



# INSTRUCTIONS

-J03497

REV. 10-01-2004

Kit Number 69286-05A

## SPRINGER AUXILIARY LAMP KIT

### General

#### NOTE

Auxiliary/fog lamps are not included in this kit. The lamps must be purchased separately. HDI (International) motorcycles should only use approved fog lamps.

These kits **are not** compatible with Handlebar Reservoir Cover Sets 46098-98 or 46099-98.

See the Service Parts illustration for kit contents.

#### CAUTION

When installing any electrical accessory, be certain not to exceed the maximum amperage rating of the fuse or circuit breaker protecting the affected circuit being modified. Exceeding the maximum amperage can lead to electrical failures, which could result in death or serious injury. (00310b)

#### WARNING

The rider's safety depends 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. (00308a)

#### NOTE

This instruction sheet references service manual information. A service manual for the year and model motorcycle is required for this installation and is available from a Harley-Davidson dealer.

### Installation

#### Prepare the Motorcycle for Service

1. **For EFI models:** Follow the Service Manual instructions to purge the fuel supply of high pressure gasoline and remove the fuel supply line.
2. Follow Service Manual instructions to remove the seat.

#### WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (-) battery cable before proceeding. (00048a)

3. Disconnect the negative (-) battery cable from the battery.

#### WARNING

Stop the engine when refueling or servicing the fuel system. Do not smoke or allow open flame or sparks near gasoline. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00002a)

4. Follow the Service Manual instructions to remove the fuel tank.

#### Remove the Existing Hardware

1. See Figure 1. Remove the socket head screw (4) and the brake line P-clamp (8) from the right side of the rigid fork. Save the P-clamp.
2. Remove the socket head screw (7) and external-tooth lockwasher (5) from the left side. Save the screw.
3. Remove the original acorn nut (1), a flat washer (2) and bolt (3) holding the upper shock absorber. Save the washers and the acorn nut.

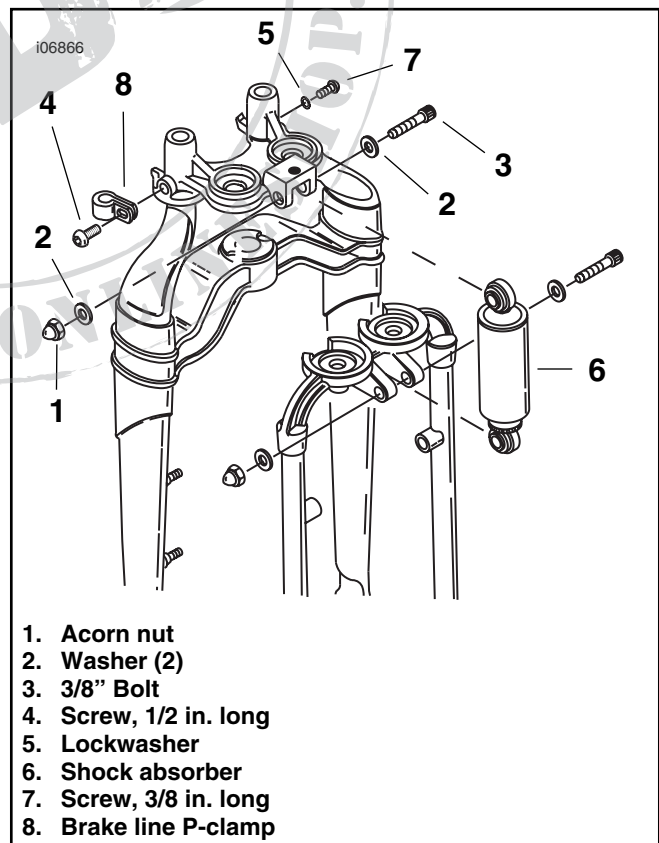


Figure 1. Mounting Hardware

## Mount the Bracket

1. Identify the correct length 3/8 -16 UNC screw for the combination of accessories and add a flat washer from the shock absorber bolt.

**Without horn kit:** See the Service Parts illustration. Select the 3/8"-16 x 2-1/2 in. cap screw (9) from the auxiliary lamp kit.

**With horn kit:** Select the 3/8"-16 x 3 in. silver-finished screw from the horn kit.

2. With the auxiliary lamp support bracket (7) positioned with the wiring holes facing downward, assemble the support bracket and accessories in combination to the upper shock mount sliding the selected screw through the combination.

