



-J04035

INSTRUCTIONS

REV. 2006-06-15

HIGH INTENSITY DISCHARGE (HID) HEADLAMP KIT (FLHT)

GENERAL

Kit Number

68094-06B

Models

This kit fits all 1996 and later FLHT model motorcycles.

NOTE

Hg - Lamp Contains Mercury. Manage in accordance with disposal laws. See: <http://www.lamprecycle.org/> or call 1-414-343-4056.

Additional Parts Required

WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. 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. (00333a)

NOTE

This instruction sheet references Service Manual information. A Service Manual for your year and model motorcycle is required for this installation and is available from a Harley-Davidson Dealer. Reference to the MOLEX ELECTRICAL CONNECTORS section of a 2007 or later Service Manual will also be needed to assemble some electrical connectors.

Kit Contents

See Figure 7 and Table 1.

INSTALLATION

For models WITH maxi-fuse:

WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, remove maxi-fuse before proceeding. (00251a)

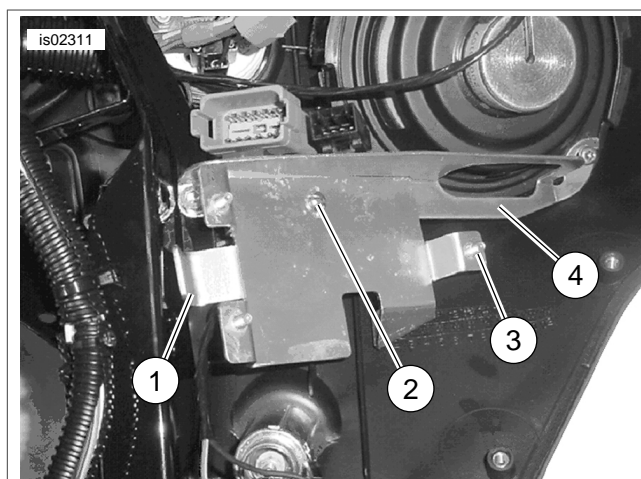
1. Refer to the Service Manual and follow the instructions given to remove the seat and maxi-fuse. Retain all seat mounting hardware.

For models WITHOUT maxi-fuse:

WARNING

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

1. Refer to the Service Manual and follow the instructions given to remove the seat and disconnect the negative (black) battery cable from the negative (-) battery terminal. Retain all seat mounting hardware.
2. Remove the original equipment (O.E.) outer trim ring, headlamp retaining ring, and headlamp.
3. Remove the O.E. headlamp mounting assembly. Retain the mounting screws.
4. Remove the outer fairing. See the Service Manual for fairing removal procedure.
5. Remove the fuel tank. See the Service Manual for fuel tank removal procedure.
6. See Figure 1. Obtain the ballast bracket assembly (1) from the kit. Test fit the bracket to the left side speaker bracket to understand how it is positioned.



1. Ballast bracket
2. Hex socket button head screw
3. Threaded stud (3)

Figure 1. Ballast Bracket Location

NOTES

Some models have a "Low Fuel Sensor" attached to the speaker bracket. Remove the sensor to make room for installing the ballast bracket.

Clean the ballast bracket and all areas the two-sided adhesive tape will contact with isopropyl alcohol prior to applying the acrylic foam tape.

