



INSTRUCTIONS

-J02798

REV. 9-24-2003

Kit Number 68913-98B

ENGINE GUARD-MOUNTED FOG LAMP KIT

General

This kit fits all models equipped with Harley-Davidson 1-1/4 in. (32 mm) diameter front engine guards, except models equipped with fairing lowers or splash shields.

This kit is **not** compatible with Handlebar Reservoir Cover Sets 46098-98 or 56099-98, due to the location of the switch.

See the Service Parts illustration on the last page of these instructions for kit contents.

CAUTION

It is possible to overload your motorcycle's charging system by adding too many electrical accessories. If your combined electrical accessories operating at any one time consume more electrical current than your vehicle's charging system can produce, the electrical consumption can discharge the battery and cause vehicle electrical system damage. See a Harley-Davidson Dealer for advice about the amount of current consumed by additional electrical accessories, or for necessary wiring changes. (00211b)

NOTE

These lamps require 9 amps of available current from the motorcycle's electrical system.

WARNING

A Service Manual is required for correct installation of this kit. 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 your Harley-Davidson Dealer perform the installation. Incorrect installation of this kit could result in death or serious injury.

NOTE

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

Installation

1. **VRSC models:** Refer to the Service Manual and remove the right side cover and Maxi-Fuse.

All models except VRSC:

WARNING

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

WARNING

Disconnect negative (-) battery cable first. If positive (+) battery cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

Refer to the Service Manual and follow the instructions given to remove the seat and disconnect the battery cables, negative cable first.

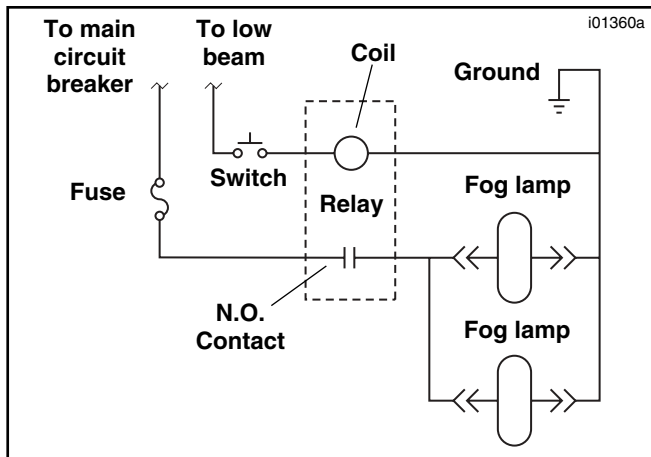


Figure 1. Fog Lamp Schematic

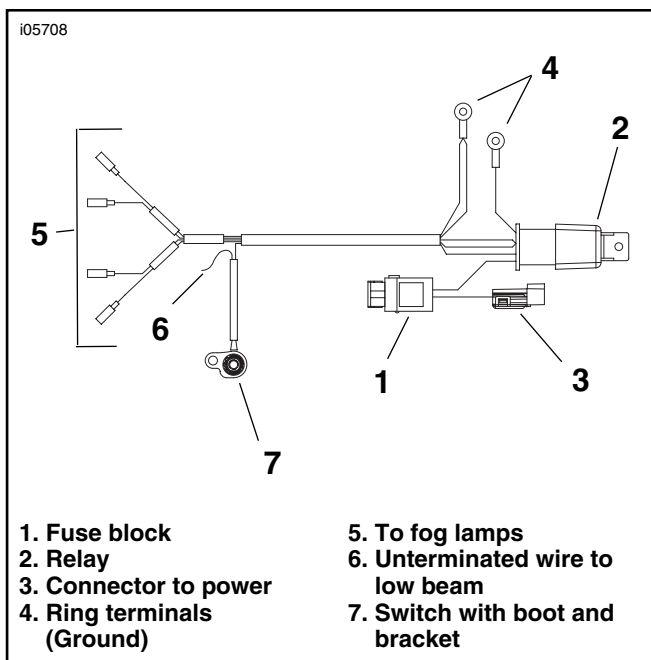


Figure 2. Fog Lamp Wiring Harness

2. **RSC models:** Remove the left side cover to expose the battery compartment.