**For the combination of support bracket, windshield and horn:** See Figure 2.

**For the combination of support bracket and horn:** See Figure 3.

**For the combination of support bracket and windshield:** See Figure 4.

3. Fasten with the flat washer and acorn nut removed from the shock absorber mount.
4. See the Service Parts illustration. Apply Loctite® 243 (blue) to the threads and install the original 5/16"-24 x 1/2 in. socket head screw removed from the right side of the rigid fork, and a 5/16 in. internal tooth lockwasher (12) from the kit onto the left side to fasten the auxiliary lamp bracket long tab to the rigid fork.
5. Obtain the 5/16"-24 x 7/8 in. socket head screw (11) and another 5/16 in. internal tooth lockwasher (12) from the kit. Apply Loctite® 243 (blue) to the threads and fasten the screw and lockwasher through the brake line P-clamp and through the right-side long auxiliary-lamp support bracket long tab to the rigid fork.
6. Apply Loctite® 243 (blue) to the threads and tighten the upper shock mounting bolts to 45-50 ft-lbs (61.0-67.8 Nm).
7. Tighten the left and right rigid fork socket head screws securely.

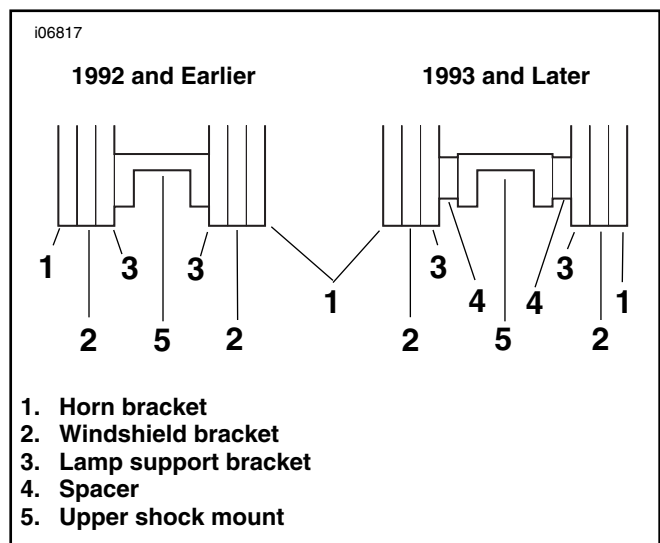


Figure 2. Support, Windshield and Horn Combination

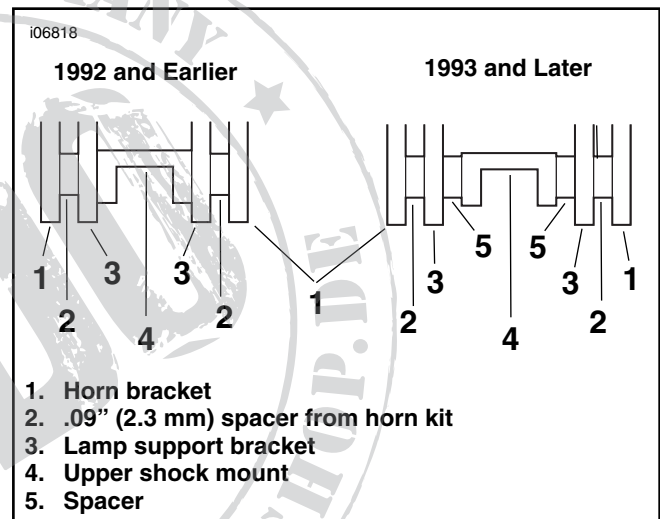


Figure 3. Auxiliary Lamps and Horn Combination

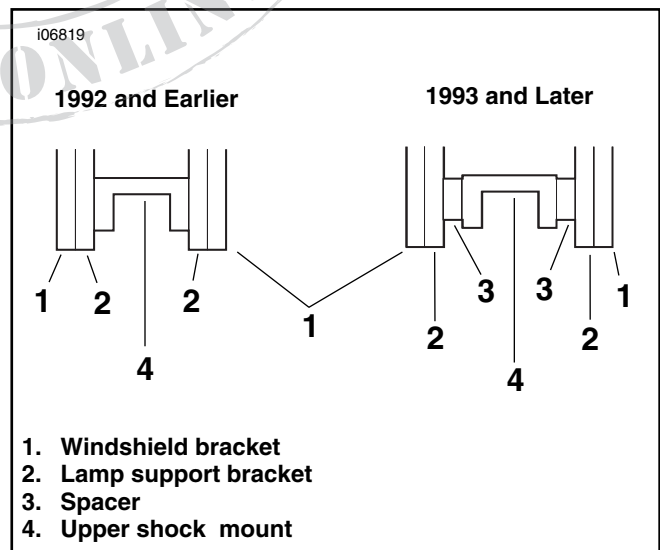


Figure 4. Auxiliary Lamps and Windshield Combination

## Install and Wire the Auxiliary Lamp Housings

1. See Figure 5. With the open end facing the rear of the motorcycle, fit the U-clamp (1) around the support bracket (2) and assemble the lamp housing to the bracket.