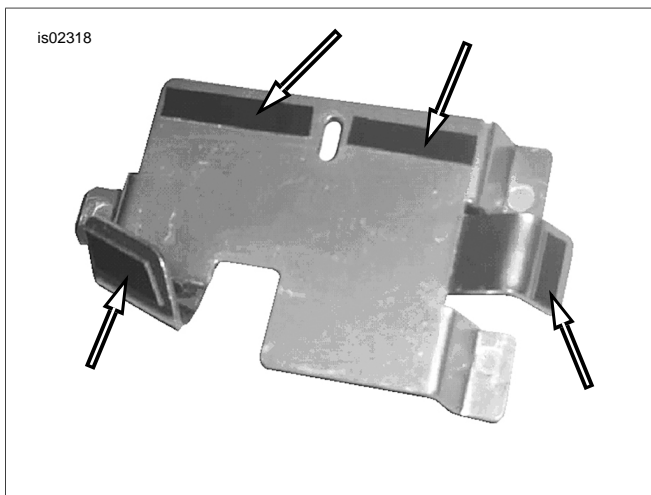


Figure 2. Acrylic Foam Tape Locations

7. See Figure 2. Locate the two-sided acrylic foam tape provided in the kit. Cut the tape strip. Peel the paper backing from **one** side of the tape strips, and place the tape in the four locations shown.
8. Peel the paper backing from the second side of the tape strips, and carefully position the ballast bracket onto the speaker bracket as shown in Figure 1. Obtain the hex socket button head screw (2) from the kit and install as shown. Tighten securely.
9. See Figure 7. Locate the ballast module (10). Fill the connector cavities with the dielectric grease (17) provided in the kit.

NOTE

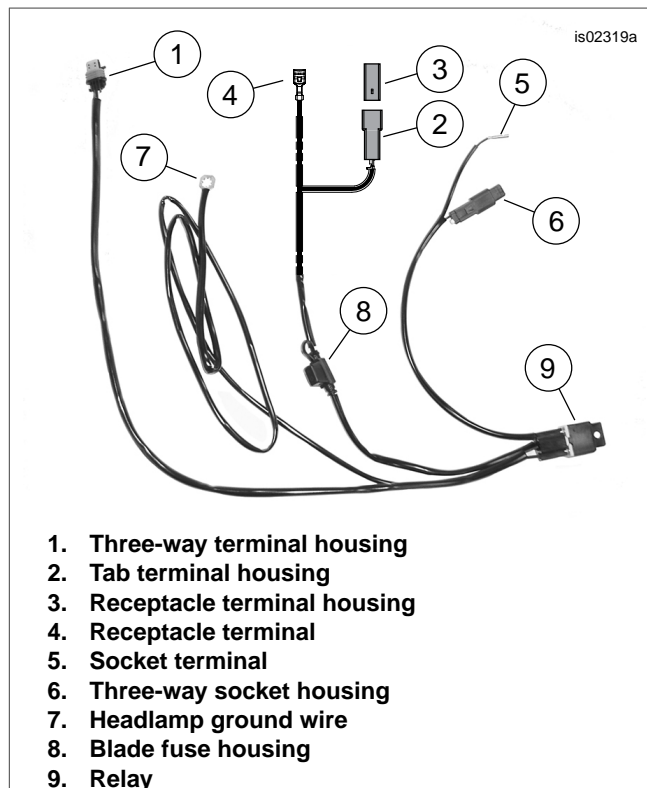
*The non-metallic washers from the kit **must** be used to prevent corrosion.*

10. Obtain the six non-metallic washers (13) and three #10-32 nuts (14) from the kit. Place **one** non-metallic washer onto each threaded stud of the ballast bracket.
11. Place the ballast over the studs and washers.
12. Place an additional non-metallic washer over each threaded stud on the ballast bracket.
13. Place one #10-32 nut on each stud, and tighten securely.

NOTE

If the Low Fuel Sensor was removed earlier, use a cable strap (15) from the kit to attach the Sensor to the ballast mounting bracket.

14. Gather the headlamp system wire harness (5) from the kit. See Figure 3. Connect the three-position terminal housing (1) on the headlamp system wire harness to the ballast module.



1. Three-way terminal housing
2. Tab terminal housing
3. Receptacle terminal housing
4. Receptacle terminal
5. Socket terminal
6. Three-way socket housing
7. Headlamp ground wire
8. Blade fuse housing
9. Relay

Figure 3. Headlamp System Harness

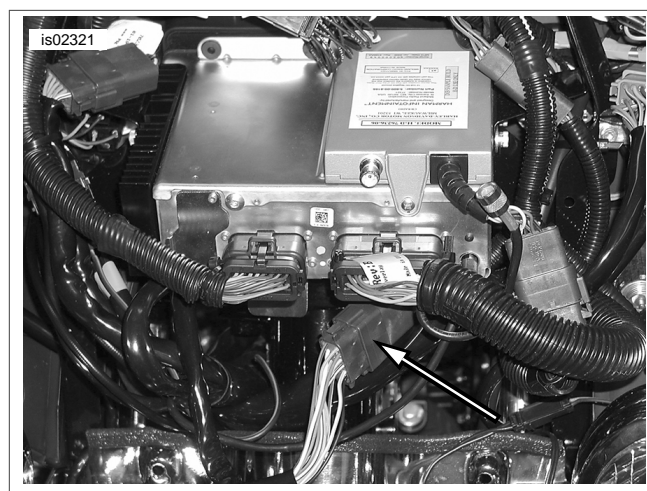


Figure 4. Right Hand Control Connector Location

NOTE

The right hand control connector may vary in appearance, depending on model and year. All models will have a Black/Red starter wire.