All models except VRSC:

WARNING

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.

Remove the fuel tank. See FUEL TANK – REMOVAL in the Service Manual.

3. **All models:** See Figure 1 for the electrical schematic and Figure 2 for wiring harness connections.

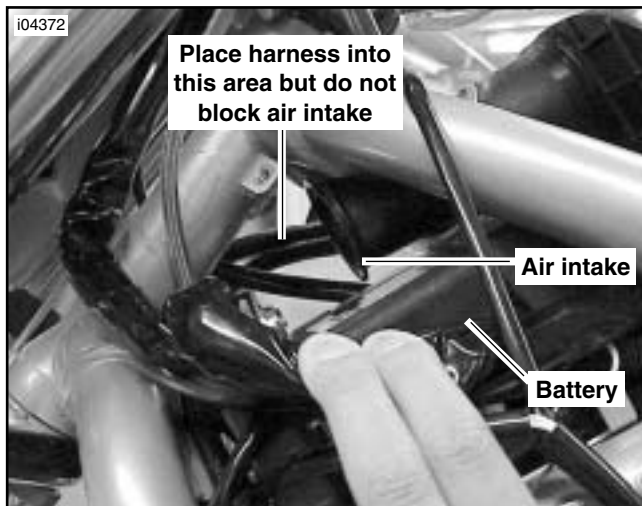


Figure 3. Install Fog Lamp Wiring Harness (VRSC Models)

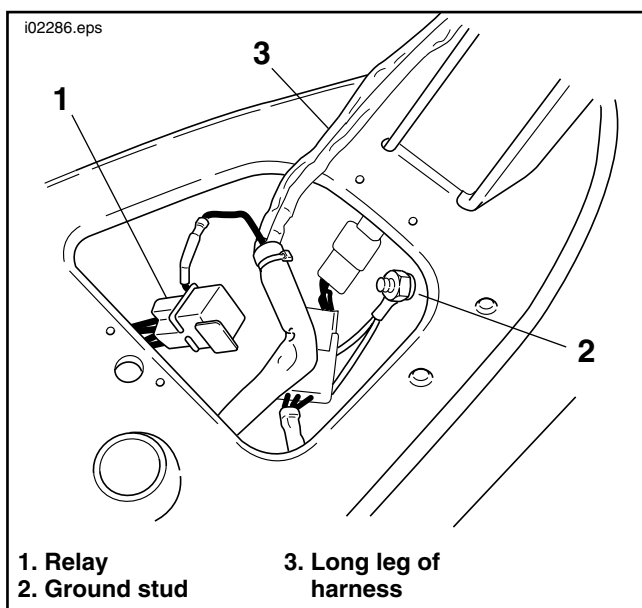


Figure 4. Install Fog Lamp Wiring Harness (All Models Except VRSC. Dyna Model Shown)

CAUTION

When routing wires along the frame backbone, make sure the wires are clear of moving parts, heat sources and pinch points, to avoid possible short circuits.

4. **VRSC models:** See Figure 3. Place the wire harness from the kit into the area in front of the battery. Do not block the air intake opening.

All models except VRSC and 2004 and later XL models: See Figure 4. Install the wire harness from the kit. Place the relay in the opening of the frame under the seat area, and route the long leg of the harness forward along the frame backbone.

2004 and later XL models: See Figure 5. Remove the nuts retaining the ignition module (1) and temporarily reposition the module as shown. Place the relay in the recessed area (2) of the oil reservoir. Install the ignition module. Route the long leg of the harness along the frame backbone.

5. **All 2003 and earlier models and VRSC:** Cut the connector from the white power lead, and replace it with the ring terminal supplied in the kit.
6. **All 2003 and earlier models, except VRSC:** Connect the white wire with the ring terminal to the copper stud (BAT) terminal of the main circuit breaker.

All 2004 and later models, except VRSC: Connect the white wire with connector to the B+ connector on the harness.

All VRSC: Connect the white power lead to the battery positive terminal.

