



# INSTRUCTIONS

-J00064

REV. 11-1-95

Kit Numbers 31965-93A to 31969-93A, 31973-93A, 32024-95 to 32027-95,  
and 32036-95A to 32039-95A

## BRAIDED SPARK PLUG WIRE KITS

### General

These kits are designed for installation on these vehicles:

31965-93A	1986 and later XL models
31966-93A	1986 and later XL models
31967-93A	1986 and later XL models
32036-95A	1986 and later XL models
32037-95A	1986 and later XL models
32038-95A	1986 and later XL models
32039-95A	1986 and later XL models
31968-93A	1985 and later Softail/Dyna models
31969-93A	1985 and later Softail/Dyna models
31973-93A	1985 and later Softail/Dyna models
32024-95	1985 and later Softail/Dyna models
32025-95	1985 and later Softail/Dyna models
32026-95	1985 and later Softail/Dyna models
32027-95	1985 and later Softail/Dyna models

Kit contents:

QTY	DESCRIPTION
2	Plug wire
2	Washer, flat
2	Cable strap

Kits 31965-93A and 31968-93A contain red with silver stripe braided wires.

Kits 31966-93A and 31969-93A contain silver with black stripe braided wires.

Kits 31967-93A and 31973-93A contain gold, silver and black braided wires.

Kits 32038-95A and 32026-95 contain silver braided wires.

Kits 32037-95A and 32025-95 contain red braided wires.

Kits 32036-95A and 32024-95 contain blue braided wires.

Kits 32039-95A and 32027-95 contain black braided wires.

#### NOTE

*There are no Service parts for these kits.*

### Installation - XL Models

#### ⚠ WARNING

Gasoline is extremely flammable and highly explosive under certain conditions. Do not smoke or allow open flame or sparks anywhere in the area when refueling or servicing the fuel system. Follow all Service Manual instructions for proper assembly and disassembly procedures.

#### NOTE

*Set all fuel tank hardware aside for later reinstallation.*

*A Service Manual for your vehicle is available from your Harley-Davidson dealer.*

1. Remove fuel tank following instructions in appropriate Service Manual. Place tank in a safe location where it will not be damaged or scratched.

2. Cut cable straps securing upper spark plug wire and harness assembly to frame of motorcycle at tank location. Remove existing spark plug wires and discard.
3. Seat the new rear cylinder spark plug wire firmly into the coil tower.
4. Seat the new front cylinder spark plug wire firmly into the coil tower.

Verify that the plug wire terminal is plugged into the coil tower by sliding the 90 degree boot back far enough to see the terminal plugged into the coil tower.

Slide the terminal boot back over the coil tower.

#### NOTE

*In the next step, make sure the star portion of ground cable is positioned toward the coil mounting bracket surface. The ground cable must cut into paint on coil mounting bracket to assure proper ground.*

5. Remove one 1/4-20 coil mounting bolt from coil mounting bracket. Assemble flat washer from kit onto bolt head. Install new rear cylinder spark plug ground wire over end of bolt. Reinstall bolt into coil mounting bracket. Tighten bolt finger tight.
6. Repeat NOTE and Step 4 for front cylinder spark plug ground wire.
7. Connect spark plug wires to spark plugs. Make sure boots are seated firmly on plugs.
8. Secure rear cylinder spark plug wire and harness assembly to frame using cable straps from kit.
9. Reassemble fuel tank to frame following Service Manual procedure. Make sure horn bracket is properly spaced and rubber grommets are in place.
10. Tighten all fuel tank hardware and 1/4-20 coil mounting bolts.

### Installation - FXST Models

1. Remove chrome coil cover from left side of vehicle. Set assembly aside for later reinstallation.

#### NOTE

*Make note of the location of existing spark plug wires before disconnection. Reference them when installing new wires.*

2. Remove existing spark plug wires and discard.
3. Place new wires firmly into coil towers. Make sure boots and wires are seated over towers.