  - a. Hold the U-clamp and fit the bevel washers (3) to the curve of the support bracket.
  - b. With the convex side of the Belleville washer (4) facing the lamp housing, thread the gray/black (GR/BK) wire (5) from the housing through the Belleville washer and then through the clamp and the 2 bevel washers.
  - c. Fit the housing threaded stud (6) through the Belleville washer, the U-clamp and the bevel washers.
  - d. Slip a washer (7) over the wire and housing stud and secure with the chrome acorn nut (8).
2. See the Service Parts illustration. Locate the outer trim ring (18), inner nesting ring (21), screw (19), and nut (20).
3. Place the inner nesting ring on the lamp bulb (purchased separately).
4. See Figure 6. Connect the black wire to the bulb spade terminal (2) next to the bulb indexing tab (1) on the bulb. Install the gray wire on the remaining spade terminal.
5. Install the trim ring with the bulb in the housing with the screw and nut.
6. Use fish tape or wire to draw the lamp wire leads through the holes in the support bracket, along the inside of the bracket and through the single exit hole inside the left side long mounting tab.
7. See the Service Parts illustration. Slide conduit (17) over each wire, until the end of the conduit is 2 inches inside the exit hole of the support bracket.
8. Trim the opposite end of the conduit to expose a short length of lamp wire
9. Secure the wires to the inside of the right-side long mounting tab on the support bracket with 2 short cable straps (14).
10. Install button plugs (8) in both ends of the support bracket.