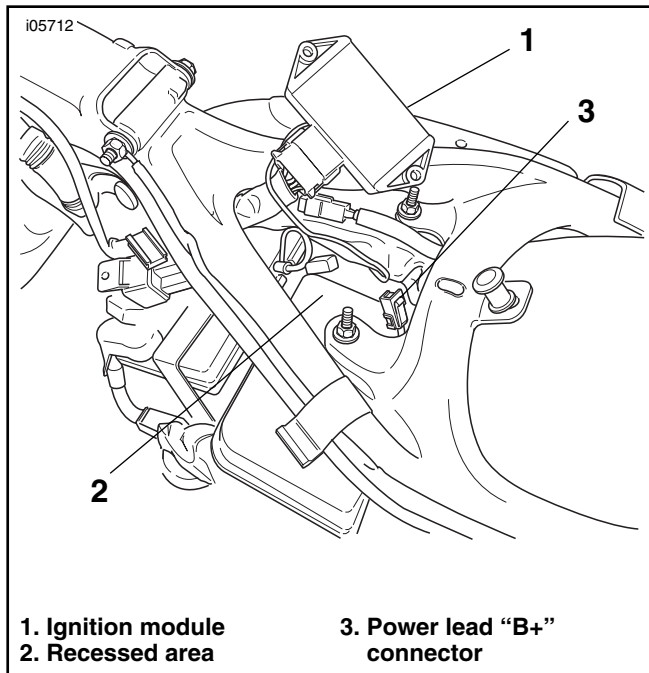


Figure 5. Install the Wiring Harness (2004 and Later Models)

7. See Service Part illustration. Connect the black ground wires with the two ring terminals to the ground stud under the seat, or at any good electrical ground point. Secure the kit harness to the adjacent harnesses with cable straps (item 6) from the kit.

CAUTION

When routing wires through the front fork, make sure the wires are clear of moving parts, to avoid pinching and possible short circuits.

8. Route the forward end of the harness past the steering head, and route the lamp switch leg of the harness along the left side of the handlebar to the clutch control.
9. See the Service Parts illustration. Obtain the switch mounting bracket (item 11) from the kit. Unscrew the boot from the lamp switch, and install the switch into the bracket. Replace the boot on the switch.

NOTE

If the boot becomes worn or damaged, or is lost, replace the boot to prevent moisture from entering the switch. See the Service Parts illustration (Item 12).

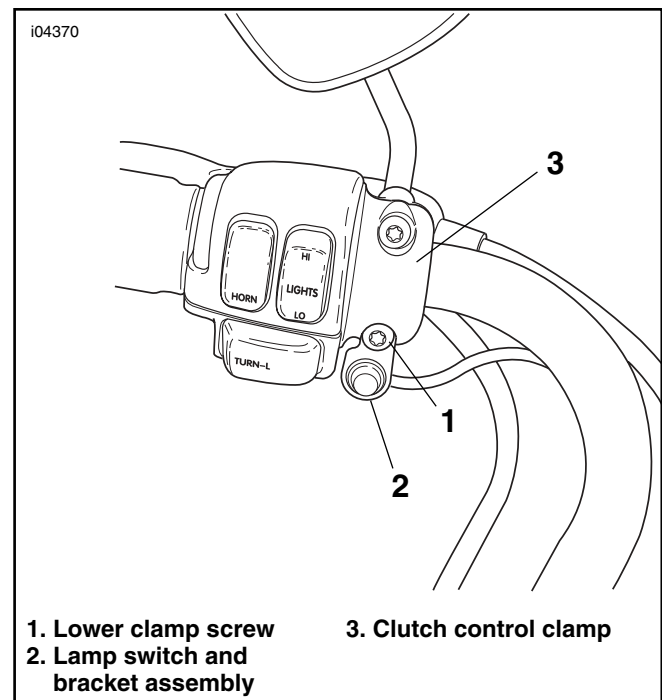


Figure 6. Install the Lamp Switch on the Clutch Control Clamp

10. See Figure 6. Remove the lower screw (1) and washer from the clutch control clamp (3), and install the lamp switch and bracket assembly (2). Install the screw and washer and tighten to 60-80 **in-lbs** (7-9 Nm).
11. See the Service Parts illustration. Secure the lamp switch leg of the harness to the handlebar using the wire harness retainers already on the bike. Snap the retainers into the holes in the handlebar.
12. Remove the headlamp assembly. See HEADLAMP – REMOVAL instructions for the correct model in the Service Manual.

