



INSTRUCTIONS

J04944

2010-07-08



SCREAMIN' EAGLE PRO PROGRAMMABLE SHIFT LIGHT

GENERAL

Kit Number

69779-09

Models

For model fitment information, see the P&A retail catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

Tools and Supplies Required

An UltraTorch UT-100 (Part No. HD-39969), Robinair Heat Gun (Part No. HD-25070) with Heatshrink Attachment (Part No. HD-41183), or other suitable radiant heating device is required for the proper installation of this kit.

⚠ WARNING

Rider and passenger safety depend 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. (00333b)

NOTE

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

Electrical Overload

NOTICE

It is possible to overload the vehicle's charging system by adding too many electrical accessories. If the combined electrical accessories operating at any one time consume more electrical current than the vehicle's charging system can produce, the electrical consumption can discharge the battery and cause damage to the vehicle's electrical system. (00211d)

⚠ WARNING

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. (00310a)

The Screamin' Eagle Pro Programmable Shift Light requires up to **200 mA** additional current from the electrical system.

Kit Contents

See Figure 3 and Table 1.

INSTALLATION

NOTE

Read and follow the instructions that follow regarding the installation and operation of the Screamin' Eagle Pro Programmable Shift Light to receive maximum benefit and accuracy from this product.

This product features *INTENSELY BRIGHT LEDS!* This feature is intended to provide maximum rider visibility during daytime operation and high glare situations.

Harley-Davidson strongly recommends that the rider becomes familiar with the dimming function of this product, and that the product is not operated at full brightness during dim or dark lighting conditions.

Handlebar Clamp and Shift Light Mounting

NOTE

The clamps provided allow mounting of the shift light in a variety of locations and orientations.

One suggested mounting position is just inboard and above the left-side handlebar switch housing, with the shift light directly facing the rider.

Proximity to rear view mirrors (if equipped) or other equipment on the handlebar, and available routing for wires may limit location and orientation.

1. See Figure 3. Get the upper (7) and lower (8) handlebar clamps, and two hex socket head screws (9) from the kit. **If installing to a 25.4 mm (1 in) diameter handlebar**, also get the handlebar clamp bushing (3) from the kit.
2. Position the bushing onto the handlebar if needed. Fasten the upper and lower clamps (over the bushing if used) around the handlebar with the screws. Snug the screws enough to hold the clamps in place, but do not fully tighten at this time.
3. Get the shift light mount (5), lockwasher (6) and one screw (9) from the kit. Position the lockwasher between the shift light mount and the upper clamp as shown in Figure 3.
4. Fasten the shift light mount to the upper clamp with the screw. Snug the screw enough to hold the mount in place, but do not fully tighten.
5. Get the shift light (1), shift light clamp bushing (4) and the remaining screw (9) from the kit.
6. Position the bushing into the shift light mount, and slide the shift light into the mount, aligning the shift light center ring (A) with the bushing and the clamp ring of the shift light mount.

7. Fasten the shift light to the mount with the screw. Snug the screw enough to hold the light in place, but do not fully tighten.
8. Adjust the light to the desired position on the handlebar, and tighten the screws securely.

Preparation for Electrical Routing and Connection

For EFI models:

⚠ WARNING

To prevent spray of fuel, purge system of high-pressure fuel before supply line is disconnected. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00275a)

Follow the instructions in the service manual to purge the fuel supply of high pressure gasoline and remove the fuel supply line.

For EFI or Carbureted models:

Models with main fuse:

⚠ WARNING

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

1. Refer to the service manual and follow the instructions to remove the main fuse.

Models with main circuit breaker:

⚠ 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.

For Carbureted models:

⚠ WARNING

Gasoline can drain from the carburetor fuel line when disconnected from fuel valve fitting. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00256a)

⚠ WARNING

When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)

1. Turn the fuel supply valve to OFF. Remove the fuel line from the valve.

2. **For ALL models:** Follow the instructions in the service manual to remove the instrument console from the fuel tank.
3. See the proper section (Carbureted or EFI Engine) of the service manual for fuel tank removal instructions.
4. **For FLHR models, or FL Softail models WITH Chrome Headlight Nacelle Kit (H-D Part No. 67907-96):** Follow the instructions in the service manual to remove the handlebar shroud.