#### NOTE

*In the next step, make sure the star portion of ground cable is positioned toward the coil mounting bracket surface. The ground cable must cut into paint on coil mounting bracket to assure proper ground.*

4. Remove rear cylinder coil mounting bolt and washer. Insert flat washer from kit onto bolt and insert bolt through ground wire. Reinstall coil mounting bolt into coil mounting bracket. Do not tighten bolt at this time.
5. Repeat Step 4 for front cylinder ground wire using lower coil mounting bolt.
6. Tighten coil mounting bolts.
7. Reinstall coil cover using original hardware.
8. Connect spark plug wires to spark plugs. Make sure boots are seated firmly on plugs.
9. Insert kit supplied cable strap through hole (located under gas tank) where old spark plug cable was anchored. Wrap cable strap around new spark plug wire and secure wire.

## Installation - Dyna Models

1. Remove left side side panel by removing four 1/4-20 socket head bolts. Set aside for later reinstallation. Be careful not to scratch side panel's surface.

### NOTE

*Make note of the location of existing spark plug wires before disconnection. Reference them when installing new wires.*

2. Remove existing spark plug wires and discard.
3. Place new wires firmly into coil towers. Make sure boots and wires are seated over towers.

### NOTE

*If coil is mounted by two bolts inserted from the front side of the coil, do not perform steps 4-8. Instead:*

- remove one coil mounting bolt,
- install ground wire on bolt,
- place flat washer from kit on bolt,
- reinstall bolt.

*Repeat for other ground wire. Continue at step 10.*

### ⚠WARNING

**To avoid accidental start-up of vehicle and possible personal injury, disconnect the battery cables before proceeding. Always disconnect the negative cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion producing personal injury and/or property damage.**

4. Remove seat and battery, negative cable first, following instructions in appropriate Service Manual.
5. Place a shop rag or soft cloth on rear exhaust pipe.

To gain access to coil mounting bolts from right side of vehicle, remove and place battery box and horn assembly on exhaust pipe.

### NOTE

*In the next step, make sure the star portion of ground cable is positioned toward the coil mounting bracket surface. The ground cable must cut into paint on coil mounting bracket to assure proper ground.*

6. From right side of vehicle, use 3/16 in. Allen wrench to remove rear cylinder coil mounting bolt. Place slide washer from kit onto bolt. Insert bolt through rear cylinder ground cable and reinstall bolt. Tighten finger tight.

7. Repeat Step 6 for front cylinder bolt and ground cable.
8. Tighten coil mounting bolts.

### ⚠WARNING

**Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion producing personal injury and/or property damage.**

9. Reinstall battery box, horn assembly, and battery - positive cable first. Follow instructions in Service Manual.
10. Connect spark plug wires to spark plugs. Make sure boots are seated firmly on plugs.
11. Secure front cylinder coil wire. Insert cable straps from kit through existing hole under gas tank where original wire was anchored.
12. Reinstall side panel. Place a drop of Loctite 242 (Blue) on threads of the four 1/4-20 bolts removed in Step 1. Tighten bolts alternately until all are properly torqued to 8 ft-lbs.
13. Reinstall seat.

### ⚠WARNING

**After installing seat, pull upward on front of seat to be sure it is locked in position. If seat is loose, it could shift position during vehicle operation and startle the rider, causing loss of control and personal injury.**

## Installation - FXR Models

1. Remove chrome coil cover from vehicle by removing 1/4-20 socket head screw and 7/16 in. nut. Coil will hang loosely from motorcycle. Set coil cover and hardware aside for later reinstallation.

### NOTE

*Make note of the location of existing spark plug wires before disconnection. Reference them when installing new wires.*

2. Disconnect existing spark plug wires and discard.
3. Install new wires firmly onto coil towers. Make sure boots and wires are seated over towers.
4. Locate chrome coil cover removed in Step 1. Insert original bolts into coil cover.
5. Position coil in coil bracket.
6. Bring chrome coil cover up to coil bracket and insert ground wires over 1/4-20 coil cover mounting bolts. With ground wires positioned between inner surface of chrome coil cover and coil bracket surface, tighten bolts.
7. Connect spark plug wires to spark plugs. Make sure boots are seated firmly on plugs.
8. Just below coil cover, wrap new spark plug wires together using cable strap from kit.