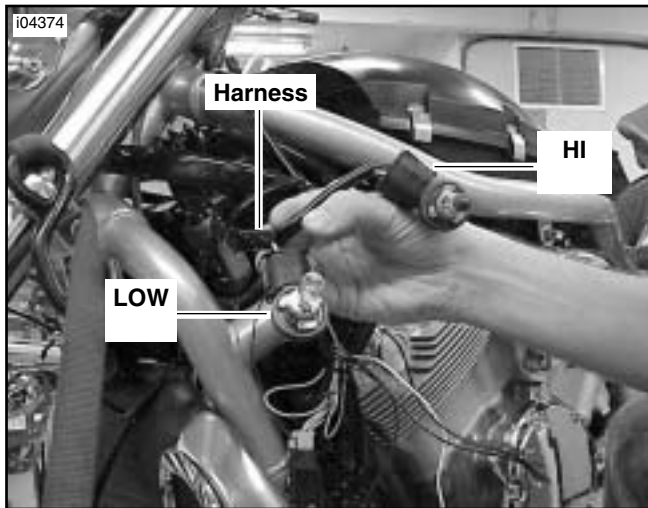


Figure 7. HI and LOW Beam Bulb Assemblies (VRSC Models)

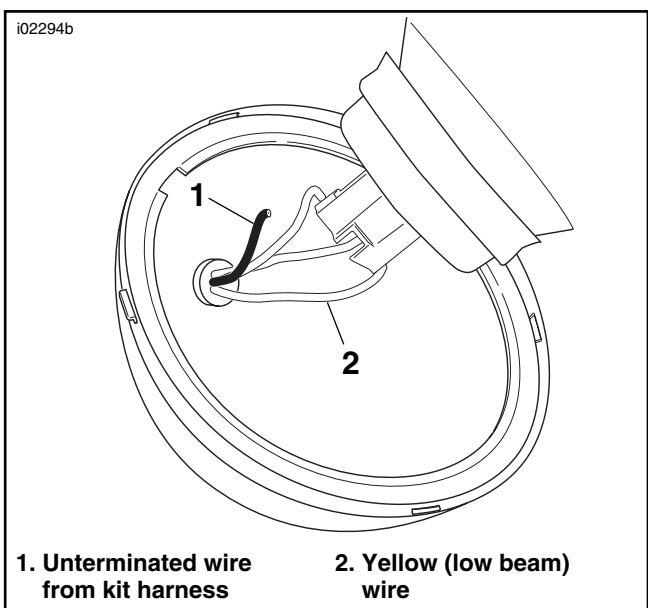


Figure 8. Route Underterminated Wire from Lamp Switch to Headlight Yellow Wire (All Models Except VRSC)

13. **VRSC models:** See Figure 7. Route the underterminated wire from the switch toward the HI and LOW beam harness.

All models except VRSC: See Figure 8. Route the underterminated wire from the switch through the grommet into 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 toggle switch wire and pull it back through the grommet with the hooked wire.

In some applications the wire from the kit harness may not fit through the headlight housing grommet. In that case, the underterminated wire must be spliced to the yellow wire outside the headlight housing.

NOTE

When wired as follows, the auxiliary lamps can only be operated while the main headlamp is on low beam. This conforms to many state and local laws.

14. **All models:** See Figures 9 and 10. Connect the unterminated wire to the low beam (yellow) wire from the headlamp socket with the sealed butt splice connector from the kit as follows:

- a. Cut the low beam (yellow) wire several inches from the headlamp connector.
- b. Strip 3/8 in. (10 mm) of insulation from each newly cut end of the yellow wire.
Strip 3/8 in. (10 mm) of insulation from the cut end of the unterminated wire from the kit harness.
- c. Insert the ends of both yellow wires and the wire from the kit harness into the sealed butt splice connector from the kit as shown in Figure 9.
- d. See the SEALED BUTT SPLICE CONNECTORS section of the Service Manual. Match the color of the connector with the color of the crimp cavity of the Crimp Tool, Part No. H-D 38125-8, and crimp the connector to the wires with the Crimp Tool.