Wire Harness Routing

NOTE

The shift light (1) harness will be routed through the front forks, then back along the frame backbone. The power/signal harness (14) will be spliced to the shift light harness and connected to the vehicle power source, signal source and ground

Carefully review harness routing options, and choose an inconspicuous and protected location for splicing between the shift light harness and the power/signal harness.

Warranty will be void if this product is connected to coil when using an aftermarket ignition box. Prior to installation of this product, check with the ignition box manufacturer for recommended tachometer signal location.

1. Route the harness (B) of the shift light along the handlebar, through the front forks and upper fork bracket (triple clamp), then back along the frame backbone. Be sure to leave sufficient slack in the harness so that handlebar movement is not restricted. Route the **terminated** end (C) of the power/signal harness (14) back along the frame backbone toward the seat. Follow existing wiring where practical.

NOTE

*Locate the main harness chassis ground connection on the vehicle frame. See the service manual for this year/model motorcycle for specific location. The **black** wire of the power/signal harness will be connected to the chassis ground.*

*Use the service manual wiring diagrams to locate the tachometer **signal** source for this year/model vehicle. The **pink** wire of the power/signal harness will be connected to the tachometer signal source.*

*Use the service manual wiring diagrams to locate the tachometer **power** source for this year/model vehicle. The **orange/white** wire of the power/signal harness will be connected to the tachometer power source.*

2. Cut the protective tubing (D) covering the power/signal harness as needed to allow the wires to easily reach the proper connection points.

Connect the Black Lead to the Vehicle Ground

1. Remove the ground screw or nut from the chassis ground.
2. Select the proper ring terminal (11 or 12) to fit the ground screw or stud.
3. Cut the black wire on the power/signal harness to easily reach the ground location, and crimp the ring terminal to the end of the wire according to the PACKARD crimping tool instructions in the service manual.
4. Install the ring terminal to the ground connection, and secure per the torque specification in the service manual.

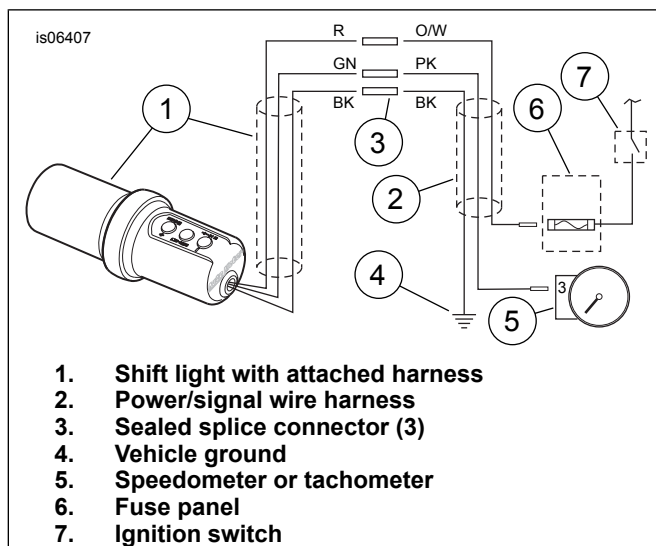


Figure 1. Wiring Diagram, Programmable Shift Light

Connect the Pink Lead to the Tachometer Signal Source

Follow the PACKARD ELECTRICAL CONNECTOR: MICRO 64 instructions in the service manual.

For XR models only:

NOTE

Splicing of wire leads is necessary in the installation of the shift light to the motorcycle. Refer to the service manual appendix for proper wire splicing procedures.