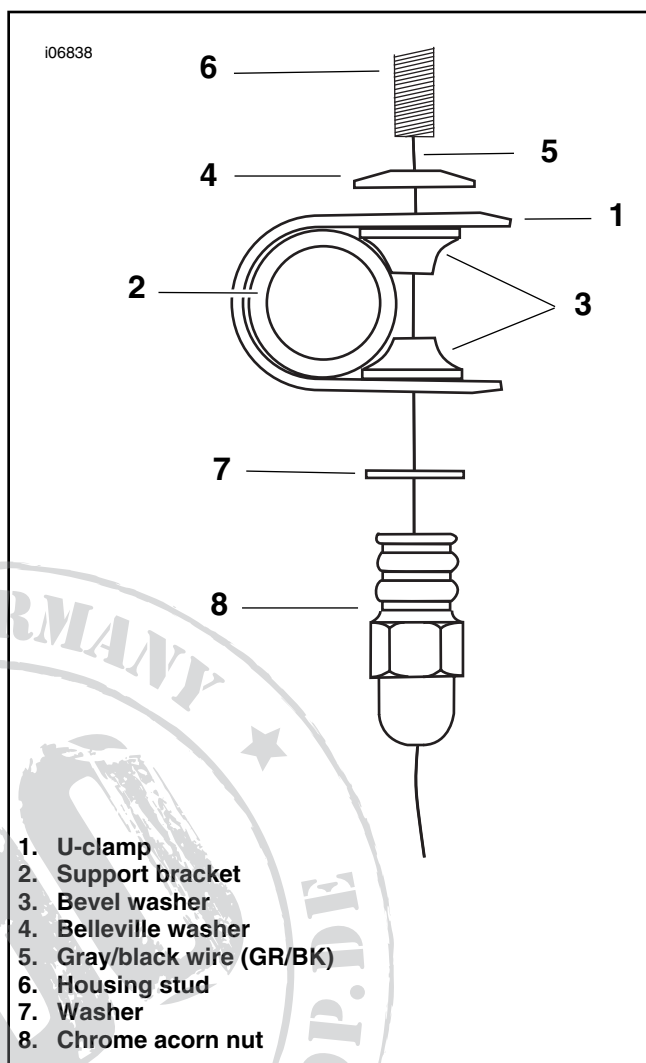


Figure 5. Auxiliary Lamp Bulb Terminals

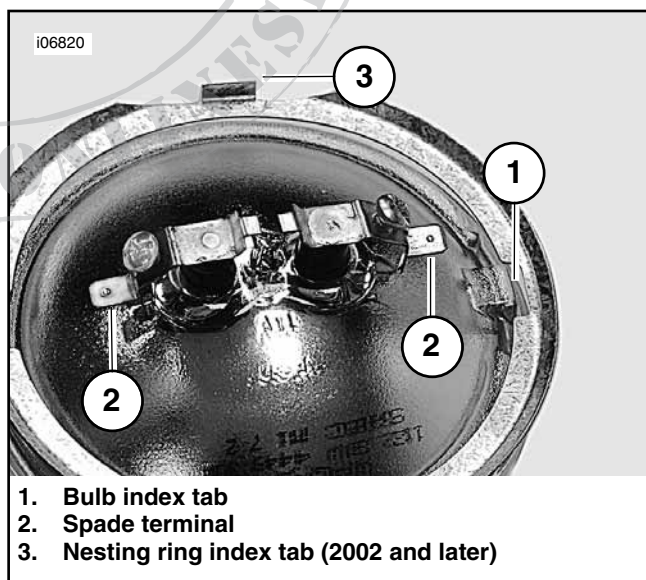


Figure 6. Auxiliary Lamp Bulb Terminals

## Route the Wiring Harness

1. See Figure 7. Place the relay (1) of the wire harness in the opening of the seat pan.

### CAUTION

When routing wires through the frame and front fork, make sure the wires are clear of moving parts, heat source and pinch points to avoid a possible short circuit.

2. Route the black ring terminated wire (2) to a ground stud.
3. Find the B+ connector [160B] on the main wiring harness and route the white wire with connector (7) to the B+ connector.
4. Route the long center conduit along the frame backbone.
5. Turn the lamp switch (3) and the lamp circuit conduit (6) to the left side of the motorcycle.
6. Route the unterminated white wire to the headlamp.
7. Cable tie the long center harness to the main wiring harness.

## Install the Lamp Switch

1. See Figure 8. Remove the lower screw and washer from the left handlebar switch housing clamp.
2. See Service Parts illustration. Mount the switch bracket (25) to the switch housing and tighten to 60-80 **in-lbs** (7-9 Nm)
3. Route the switch wires along the underside of the left handlebar push the switch (28) through the bracket opening and thread on the rubber switch boot (24).

### NOTE

See the Service Parts illustration. If the boot (25) becomes worn or damaged, or is lost, replace the boot to prevent moisture from entering the switch

4. Replace the wire clips (16) in the handlebar capturing the auxiliary lamp switch wire.
5. **For International (HDI) models:** Place the fog lamp (HDI) switch label (27) on the clutch control clamp.