15. For 2007 and later models:

- a. Disconnect the two halves of the right-hand control connector (see Figure 4). Refer to MOLEX ELECTRICAL CONNECTORS in the Service Manual, and remove the Black/ Red wire and socket terminal from **only** the controls half of the connector, cavity 6. Do not remove the Black/ Red wire and pin terminal from the vehicle harness half of the connector.
- b. See Figure 3. Insert the socket terminal (5) on the headlamp system harness into the open cavity 6 of the right-hand control connector.
- c. See Figure 7. Disconnect the 3-way socket housing (7) from the headlamp system harness. Insert the Black/ Red wire and socket terminal removed from the right-hand control connector into the open cavity of the three-way socket housing (7).

Re-connect socket housing (7) to pin housing (E) on the headlamp system harness.

- d. Re-connect the two halves of the right-hand control connector.

For 2006 and earlier models:

- a. Disconnect the two halves of the right-hand control connector (see Figure 4). Refer to DEUTSCH ELECTRICAL CONNECTORS in the Service Manual, and remove the Black/ Red wire and socket terminal from **only** the controls half of the connector, cavity 6. Do not remove the Black/ Red wire and pin terminal from the vehicle harness half of the connector.
- b. See Figure 7. Obtain the two headlamp jumper wire harnesses (18 and 20) and the three-way socket housing (7) plugged into the headlamp system harness. Note that the connector housings (E and F) at one end of jumper harness (20) are the same style as socket housing (7) and the pin housing (E) on the headlamp system harness. Set jumper harness (20) aside.
- c. Refer to MOLEX ELECTRICAL CONNECTORS in a 2007 or later Service Manual, and insert the Black/ Red wire and socket terminal (G) on jumper harness (18) into the open cavity of socket housing (7).

Re-connect socket housing (7) to pin housing (E) on the headlamp system harness.

- d. Disconnect the 2-way socket housing (19) from jumper harness (18). Refer to DEUTSCH ELECTRICAL CONNECTORS in the Service Manual, and insert the Black/ Red wire and socket terminal removed from the right-hand control connector into the open cavity of the 2-way socket housing. Re-connect the socket housing to the jumper harness.
- e. Disconnect the 3-way socket housing (21) from jumper harness (20). Refer to MOLEX ELECTRICAL CONNECTORS in a 2007 or later Service Manual, and insert the Black/ Red wire and socket terminal (G) on the headlamp system harness into the open cavity of socket housing (21). Re-connect the jumper harness (20) and socket housing (21).
- f. Refer to DEUTSCH ELECTRICAL CONNECTORS in the Service Manual, and insert the socket terminal (H) on jumper harness (20) into the open cavity 6 of the right-hand control connector.

Re-connect the two halves of the right-hand control connector.

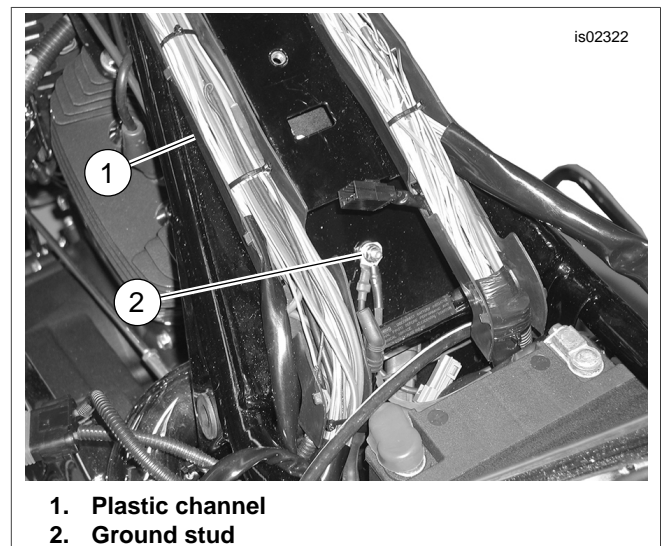


Figure 5. Ground Stud Location (2006 and Later Models)