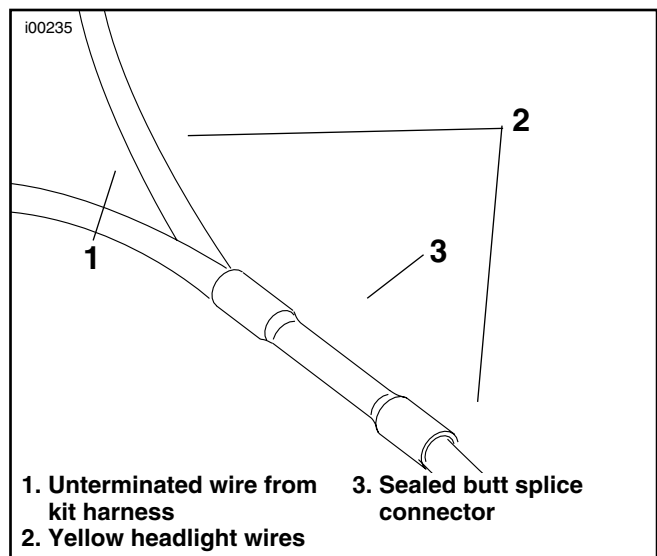


Figure 9. Splice Fog Lamp Switch Wiring

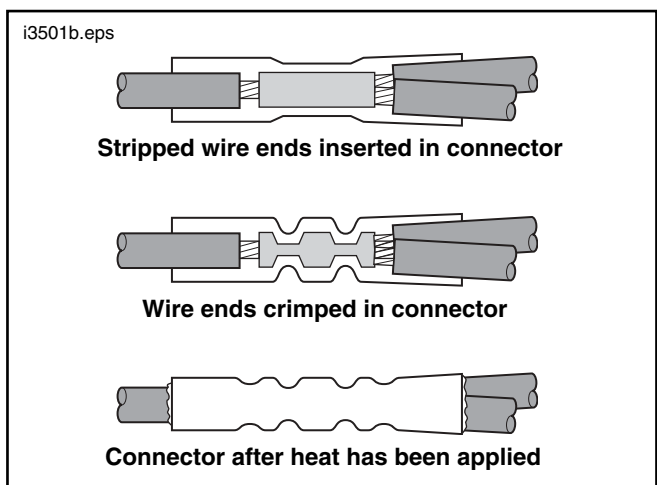


Figure 10. Installing Sealed Butt Splice Connectors

⚠ WARNING

- Use extreme caution when operating the UltraTorch UT-100 or any other radiant heating device. Read the manufacturer's instructions carefully before using the tool. Improper tool handling can result in death or serious injury.
 - 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.
- e. See Figure 10. Using the UltraTorch UT-100 (H-D 39969), Robinair Heat Gun (H-D 25070), or other suitable radiant heating device, heat the crimped splice to encapsulate the butt splice connection. Apply heat from the center of the crimp out to each end until the meltable sealant exudes out of both ends of the connector. Let the splices cool.
15. Reinstall the headlamp assembly. See HEADLAMP – INSTALLATION instructions for the correct model in the appropriate Service Manual.

CAUTION

When securing the wires in the area of the lower fork steering bracket, make sure the wires are clear of moving parts, to avoid pinching and possible short circuits.

16. Secure the wires to a suitable anchor point in the fork area (such as a harness or cable) using cable straps (Item 6) from the kit. Leave enough slack in the wires to allow the handlebar to operate freely from full left to full right.
17. **VRSC models:** Proceed to "Mounting and Connecting Fog Lamps".

⚠ WARNING

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.

All models except VRSC: Reinstall the fuel tank. See FUEL TANK – INSTALLATION in the Service Manual.

CAUTION

Be sure that wiring harness does not get pinched between fuel tank and frame during tank installation.

Mounting and Connecting Fog Lamps

1. See Figure 11. Install the fog lamps on the engine guards as shown, but do not tighten at this time.
2. Route the harness along the engine guards, and secure using cable straps from the kit.
3. Connect the harness wires to the fog lamps.
4. **VRSC models:** Refer to the Service Manual and re-install the Maxi-Fuse. Proceed to Step 6.