1. Cut the socket terminal from the pink wire of the power/signal harness.
2. Locate the following two wires on the vehicle:
 - The yellow/blue rear coil wire connecting ECM connector [78B], cavity 11 to ignition coil connector [83B], cavity C.
 - The blue/orange front coil wire connecting ECM connector [78B], cavity 29 to ignition coil connector [83B], cavity D.
3. Cut **only one** of those wires at a convenient, protected location within easy reach of the pink wire from the power/signal harness.
4. Use a sealed splice connector from the kit, and follow the instructions in the service manual appendix to splice the power/signal harness pink wire from Step 1 to the cut ends of the **ECM-to-ignition coil wire** from Step 3.

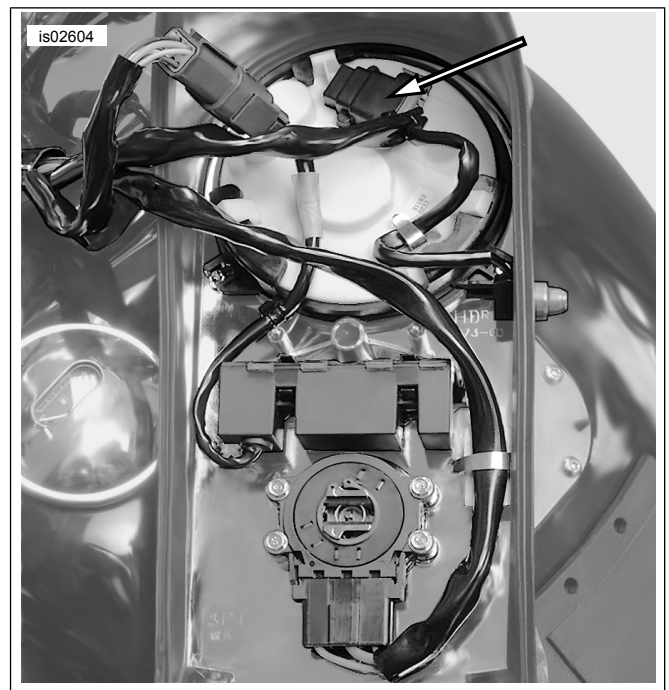


Figure 2. Speedometer Connector [39] (2004 FXST shown)