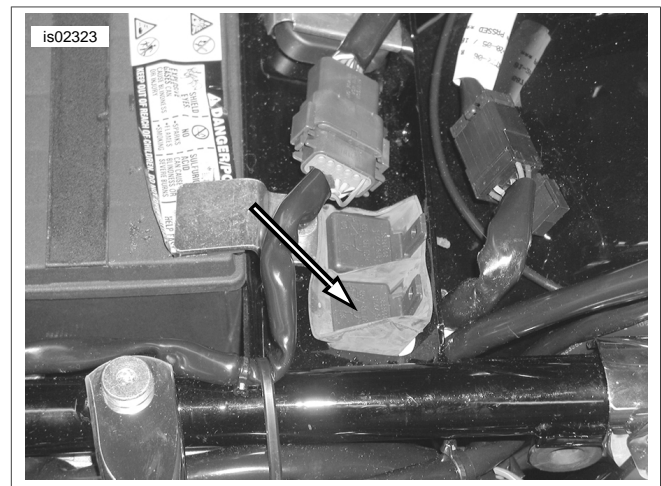


Figure 6. Key Switch Ignition Relay Location

16. **For ALL models:** See Figure 5. Route the headlamp system ground wire and Red/ Black power wire through the plastic channel (1, for 2006 and later models) or alongside existing harnesses (for 2005 or earlier models). Connect the Black wire to the ground stud (2).

NOTE

The key switch ignition relay will normally be found in the out-board position of the rubber relay holder. However, since the position of the relays can be reversed, and both relays are identical, check the wire tag or color for positive identification. The start relay connector can be identified by the presence of a heavy gauge Green wire in one of the cavities. The key switch ignition relay connector is the one WITHOUT the Green wire.

17. See Figure 6. Remove the **key switch ignition relay** from the rubber relay holder.
- Remove the left-side saddlebag and the left-hand side cover.
 - Locate the key switch ignition relay.
 - Place a finger on the rubber relay holder to hold it in position, and using a needle-nose pliers, carefully pull up on the relay tab to release the key switch ignition relay. Disconnect the relay from the connector, and pull the connector and wires out from behind the frame tube.
18. Inserting a 3/32-inch (2 mm) hex key into the front of the connector to depress the tab on the terminal, pull **only** the Red/ Black wire and terminal out the back of the connector.

NOTE

It may be necessary to bend the lock tab on the wire terminal back up for it to lock into the connector housing.

19. See Figure 7. Install the Red/ Black wire and terminal from the key switch ignition relay connector into the open connector housing (C) of the headlamp system harness (5). Verify that the terminal is locked into the connector.
20. Install the Red/ Black wire and terminal (D) of the headlamp system harness into the open cavity of the key switch ignition relay connector that held the original Red/ Black wire and terminal.
21. With the tab up and toward the rear of the vehicle, insert the key switch ignition relay into the open cavity of the rubber relay holder. Re-install the key switch ignition relay connector to the relay from the bottom. Place a finger on the relay holder to hold it in position, and push down on the relay until seated in the cavity of the frame cross-member.

⚠ WARNING

Be sure that steering is smooth and free without interference. Interference with steering could result in loss of vehicle control and death or serious injury. (00371a)

22. See Figure 3. Secure the headlamp relay (9) to another harness using cable straps from the kit. Be sure to turn the handlebars through their full range of motion to ensure proper slack exists before securing the relay.

23. Secure the fuse housing (8) underneath the fairing (to the inside of the fork tube) so it is easily accessible for service, using cable straps from the kit.
24. Install the outer fairing. See the Service Manual for fairing installation procedures.
25. See Figure 7. Install the **new** headlamp mounting ring (8) using the original screws removed in Step 3.
26. Connect the low-beam harness (3) from the HID bulb to the ballast (10).
27. Connect the O.E. headlamp connector to the wire harness (9) attached to the halogen high-beam (H8) bulb.
28. Install the HID headlamp, and reassemble the headlamp retaining ring to the vehicle.
29. Install the fuel tank. See the Service Manual for fuel tank installation procedures.
30. Verify that the Ignition/ Light Key Switch is in the OFF position.

