**

4. Verify proper operation of the master cylinder relief port. Actuate the brake pedal. A slight spurt of fluid will break the fluid surface in the reservoir compartment if all internal components are working properly.

#### ⚠ 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)**

5. Depress and hold brake pedal to build up hydraulic pressure.
6. Open bleeder valve about 1/2 turn. Brake fluid will flow from bleeder valve through tubing. Close bleeder valve when brake pedal has moved 1/2 to 3/4 of its full range of travel. Allow brake pedal to return slowly to its released position.
7. Repeat steps 3, 5, and 6 above until all air bubbles are purged.
8. Tighten bleeder valve to 80-100 **in-lbs** (9.0-11.3 Nm), then install bleeder cap.
9. Add brake fluid to master cylinder reservoir until fluid level is about 1/8 in (3.2 mm) from the top.
10. Install master cylinder reservoir gasket, cover and screws. Tighten screws to 6-8 **in-lbs** (0.7-0.9 Nm).

#### ⚠ WARNING

**Be sure that all lights and switches operate properly before operating motorcycle. Low visibility of rider can result in death or serious injury. (00316a)**

11. Turn the ignition/key switch to IGNITION and apply the rear brake foot pedal to test operation of the brake light.

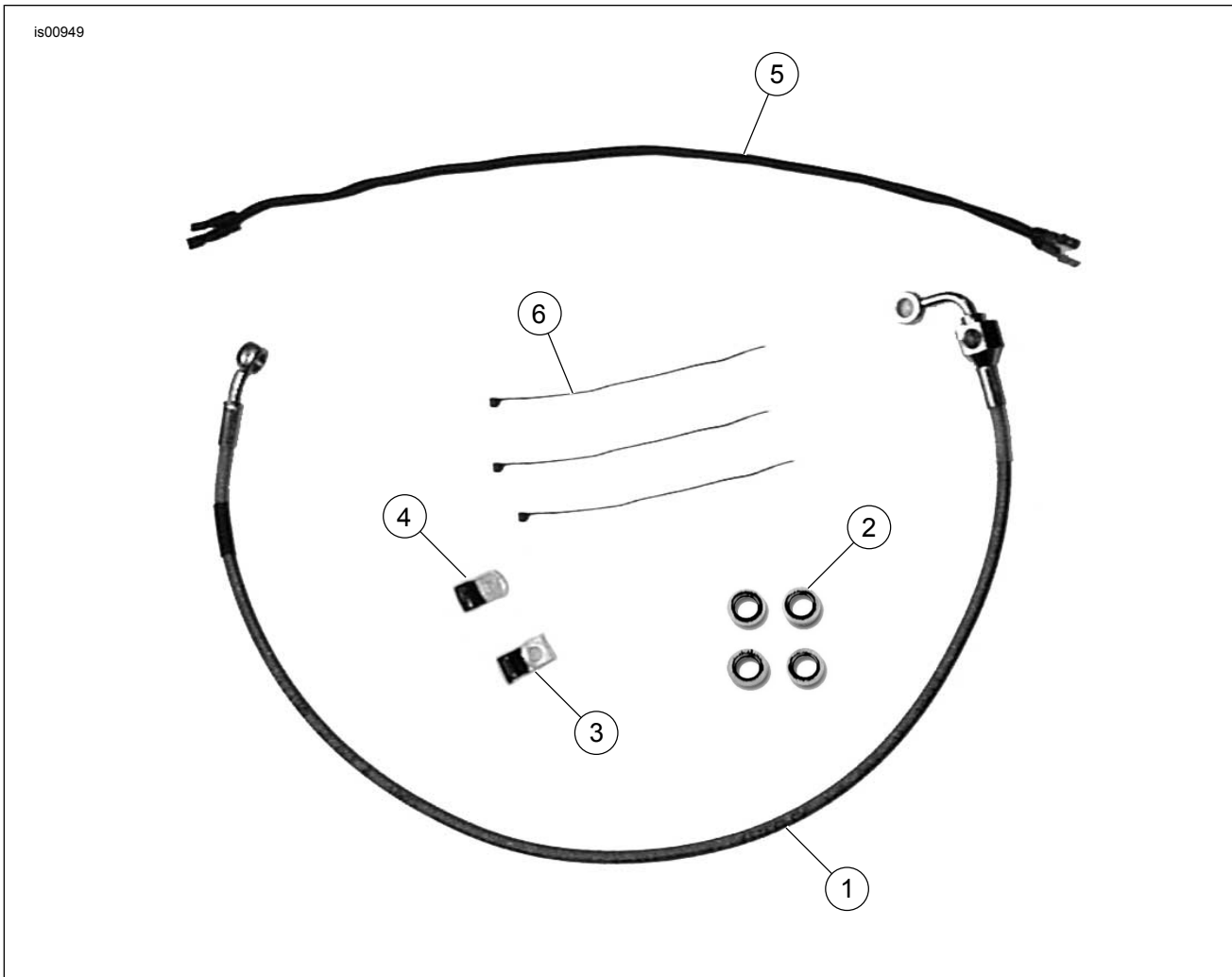
#### ⚠ WARNING

**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)**

12. Test ride the motorcycle. If the brake feels spongy, repeat the bleeding procedure.

# SERVICE PARTS

is00949



**Figure 6. Service Parts: Sportster Braided Rear Brake Line Kit**

**Table 1. Service Parts: Sportster Braided Rear Brake Line Kits**

Item	Description (Quantity)	Part Number
1	Brake line, braided	Not Sold Separately
2	Gasket (4)	41731-01
3	P-clamp, large	68562-84
4	P-clamp, small	71795-63A
5	Cable extension	Not Sold Separately
6	Cable strap (3)	10065