**Connect the Orange/White Lead to the
Power Source**

1. Use the service manual wiring diagrams to locate the shift light power source for this year/model vehicle. **For Softail models:** The shift light power source is an open fuse position on the fuse panel. See the service manual. **For Dyna models:** The shift light power source is an open fuse position on the electrical caddy. See the service manual. **For 2004 through 2006 Touring models:** The shift light power source is an open fuse position on the fuse panel. See the service manual. **For 2007 and later Touring models:** The shift light power source is an open fuse position on the fuse panel. See the service manual. **For 2004-2006 XL models:** The shift light power source is the orange wire coming from the fuse block. See the service manual. **For 2007 and later XL and XR models:** The shift light power source is an open fuse position on the fuse panel. See the service manual.
 - a. Remove the fuse block cover. Remove the two hex head screws fastening the fuse block bracket, and pull the bracket and fuse block assembly away from the motorcycle frame.
 - b. Press the tab retaining the left-hand fuse block, and slide the block out of the mounting slots.
 - c. Locate the fuse cavity labeled "P&A IGN" on the fuse block cover. There is a terminal in only one side of this cavity. From the back side, insert the terminal on the orange/white wire of the shift light power/signal harness into the open side of the cavity until it stops. Refer to a nearby factory-installed terminal for comparison to verify proper orientation and depth.
 - d. See Figure 3. Install the 2 Amp fuse (10) from the kit into the P&A IGN fuse cavity to complete the circuit.
 - e. Slide the fuse block into the mounting slots in the fuse block bracket until it clicks firmly into place. Place the bracket and fuse block assembly into position, and fasten with the two hex head screws removed earlier. Tighten securely. Install the fuse block cover.
- a. Remove the electrical caddy from the vehicle per service manual instructions.
- b. Locate the fuse cavity labeled "OPEN" on the electrical caddy. There is a terminal in only one side of this cavity. From the back side, insert the terminal on the orange/white wire of the shift light power/signal harness into the open side of the cavity until it stops. Refer to a nearby factory-installed terminal for comparison to verify proper orientation and depth.
- c. See Figure 3. Install the 2 Amp fuse (10) from the kit into the OPEN fuse cavity to complete the circuit.
- d. Install the electrical caddy and cover onto the vehicle per service manual instructions.
- a. Remove the left-hand side cover, fuse block and dust cover per service manual instructions.
- b. Locate the fuse cavity labeled "P&A IGN" "2A MAX". There is a terminal in only one side of this cavity. Remove the three existing fuses in this row, noting their location.
- c. Gently remove the orange plastic secondary lock from the fuse block.
- d. See Figure 3. Obtain the orange/white power adapter wire (15) from the kit. Insert the terminal on the adapter wire into the "P&A IGN" "2A MAX" cavity until it stops. Refer to a nearby factory-installed terminal for comparison to verify proper orientation and depth. Install the secondary lock.
- e. Cut the excess length from the orange/white wire **of the shift light power/signal harness** to within easy reach of the orange/white adapter wire installed in Step 1d.
- f. Use a sealed-splice connector (16) from the kit to splice the two orange/white wires.
- g. Install the 2 Amp fuse (10) from the kit into the P&A IGN fuse cavity to complete the circuit. Install the three fuses removed in Step 1b (above) into the proper cavities.
- h. Install the dust cover onto the fuse block, and install the fuse block per service manual instructions.
- a. Open the left-hand side cover. Locate the orange wire coming from the fuse block. Cut the orange wire in a convenient location near the fuse block.
- b. Refer to the service manual appendix for proper wire splicing procedures. Use the remaining sealed splice connector (16) from the kit to splice the orange/white wire of the shift light power/signal wire harness to both orange wires.
- a. Open the left-hand side cover. Locate the orange wire coming from the fuse block. Cut the orange wire in a convenient location near the fuse block.
- b. Refer to the service manual appendix for proper wire splicing procedures. Use the remaining sealed splice connector (16) from the kit to splice the orange/white wire of the shift light power/signal wire harness to both orange wires.
- a. Remove the left-hand side cover from the vehicle. Loosen the "H"-bracket per service manual instructions, and pull it away from the frame to gain access to the back side of the fuse block.
- b. Locate the fuse cavity labeled "P&A IGN" "2A MAX" on the fuse block cover. There is a terminal in only one side of this cavity. From the back side, insert the terminal on the orange/white wire of the shift light power/signal harness into the open side of the cavity until it stops. Refer to a nearby factory-installed terminal for comparison to verify proper orientation and depth.
- c. See Figure 3. Install the 2 Amp fuse (10) from the kit into the P&A IGN fuse cavity to complete the circuit.
- d. Fasten the "H"-bracket to the vehicle frame per service manual instructions. Install the left-hand side cover.

Wire Harness Splicing

NOTE

Splicing of wire leads is necessary in the installation of the shift light to the motorcycle. Refer to the service manual appendix for proper wire splicing procedures.

When splicing adjacent wires, stagger the splices so that the sealed splice connectors will not touch each other but are located at different positions along the length of the wires.

1. Cut the protective tubing and wires of the power/signal harness and shift light harness as needed to allow the wires to be spliced in an inconspicuous and protected location along the frame backbone.

▲ 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)

- Avoid directing 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.
 - Always keep hands away from tool tip area and heat shrink attachment.
2. Use three sealed splice connectors (16) from the kit, and a heat gun or suitable radiant-heating device to shrink the connectors to the wires as follows:
 - connect the **black** lead of the power/signal harness to the **black** lead of the shift light harness.
 - connect the **pink** lead of the power/signal harness to the **green** lead of the shift light harness.
 - connect the **orange/white** lead of the power/signal harness to the **red** lead of the shift light harness.
 3. Use cable straps (13) from the kit to secure the shift light and power/signal wire harnesses to the vehicle harnesses.

SHIFT LIGHT PROGRAMMING

Prior to use, the shift light setting must be programmed into the gauge.