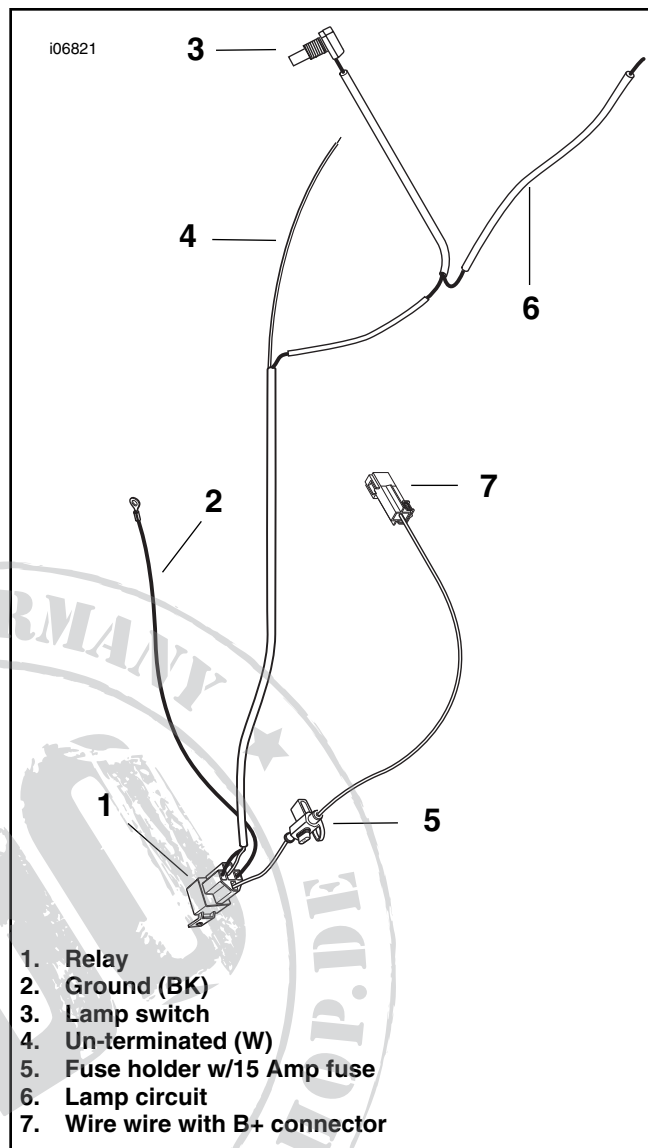


Figure 7. Auxiliary Lamp Wire Harness

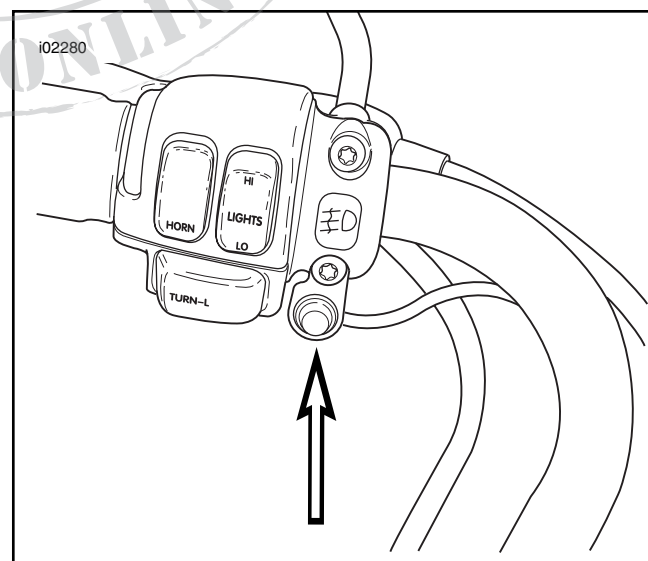


Figure 8. Lamp Switch Mounting

### Connect the Lamp Switch Circuit

1. See Figure 9. Route the unterminated black wire (2) from the harness to the 2 lamp wires and slide heat shrink tubing over the black wire.
2. Follow the **2 into 1 Splice** instructions on the next page to splice the black wire from the wire harness to the 2 lamp gray and black wires.
3. Slide the conduit over the splice.

### Splice in the Low Beam

#### NOTE

The auxiliary lamps can only be operated while the main headlamp is on low beam. This function meets the requirements of many state and local laws.

#### CAUTION

When routing wire through frame and front fork, make sure wire is clear of moving parts, heat sources and pinch points to avoid a possible short circuit.

1. Remove the headlamp trim ring and headlamp.
2. Separate the connector from the bulb.
3. See Figure 10. Route the unterminated white wire from the auxiliary lamp harness through the grommet in the headlight housing.

#### NOTE

To route the wire through the grommet, push a hooked piece of wire through the grommet from the inside of the headlamp housing. Soap the white wire and pull it back through the grommet with the hooked wire.

4. Cut the yellow low beam lead 1.5 in. (38.1 mm) from the headlamp connector to leave sufficient length for a splice.
5. Follow the **2 into 1 Splice** instructions on the next page to splice the cut end of the yellow wire from the connector to the white and yellow wires from the headlamp housing grommet.

#### NOTE

If the white wire from the harness does not fit through the grommet, the white wire may be spliced to the yellow wire outside the headlamp housing.

6. Connect the connector to the spade connectors on the headlamp and install the headlamp and trim ring in the headlamp housing.