All models except VRSC:

⚠ WARNING

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury.

Connect the battery cables, positive cable first.

⚠ 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.

5. Refer to the Service Manual, and follow instructions to install the seat.
6. Turn motorcycle ignition/light key switch to "IGNITION". Check for proper fog lamp operation. Fog lamps should illuminate only while the main headlamp is on low beam.
7. Align the fog lamps. Follow the HEADLAMP ADJUSTMENT procedure in the Service Manual with the following exception:
 - Adjust the lamps to project a beam below the headlamp beam when directed at a vertical surface such as a wall or garage door.
8. Tighten the fog lamp clamps to 10 ft-lbs (13.6 Nm).
9. **VRSC models:** Install the right and left side covers.

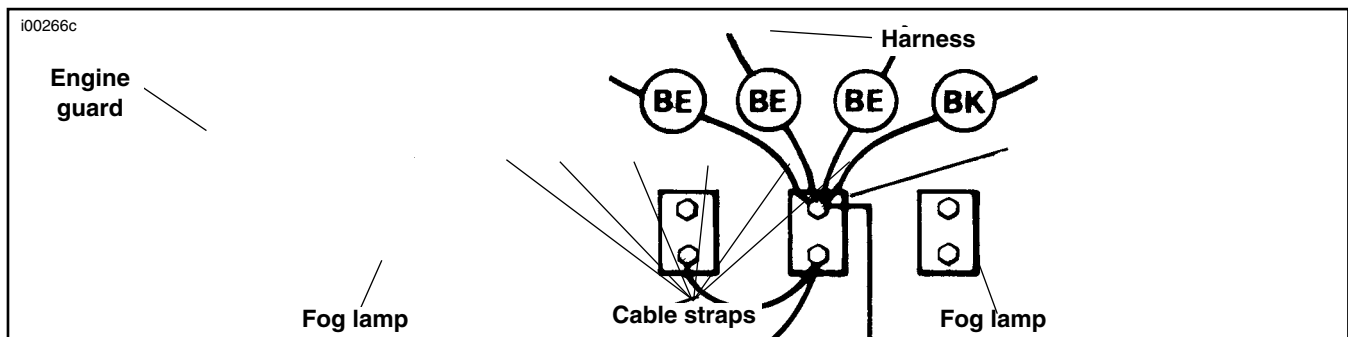


Figure 11. Fog Lamp Mounting (Rear View)