NOTE

*Verify that the ignition key switch is in the OFF position **before** installing the main fuse or attaching the negative battery cable.*

1. **Models with main fuse:** Refer to the service manual and follow the instructions to install the main fuse. **Models with main circuit breaker:** Refer to the service manual and follow the instructions given to attach the negative battery cable. Apply a light coat of Harley-Davidson electrical contact lubricant (H-D Part No. 99861-02), petroleum jelly or corrosion retardant material to the negative battery terminal.
2. Turn the ignition key switch to IGNITION, but do not start the motorcycle.

NOTE

*This product features **INTENSELY BRIGHT LEDS!** This feature is intended to provide maximum rider visibility during daytime operation and high glare situations.*

*The factory programmed preset is at the lowest setting (0). Maximum brightness is (3). See **SHIFT LIGHT BRIGHTNESS SET**, below if setting needs immediate adjustment.*

Harley-Davidson strongly recommends that the rider becomes familiar with the dimming function of this product, and that the product is not operated at full brightness during dim or dark lighting conditions.

3. **To select MENU mode:** press MODE (+).

- **SHIFT POINT SET:** Press MODE (+) until "SptS" is displayed. With "SptS" displayed, press ENTER to confirm that "setting the shift point" is the desired action. "SP1" will now be displayed. To set the shift point, press ENTER. The display will now show the current shift point setting. Use the MODE (+) and EXIT (-) buttons to raise and lower this number. A single press results in a 10 RPM increment change. Press and hold each button to scroll more quickly through the RPM scale. *It is recommended that the shift point be first set to 3000 RPM (or a similar mid to low point in the engine's rev range) to confirm proper installation. Once this "test" set point has been dialed in press ENTER to confirm the choice. With the shift light in TACH mode, bring the engine revs to 3000 RPM and verify that the light activates as specified. Once this test is completed dial up the shift point to the desired RPM setting, or to the RPM setting specified by the engine builder. Once the desired set point has been dialed in press ENTER to confirm the choice.*
- **PULSE PER REVOLUTION SET (Cylinder Calibration):** Use this feature to calibrate the shift light to your engine and ignition type. To enter Pulse Per Revolution Set, press the MODE (+) button until "PPR" is displayed, then press ENTER to confirm that "setting the pulses per revolution" is the desired action. Use the "+" and "-" buttons to cycle up and down through the pulse settings available on the shift light. *For all 2004 and later Harley-Davidson TWIN CAM and XL/XR models, the correct PPR setting is "1".* Press ENTER to confirm the new setting. Press EXIT to store the setting and return to TACH mode. If further assistance is needed in calibrating the shift light for a specific application, visit the Tech Tips and FAQ section of http://www.autometer.com/tech_faq.aspx, or contact Auto Meter tech support personnel via the information included with the warranty information shown later in these instructions.
- **SHIFT LIGHT BRIGHTNESS SET:** To adjust the brightness setting of the shift light, press the MODE (+) until "S LV" (Shift Light Level) is displayed, then press ENTER to select. The factory programmed preset "0" (the lowest setting) should display. To adjust, use the "+" and "-" buttons. Maximum brightness setting is "3". Press ENTER to confirm the new setting. Press EXIT to store the setting and return to TACH mode.
- **PEAK RECALL:** The shift light features a "peak" recall or memory to display the highest RPM reached. Scroll through the Menu Mode [MODE (+)] until the display reads "PEAC", then press ENTER to display the highest RPM achieved. To clear the peak press MODE (+).
- **To exit setup mode and return to Real Time display:** press EXIT (-).

FINAL ASSEMBLY

NOTE

During assembly, check the wire harnesses along the entire path for clearance from moving parts, heat sources, sharp edges and pinch points.

Flex the front suspension, and turn the front forks to the full left and right stops to check for smooth and free operation and pulling or binding of the harness.

1. **For FLHR models:** Follow the instructions in the service manual to install the handlebar shroud.

▲ WARNING

When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)

2. Install the fuel tank. Refer to the proper section (Carbureted or EFI Engine) in the service manual.

▲ 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)

3. Refer to the service manual, and follow the instructions to install the seat.

NOTE

Refer to the owner's manual for the maximum recommended engine speed for this model, or refer to the RPM setting specified by the engine builder.