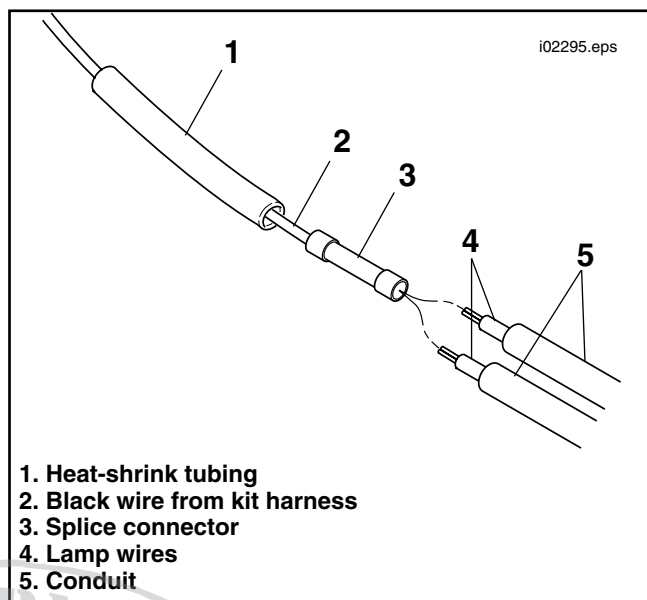


Figure 9. Connect the Lamp Wires to the Kit Harness

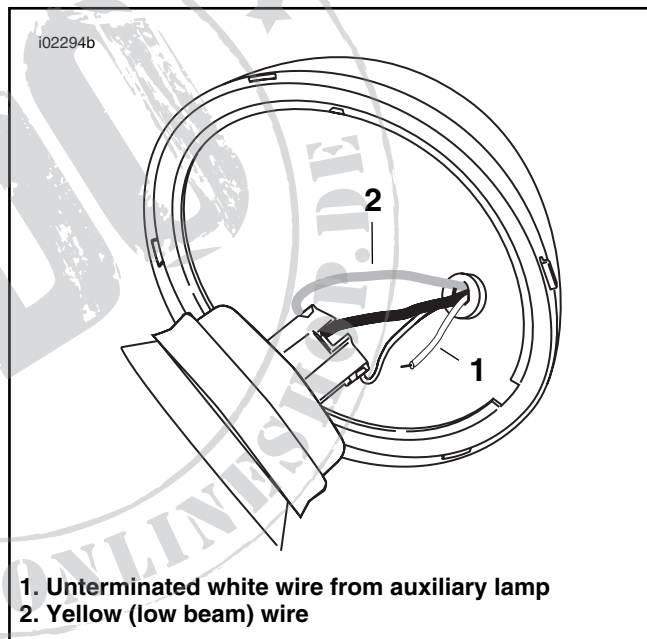


Figure 10. Splice the Unterminated Wire to the Headlight Yellow (low beam) Lead



## 2 into 1 Splice

1. Strip 3/8 in. (9.5 mm) of insulation off the wire ends.
2. See Figure 11. Use the blue (14-16 gauge) crimp cavity of the crimping tool (Kent-Moore Part No. HD-38125-8) to crimp one wire end in one end of the blue connector and 2 wire ends in the other end of the connector.

### WARNING

Be sure to follow manufacturer's instructions when using the UltraTorch UT-100 or any other radiant heating device. Failure to follow manufacturer's instructions can cause a fire, which could result in death or serious injury. (00335a)

- Always keep hands away from tool tip area and heat shrink attachment.
  - Avoid directing the heat toward any fuel system component. Extreme heat can cause fuel ignition/explosion resulting in death or serious injury.
  - Avoid directing heat toward any electrical system component other than the connectors on which heat shrink work is being performed.
  - Be sure to turn the "ON/OFF" switch to the "OFF" position after use.
3. Use the Ultra Torch UT-100 (Kent-Moore Part No. HD-39969) or other radiant heater to heat from the center of the crimp out each end until the sealant comes out both ends.

## Connect the Auxiliary Lamps to Power

1. Connect the white (power) lead to a power source.

### For 2003 and earlier models:

- a. Cut the connector from the white power lead on the lamp wire harness.
- b. See Service Parts illustration. Crimp the ring terminal (on the lead).
- c. See Figure 11. Remove the nut on the copper stud (BAT) terminal of the main circuit breaker.
- d. Add the ring terminal on the white power lead and install the nut.

### For 2004 and later models:

- a. See Figure 12. Route the white wire and connector to the B+ connector [160B].
  - b. Mate the connector halves.
2. Use the cable ties to secure any excess wire to the bike to prevent damage or interference with operation.