Models WITH maxi-fuse: Refer to the Service Manual and follow the instructions given to re-install the maxi-fuse.

Models WITHOUT maxi-fuse: Re-connect the negative (-) battery cable per the instructions in the Service Manual. Apply a light coat of petroleum jelly or corrosion retardant material to the battery terminal.

ALL models: Refer to the Service Manual, and follow the instructions given to re-install the seat.

⚠ WARNING

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

NOTES

This kit uses a 5/32-in. hex key (not provided) to turn the adjuster screws.

If preferred, temporarily remove the low beam fuse to isolate the high beam for aiming. Re-install the fuse after aiming.

31. Turn the Ignition/ Light Key Switch to ON, but do not start the motorcycle.
32. Adjust the high- and low-beam headlamp alignment. See the Service Manual for headlamp alignment procedures.

NOTE

If the trim ring gets caught on the bottom of the headlamp, it could affect headlamp alignment.

33. Install the outer trim ring. Confirm that the trim ring does not catch on the bottom of the headlamp. The trim ring may have to be pulled a little to avoid the headlamp.

⚠ WARNING

Be sure headlamp, tail and stop lamp and turn signals are operating properly before riding. Poor visibility of rider to other motorists can result in death or serious injury. (00478b)

34. Test for proper tail lamp and stop lamp operation.

SERVICE PARTS

Table 1. Service Parts Table

Item	Description (Quantity)	Part Number
1	Headlamp assembly, High Intensity Discharge (HID) (includes Items 2 through 4)	68696-04
2	• Lens and reflector assembly, HID headlamp	68095-04
3	• Wire harness, low beam headlamp	72363-04
4	• Boot, rubber	Not sold separately
5	Wire harness, HID headlamp system (includes Items 6 and 7)	70323-04B
6	• Fuse, 15 Amp (blue)	72330-95
7	• Socket housing, three-way (sealed)	72512-07BK
8	Mounting ring assembly, headlamp	68124-04A
9	Wire harness, high beam headlamp	70337-04
10	Ballast module	68018-04
11	Bracket, ballast	58930-04
12	Cap screw, hex socket, button head	2447
13	Washer, Nylon (6)	6759
14	Nut, hex lock, #10-32 (3)	7626W
15	Cable strap (10)	10006
16	Tape, foam (not shown)	Not sold separately
17	Dielectric grease, 5 g pack (not shown)	Not sold separately
18	Wire harness, jumper (Molex socket to Deutsch pin) (includes Item 19) (2006 and earlier)	70568-06
19	• Socket housing, Deutsch 2-way	72112-92BK
20	Wire harness, jumper (Molex pin to Deutsch socket) (includes Item 21) (2006 and earlier)	70570-06
21	• Socket housing, Molex 3-way	72512-07BK
Additional replacement parts available:		
A	Bulb, low beam (HID)	68639-06
B	Bulb, high beam (H8 halogen)	68096-04
Reference items mentioned in text:		
C	Single spade terminal connector housing on key switch relay harness	
D	Red/ Black wire and terminal on key switch relay harness	
E	Molex 3-way pin housing	
F	Molex 3-way socket housing	
G	Molex socket terminal	
H	Deutsch socket terminal	
Reference items on Figure 7 Inset:		
I	For 2006 and earlier models	
J	For 2007 and later models	
K	Vehicle main harness	
L	Right-hand control harness	