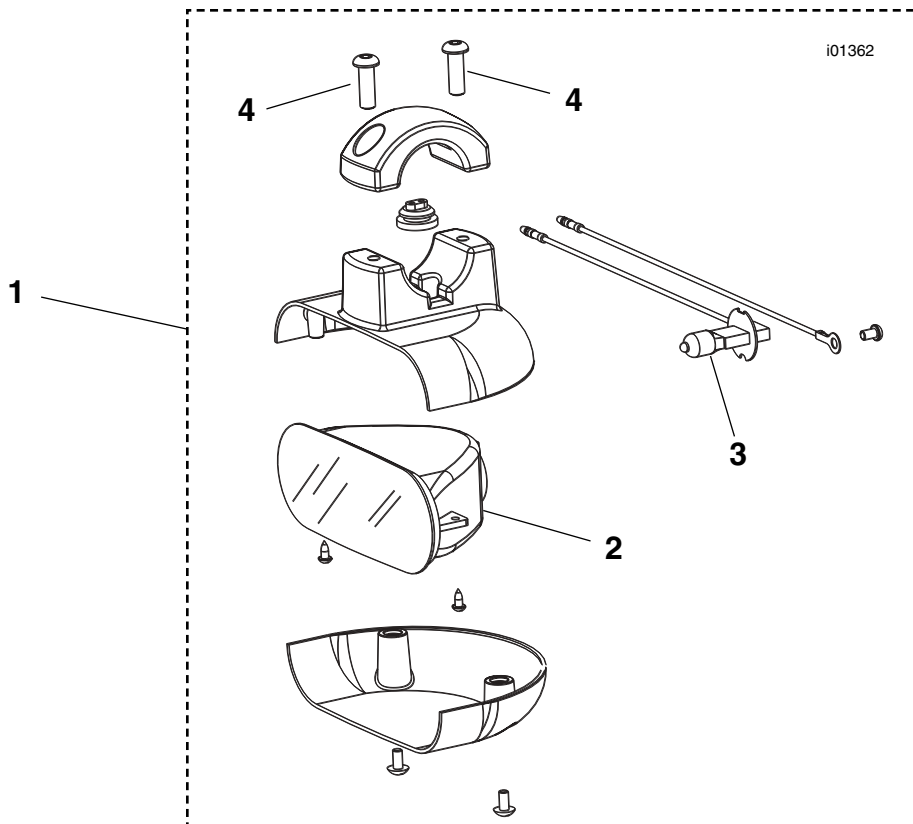
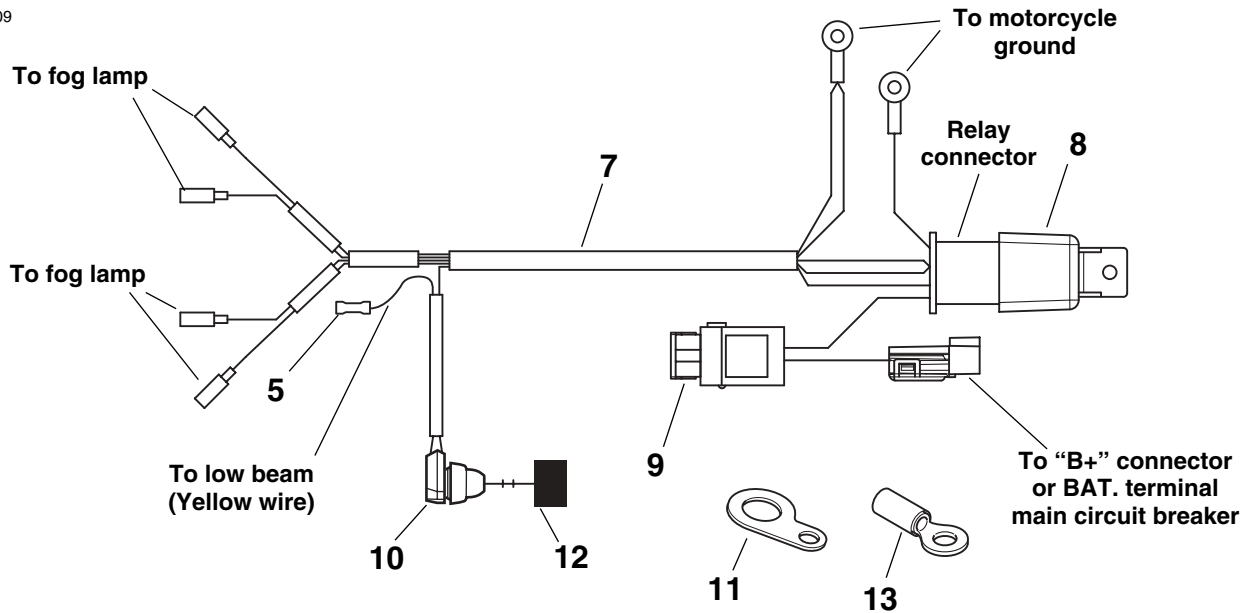
Service Parts

Part No. 68913-98B

Date 9/03

Fog Lamp Kit

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Item	Description/Qty	Part No.	Item	Description/Qty	Part No.
1	Fog lamp assembly (2) (includes items 2, 3 and 4)	68917-98	6	Cable strap, 5.5 in. (140 mm) (12) (not shown)	10065
2	Lens and reflector assembly	68199-00	7	Wiring harness assembly	69154-04
3	Bulb, H3	68918-98	8	Relay, power, 12 Volt, 30 Amp	71778-98
4	Screw, button head, Torx, chrome (4)	94593-98	9	Fuse, blade type, 15 Amp	71779-98
5	Connector, pre-insulated, sealed, butt splice	70586-93	10	Switch, pushbutton	70370-00
			11	Bracket, switch mount	Not sold
			12	Boot, switch	67880-94
			13	Ring terminal	9858