Allow the engine to reach normal operating temperature before checking that the desired trigger point has been successfully programmed into the shift light.

NOTICE

Do not run the engine at extremely high RPM with clutch disengaged or transmission in neutral. Running an engine at high RPM can result in engine damage. (00177a)

4. Turn the ignition key switch to ON, and start the motorcycle.
 - a. With engine idling, the digital display on the shift light should indicate idle RPM (950 to 1150 RPM).
 - b. The display should respond to changes in the throttle settings.
5. Ride the motorcycle until the engine has warmed up. When the engine has reached normal operating temperature, increase engine RPM to the selected set point. The shift light should illuminate.
6. If the shift light does not illuminate at the desired point, refer to the SHIFT LIGHT PROGRAMMING section of these instructions to again enter the desired shift point.

IN USE

Remove RPM Display: Sometimes fewer distractions are better for a rider. To be able to focus on just the shift light when

making a performance run and not be distracted by the digital RPM display, the display function can be disabled.

To turn the display function OFF, press and hold the ENTER button for two seconds. The display will indicate "off" as the mode being selected. The RPM display is always shown during real-time or TACH mode.

Shift light cover. A cover (17) is included in the kit to provide additional protection from the elements.

SERVICE AND WARRANTY

If after completely reading these instructions there are questions regarding the operation or installation of the Screamin' Eagle Pro Programmable Shift Light, additional information can be found at http://www.autometer.com/tech_faqs.aspx, or by contacting Auto Meter Technical Service.

- Phone (in USA): (866) 248-6357

- Email: service@autometer.com

For service, return the product, in a well-packed shipping carton, to:

- AUTO METER PRODUCTS, INC. 413 W. Elm St., Sycamore, IL 60178 USA Phone (in USA): (815) 899-0801

Include a note explaining the problem, along with your phone number. Specify when the product is needed back. If the product is being sent back for warranty adjustment, a copy of (or the original) sales receipt from the place of purchase must be included.

12 MONTH LIMITED WARRANTY: Auto Meter Products, Inc. warrants to the consumer that this product will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fall within this 12 month warranty period will be repaired or replaced at Auto Meter's option to the consumer, when it is determined by Auto Meter Products, Inc. that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of parts in the Auto Meter instruments. In no event shall this warranty exceed the original purchase price of the Auto Meter instruments nor shall Auto Meter Products, Inc. be responsible for special, incidental or consequential damages or costs incurred due to the failure of this product. Warranty claims to Auto Meter must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12 month warranty period. Breaking the instrument seal, improper use or installation, accident, water damage, abuse, unauthorized repairs or alterations voids this warranty. Auto Meter Products, Inc. disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by Auto Meter.

