



INSTRUCTIONS

-J05530

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HEADLAMP MODULATION KIT, MOST MODELS EXCEPT FLD/FLH/FLT

GENERAL

Kit Number

67700078

Models

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

This kit does not fit Dyna® FLD (Switchback), FXDF (Fat Bob®), or 2004 and earlier VRSC models with headlamp connectors [38H] and [38L] on the main harness.

For use with a 1 watt - 60 watt bulb load at 12VDC.

This kit is not compatible with LED headlamps.

Installation Requirements

For models equipped with an Accessory Front Auxiliary Lighting Kit or Accessory Front Fog Lamp Kit: Refer to Auxiliary Lamp Compatibility near the end of these instructions BEFORE beginning the installation.

For Dyna and Softail models: Electrical Contact Lube (H-D Part No. 99861-02) or equivalent is required after battery cable disconnection. This item is available from a Harley-Davidson dealer.

⚠ 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.

Kit Contents

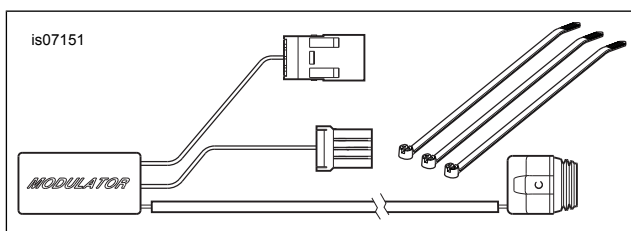


Figure 1. Headlamp Modulation Kit

Table 1. Kit Contents

Description (Quantity)	Part Number
Modulator assembly	Not sold separately
Mounting tape	Not sold separately
Cable straps (3)	10065

Proceed to Preparation for the specific model.

DYNA MODELS

Preparation

NOTE

For vehicles equipped with security siren:

- **2007 and later:** Verify that the Hands-Free Fob is present. Turn the ignition key switch to IGNITION.
- **2006 and earlier:** Disarm the siren with the key fob.

For Vehicles With Main Fuse:

⚠ WARNING

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

1. See the service manual and remove the main fuse.

For Vehicles 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. See the service manual to remove the seat and disconnect the negative (black) battery cable. Retain all seat mounting hardware.
2. **For ALL Dyna models:** Turn the ignition key switch OFF if not already done.

Installation

1. Loosen the fuel tank per service manual instructions. **2006 and later Dyna models: 2005 and earlier Dyna models:**
 - a. Remove the harness shield panel under the top frame tube just behind the steering head.
 - b. Pull the four-way Tyco/Amp headlamp harness connector [38] out of the underside of the frame tube. Unplug the connector halves.
 - c. Get the modulator assembly from the kit. Plug the modulator connectors into the two halves of headlamp harness connector [38].

- d. Route the switch/sensor assembly through the opening, up into the frame tube and out through the clutch-side rubber plug in the steering head.
- e. Insert the modulator and headlamp connectors into the frame.
- f. Install the harness shield panel to close the frame opening.
- g. Route the switch/sensor assembly forward, following the clutch-side handlebar control wiring.
- h. Remove the rubber plug in the brake-lever side of the top frame tube just behind the steering head.
- i. See the service manual to pull the four-way Tyco/Amp headlamp harness connector [38] out of the underside of the frame tube. Unplug the connector halves.
- j. Get the modulator assembly from the kit. Plug the modulator connectors into the two halves of headlamp harness connector [38].
- k. Insert the headlamp connectors and modulator into the frame per service manual instructions. Route the switch/sensor assembly forward, following the clutch-side handlebar control wiring.

NOTE

The switch/sensor wiring must be mounted to the handlebar externally.

- l. Install the rubber plug.
2. **ALL Dyna models:** Route the modulator switch/sensor and wires to follow the clutch-side handlebar control wiring up the handlebar.
3. Remove the clutch hand lever bracket upper clamp screw. Position the modulator switch/sensor assembly to the clamp, and align the holes. Fasten the switch to the bracket with the screw, and tighten to 8–12 N·m (72–108 in-lbs)
4. Fasten the wiring to the handlebar with cable straps.

SOFTAIL MODELS

Preparation

FLSTC and FLSTN models require the purchase and installation of 69200442 independent control auxiliary lamp kit.

NOTE

For vehicles equipped with security siren:

- **2007 and later:** Verify that the Hands-Free Fob is present. Turn the ignition key switch to IGNITION.
- **2006 and earlier:** Disarm the siren with the key fob.

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)

See the service manual to purge the fuel supply of high pressure gasoline and remove the fuel supply line.

For Vehicles With Main Fuse:

▲ WARNING

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

1. See the service manual and remove the main fuse.

For Vehicles 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. See the service manual to remove the seat and disconnect the negative (black) battery cable. Retain all seat mounting hardware.
2. **For ALL Softail models:** Turn the ignition key switch OFF if not already done.