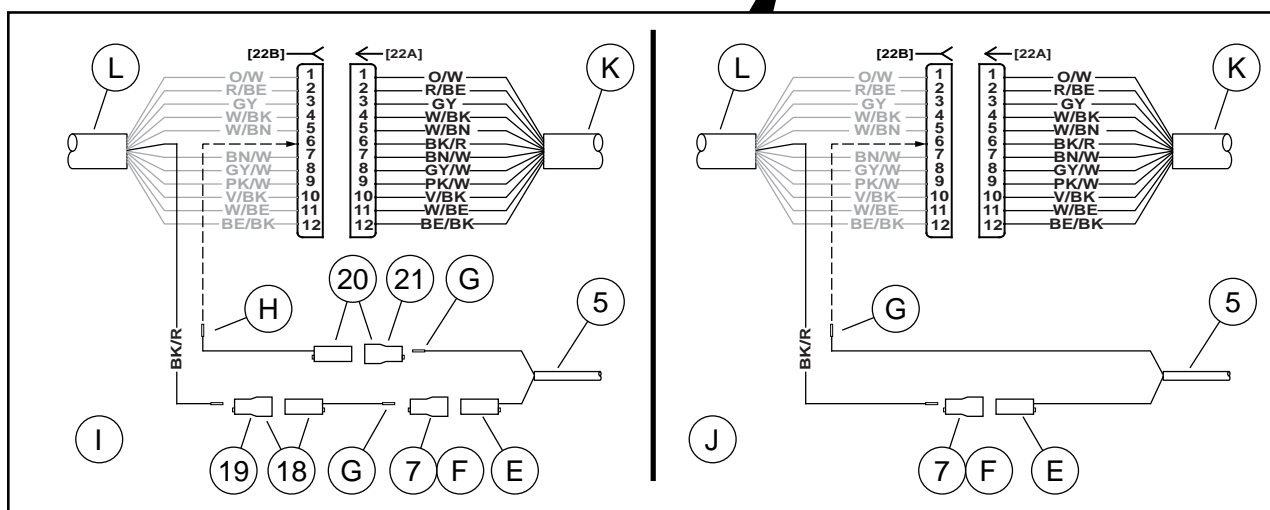
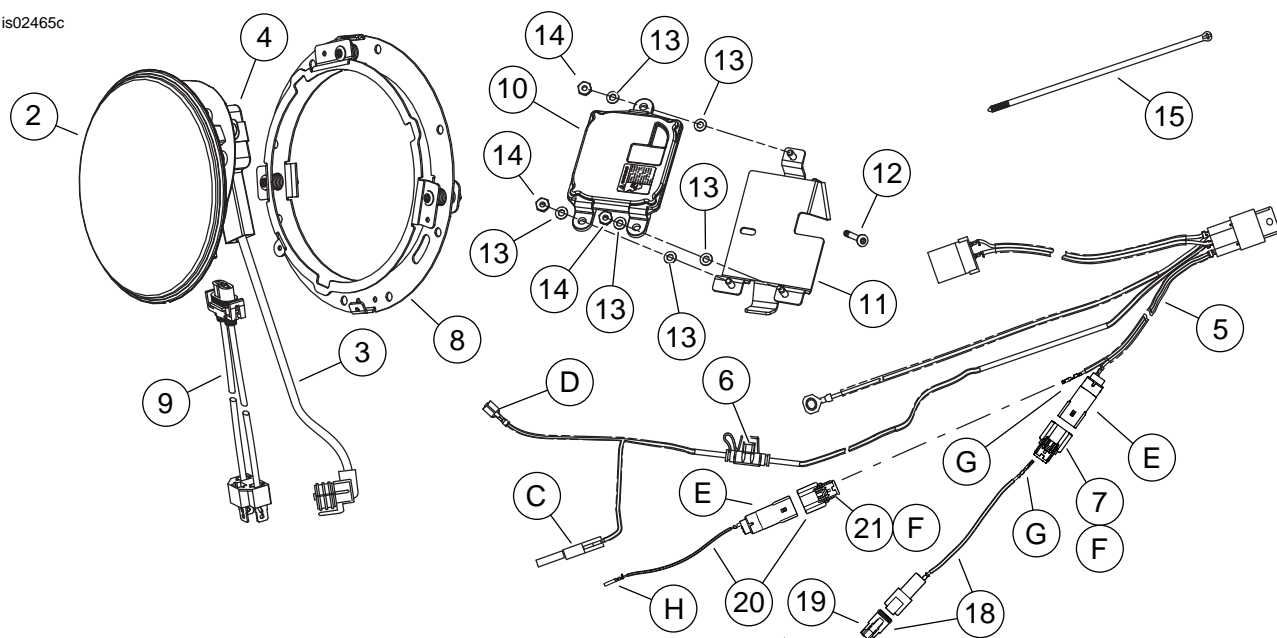


Figure 7. Service Parts, FLHT HID Headlamp Kit