SERVICE PARTS

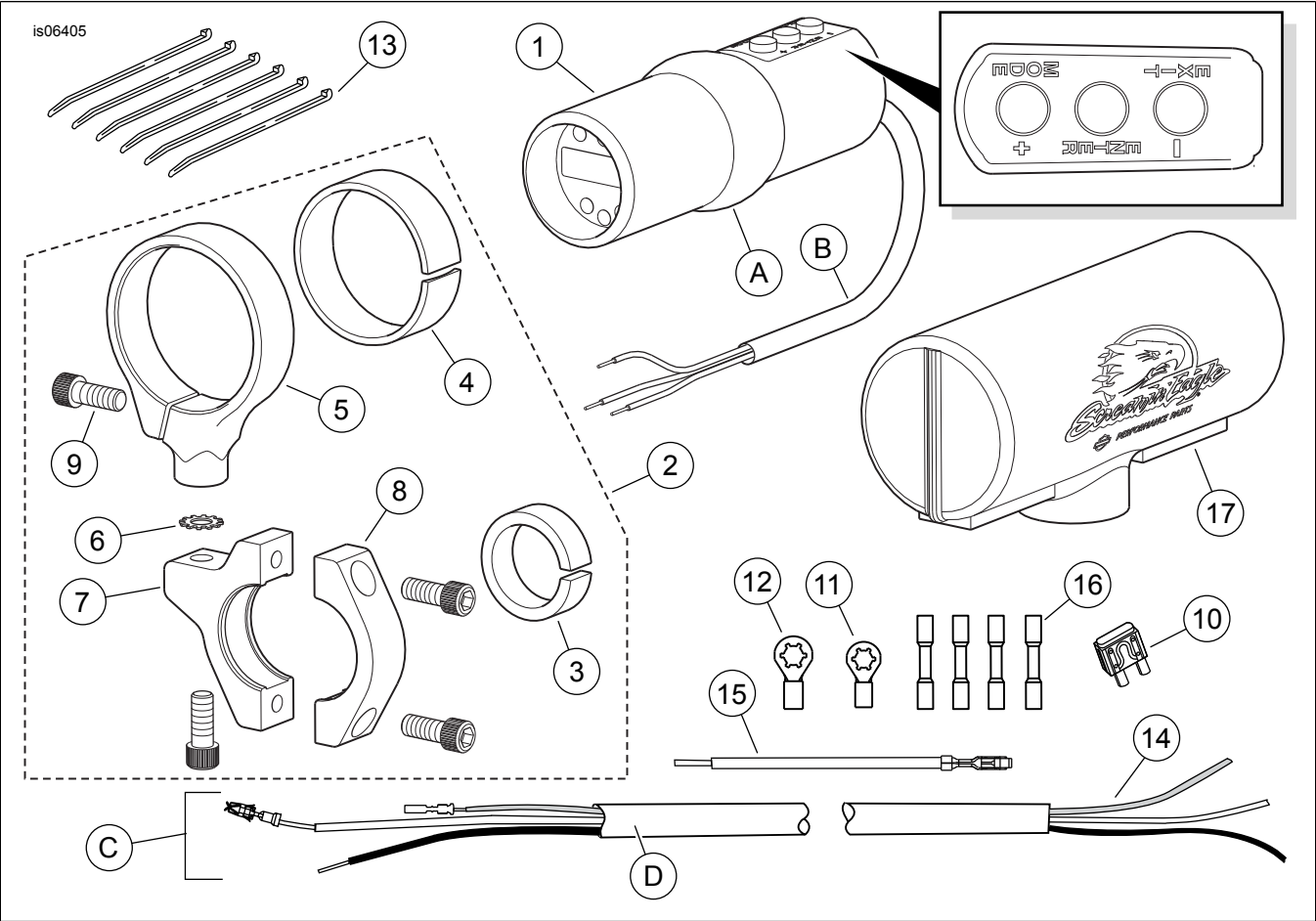


Figure 3. Service Parts, Screamin' Eagle Programmable Shift Light

SERVICE PARTS

Table 1. Service Parts

Item	Description (Quantity)	Part Number
1	Shift light, programmable	Not sold separately
2	Service kit (includes items 3 through 9)	69200015
3	• Bushing, handlebar clamp	9740
4	• Bushing, shift light clamp	9741
5	• Mount, shift light	Not sold separately
6	• Lockwasher, external tooth	7230
7	• Clamp, handlebar upper	Not sold separately
8	• Clamp, handlebar lower	Not sold separately
9	• Screw, hex socket, 1/4-20 x 16 mm (5/8 in) long, chrome (4)	94311-91T
10	Fuse, blade type, 2A	54305-98
11	Ring terminal, #18-22 AWG (1/4 inch stud)	9858
12	Ring terminal, #18-22 AWG (5/16 inch stud)	9859
13	Cable strap (6)	10006
14	Wire harness, power/signal	67245-04A
15	Wire lead, power adapter, 102 mm (4 in) long (orange/white)	67969-04
16	Sealed splice socket, #18-20 AWG, red (4)	70585-93
17	Cover, shift light	69815-09
Items mentioned in text, but not included in kit:		
A	Shift light center ring	
B	Shift light harness	

Table 1. Service Parts

Item	Description (Quantity)	Part Number
C	Terminated end of power/signal harness	
D	Protective tubing of power/signal harness	