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)

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

For ALL Softail models:

▲ 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. See the service manual and remove the instrument console (if equipped) from the fuel tank.
2. See the correct section (Carbureted or EFI Engine) of the service manual for fuel tank removal instructions.

Installation

1. Unplug the two halves of the black four-way Tyco/Amp headlamp harness connector [38] on the left side of the frame backbone.
2. Get the modulator assembly, and plug the modulator connectors into the two halves of connector [38].
3. Clean the module mounting area on the left side of the backbone with a 50-50 mixture of isopropyl alcohol and distilled water. Allow to dry thoroughly.
4. Remove the liner from the adhesive tape on the module. With the switch/sensor wires facing forward, position the module to the side of the frame, and press firmly into place. Hold the module in position with steady pressure for a few seconds..

NOTE

The switch/sensor wiring must be mounted to the handlebar externally.

5. Route the switch/sensor assembly forward, following the clutch-side handlebar control wiring up the handlebar.
6. Remove the clutch hand lever bracket upper clamp screw. Position the modulator switch/sensor assembly to the clamp, aligning the holes. Fasten the switch to the bracket with the screw. Tighten to 8–12 N·m (72–108 in-lbs)
7. Fasten the wiring to the handlebar with cable straps.

XL SPORTSTER MODELS

Preparation

NOTE

For vehicles equipped with security siren:

- **2007 and later:** Verify that the Hands-Free Fob is present. Turn the ignition key switch to IGNITION.
- **2006 and earlier:** Disarm the siren with the key fob.

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)

See the service manual to purge the fuel supply of high pressure gasoline and remove the fuel supply line.

For Vehicles With Main Fuse:

⚠ WARNING

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

1. See the service manual and remove the main fuse. Remove the seat. Retain the seat and all mounting hardware.

For Vehicles 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)

NOTE

For 2004 and later models, the negative battery cable is most easily disconnected at the engine crankcase.

1. See the service manual to remove the seat and disconnect the negative (black) battery cable from the negative (-) battery terminal. Retain all seat mounting hardware.
2. **For ALL XL Sportster models:** Turn the ignition key switch OFF.

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)

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

For ALL XL Sportster models:

⚠ 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. See the service manual and remove the instrument console (if equipped) from the fuel tank.
2. See the correct section (Carbureted or EFI Engine) of the service manual for fuel tank removal instructions.

Installation

1. See the service manual to disengage the left wire harness caddy from the right caddy.
2. Unplug the two halves of the black four-way Tyco/Amp headlamp harness connector [38] inside the left caddy.
3. Get the modulator assembly, and plug the modulator connectors into the two halves of connector [38].
4. Position the modulator inside the left caddy with the switch/sensor wires routed forward out of the caddy. Close and secure both caddies per the service manual.

NOTE

The switch/sensor wiring must be mounted to the handlebar externally.

5. Route the switch/sensor assembly forward, following the clutch-side handlebar control wiring up the handlebar.
6. Remove the clutch hand lever bracket upper clamp screw. Position the modulator switch/sensor assembly to the clamp, aligning the holes. Fasten the switch to the bracket with the screw. Tighten to 8–12 N·m (72–108 in-lbs)
7. Fasten the wiring to the handlebar with cable straps.

XR SPORTSTER MODELS

Preparation

NOTE

For vehicles equipped with security siren:

- Verify that the Hands-Free Fob is present.
- Turn the ignition key switch to IGNITION.

▲ 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)

1. See the service manual to purge the fuel supply of high pressure gasoline and remove the fuel supply line.

▲ WARNING

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

2. See the service manual and remove the main fuse.

▲ 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)

3. See the service manual for fuel tank cover and fuel tank removal instructions.

Installation

1. Unplug the two halves of the black four-way Tyco/Amp headlamp harness connector [38] on the right side of the frame backbone.
2. Get the modulator assembly, and plug the modulator connectors into the two halves of connector [38].
3. Clean the module mounting area on the ignition mounting bracket under the frame backbone on the right hand side with a 50-50 mixture of isopropyl alcohol and distilled water. Allow to dry thoroughly.
4. Remove the liner from the adhesive tape on the module. With the switch/sensor wires facing forward, position the module to the ignition mounting bracket, and press firmly into place. Hold the module in position with steady pressure for a few seconds..

NOTE

The switch/sensor wiring must be mounted to the handlebar externally.

5. Route the switch/sensor assembly forward, following the clutch-side handlebar control wiring up the handlebar.
6. Remove the clutch hand lever bracket upper clamp screw. Position the modulator switch/sensor assembly to the clamp, aligning the holes. Fasten the switch to the bracket with the screw. Tighten to 8–12 N·m (72–108 in-lbs)
7. Fasten the wiring to the handlebar with cable straps.