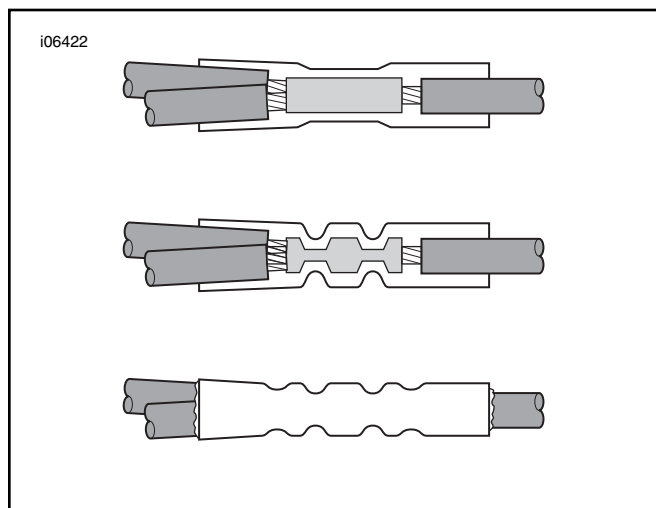


Figure 11. 2 into 1 Splice

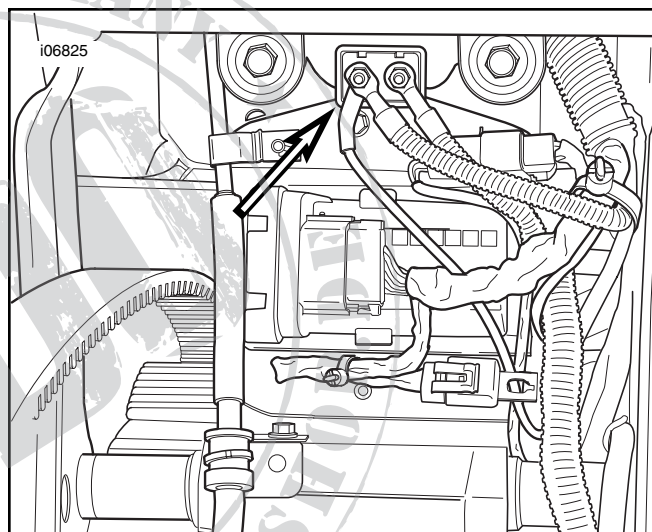


Figure 11. Electrical Panel and Main Circuit Breaker (2003 FXST shown)

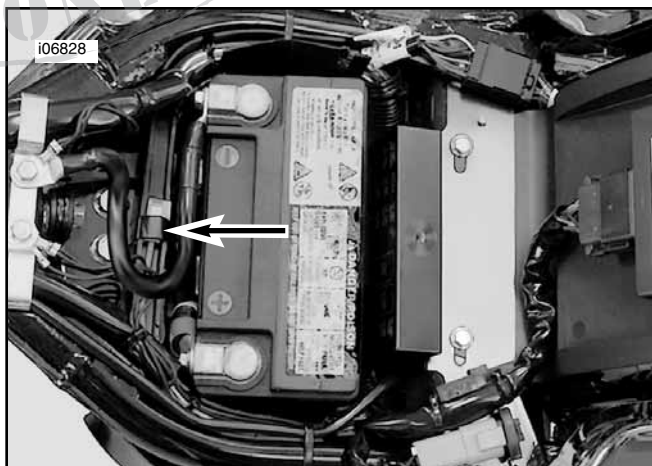


Figure 12. B+ Connector [160B] (2004 FXST shown)

### Ground the Auxiliary Lamps

1. See Figure 13. Route the ring terminated wire (BK) to the ground stud or any good electrical ground point.
2. Remove the nut and add the ring terminal to the ground stud. Tighten the bolt.

### Return the Motorcycle to Service

1. Connect the negative (–) battery cable to the battery.
2. Turn the IGNITION switch to ON and test the auxiliary lamp switch and the lamps for operation.
3. Aim the lamps forward, then tighten the lamp mounting nuts securely.

#### WARNING

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

4. Follow Service Manual instructions to install the seat.

#### 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)

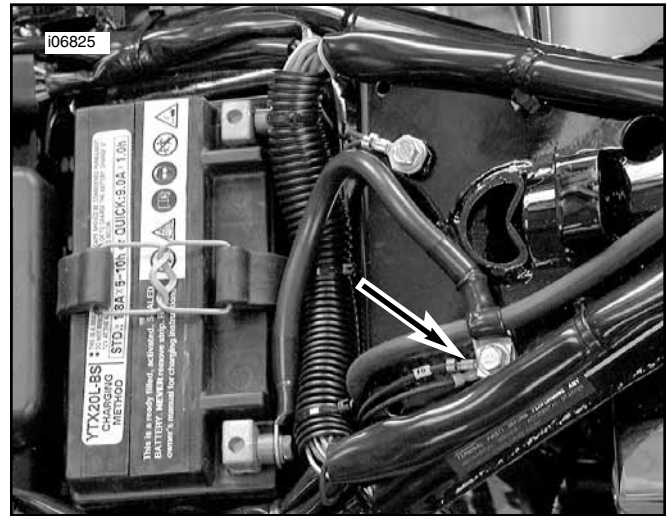


Figure 13. Ground Wire Location  
(1999 FXST shown)



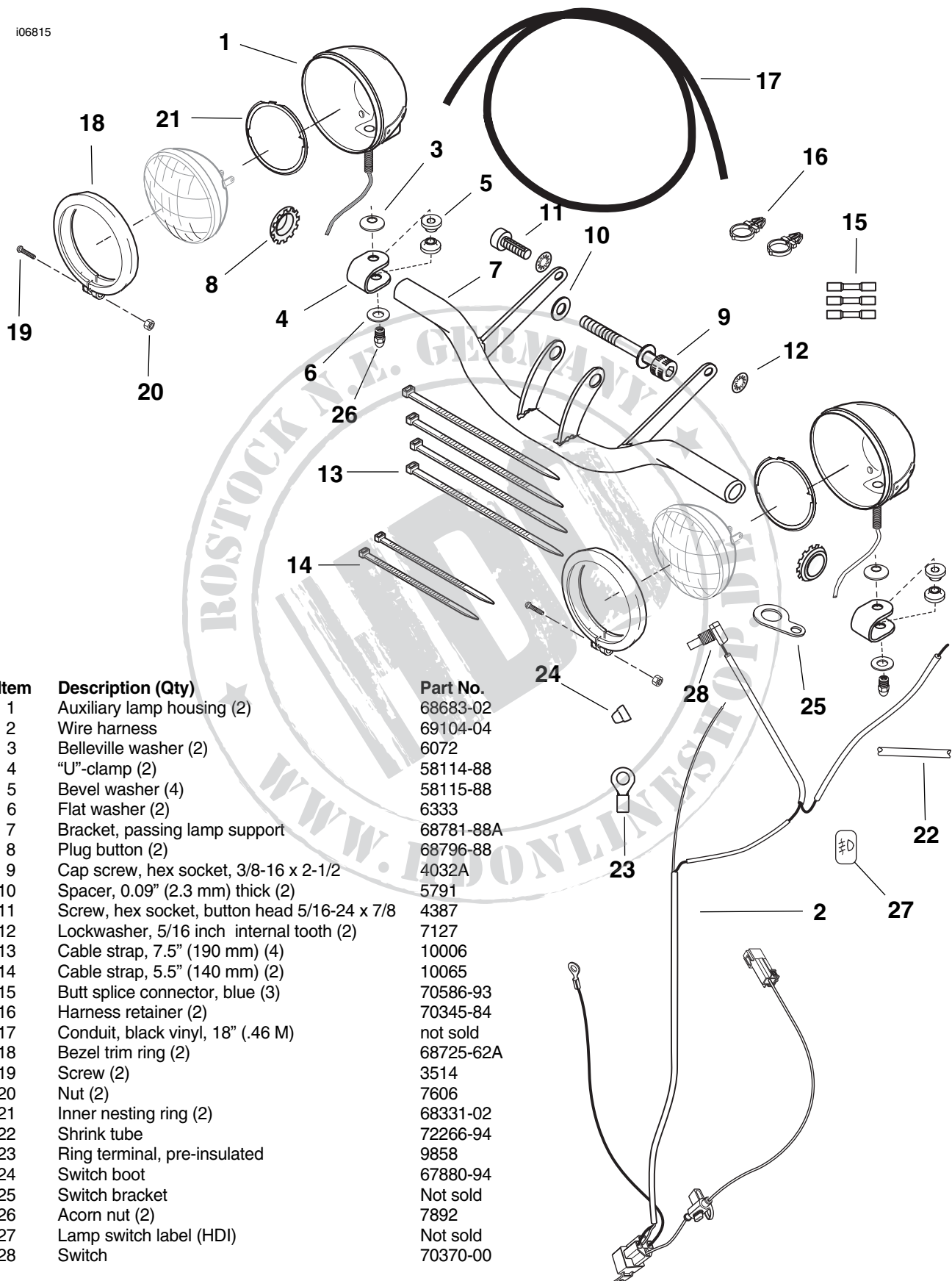
# Service Parts

Part No. 69286-05A

Date 10/04

## Springer Auxiliary Lamp Kit

106815



Item	Description (Qty)	Part No.
1	Auxiliary lamp housing (2)	68683-02
2	Wire harness	69104-04
3	Belleville washer (2)	6072
4	"U"-clamp (2)	58114-88
5	Bevel washer (4)	58115-88
6	Flat washer (2)	6333
7	Bracket, passing lamp support	68781-88A
8	Plug button (2)	68796-88
9	Cap screw, hex socket, 3/8-16 x 2-1/2	4032A
10	Spacer, 0.09" (2.3 mm) thick (2)	5791
11	Screw, hex socket, button head 5/16-24 x 7/8	4387
12	Lockwasher, 5/16 inch internal tooth (2)	7127
13	Cable strap, 7.5" (190 mm) (4)	10006
14	Cable strap, 5.5" (140 mm) (2)	10065
15	Butt splice connector, blue (3)	70586-93
16	Harness retainer (2)	70345-84
17	Conduit, black vinyl, 18" (.46 M)	not sold
18	Bezel trim ring (2)	68725-62A
19	Screw (2)	3514
20	Nut (2)	7606
21	Inner nesting ring (2)	68331-02
22	Shrink tube	72266-94
23	Ring terminal, pre-insulated	9858
24	Switch boot	67880-94
25	Switch bracket	Not sold
26	Acorn nut (2)	7892
27	Lamp switch label (HDI)	Not sold
28	Switch	70370-00