VRSC MODELS

Preparation

NOTE

For vehicles equipped with security siren:

- **2007 and later:** Verify that the Hands-Free Fob is present. Turn the ignition key switch to IGNITION.
- **2006 and earlier:** Disarm the siren with the key fob.

▲ WARNING

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

1. See the service manual and remove the main fuse.

Installation

1. Remove the screw and washer from the front left side cover, and carefully lift the side cover off the mounting tabs.
2. Unplug the two halves of the black four-way Tyco/Amp headlamp harness connector [38] beneath the cover.
3. Get the modulator assembly, and plug the modulator connectors into the two halves of connector [38].
4. With the switch/sensor wires facing forward, tuck the modulator into the rear of the area under the cover.

NOTE

The switch/sensor wiring must be mounted to the handlebar externally.

5. Route the switch/sensor assembly forward, following the clutch-side handlebar control wiring up the handlebar.
6. Remove the clutch hand lever bracket upper clamp screw. Position the modulator switch/sensor assembly to the clamp, aligning the holes. Fasten the switch to the bracket with the screw. Tighten to 8–12 N·m (72–108 in-lbs)
7. Fasten the wiring to the handlebar with cable straps.

RETURN TO SERVICE

NOTE

ALL models: 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:** See the service manual and install the main fuse. **Models with main circuit breaker:**
 - a. **For Dyna models:** See the service manual and attach the negative battery cable. Apply a light coat of Harley-Davidson electrical contact lubricant (Part No. 99861-02), petroleum jelly or corrosion retardant material to the negative battery terminal.
 - b. **For Softail models:** See the service manual and attach the negative battery cable.
 - c. **For XL Sportster models:** See the service manual, and connect the negative (-) battery cable at the engine crankcase.

NOTE

The modulator switch light sensor requires daylight or very bright indoor lighting to enable headlamp modulation. Aiming a flashlight directly into the sensor may also provide sufficient illumination to allow modulation.

2. Test the headlamp modulation system for proper operation. Turn the ignition key switch ON. Proper operation is:
 - With the modulation toggle OFF, the headlamp will be illuminated as normal.
 - With the modulation toggle ON and daylight sensed, the **low beam** headlamp will pulsate between full brightness and a substantially lower level, approximately four times per second. The headlamp will not go completely dark during the modulation cycle. The high beam headlamp **does not** modulate.
3. **For Dyna models:** Tighten the fuel tank per the service manual. **For Softail models:** Remove the main fuse or disconnect the negative battery cable as done earlier. See the correct section (Carbureted or EFI Engine) of the service manual for fuel tank installation instructions. Install the main fuse on models so equipped. For models with main circuit breaker, see the service manual and attach the negative battery cable. Apply a light coat of Harley-Davidson electrical contact lubricant (Part No. 99861-02), petroleum jelly or corrosion retardant material to the negative battery terminal. **XL and XR models:** Remove the main fuse or disconnect the negative battery cable as done earlier. See the correct section (Carbureted or EFI Engine) of the service manual for fuel tank installation instructions. Install the main fuse or connect the negative battery cable as before.

⚠ 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)

4. **ALL models:** See the service manual and install the seat, if removed.

Auxiliary Lamp Compatibility

On Dyna or Softail models equipped with a Genuine Motor Accessory Auxiliary Lighting Kit, the auxiliary lamp switch currently connected to the low beam wire at the headlamp provides a relay coil signal to enable auxiliary lamp on/off. If installed per the instructions in the above sections, the modulator in **this** kit would be connected in a way that the auxiliary lamps would modulate.

- This would not comply with government regulations.
- The modulator will not support a multiple lamp load.

There are two options available to remedy this situation:

1. Re-wire the auxiliary lamps by splicing into the low beam wires on the main harness upstream of the modulator. This option maintains usual functionality in which the auxiliary lamps can be turned ON/OFF in low beam mode.
2. Re-wire the auxiliary lamps to switch power ON/OFF directly from P&A Accessory power. Remove the auxiliary lamp relay and associated wires from low beam and battery power. Re-connect the auxiliary lamps to the accessory circuit at the front of the vehicle to enable switched power ON/OFF. This option allows the auxiliary lamps to turn on or off independently of the high or low headlamp beam.

IN USE

A light sensor mounted in the modulator switch assembly senses the presence of daylight. Government regulations only allow headlamp modulation in daylight.

The switch can be used to turn the modulation on or off at any time, provided it is enabled by the daylight sensor and the low beam is selected. The high beam headlamp **does not** modulate.

If equipped, the transmitter in the Remote Control Garage Door Opener Kit (Part No. 91558-01A) will not work while the low beam headlamp is modulating. Turn the modulator off to operate the garage door opener.