



INSTRUCTIONS

J05523

2015-11-03



BOOM! AUDIO CRUISER AMP AND SPEAKER KIT - WINDSHIELD MOUNT

GENERAL

Kit Number

76321-09A

Models

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

Installation Requirements

The following models will require separate purchase of an Electrical Connection Kit (Part No. 72673-11):

- 2011 and later Softail® models
- 2012 and later Dyna® FLD Switchback models

The following models will require separate purchase of a Speaker and Amplifier Relay Kit (Part No. 69200397):

- 2000-2010 Softail models
- 2000-2013 Road King® models

The following model will require separate purchase of Kit (Part No. 69200722):

- 2014-2016 later Road King® models

The following model will require separate purchase of Kit (Part No. 69201599):

- 2017 and later Road King® models

Connection to a portable audio player (purchased separately) with a 3.5 mm (1/8 in) stereo output (headphone jack or audio line out) is required.

NOTE

A Boom! Audio Tank Pouch (Part No. 91003-10) can be used to secure a **solid-state** portable audio player.

DO NOT secure a portable audio player with a **hard drive memory** on or to the vehicle.

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.

Electrical Contact Lubricant (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.

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 Amp and Speaker Kit requires up to **4.0 A** additional current from the electrical system.

Kit Contents

See Figure 7. and Refer to Table 1.

PREPARATION

NOTE

For 2007 and later vehicles equipped with security siren:

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



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. Purge the fuel supply of high pressure gasoline and remove the fuel supply line.

For ALL 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 service manual. Remove main fuse and seat. Retain seat and all mounting hardware.

For ALL 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. Remove the seat and disconnect the negative (black) battery cable from the negative (-) battery terminal. Retain all seat mounting hardware.
2. **For ALL 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 OFF. Remove the fuel line from the valve.

For ALL models:

1. See the service manual or instructions included with the accessory kit. Remove the windshield. Be sure to protect the windshield from scratches during removal and installation, and while off the vehicle.

⚠ 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. See the service manual. Remove the instrument console (if equipped) from the fuel tank.

3. See the correct section (Carbureted or EFI Engine) of the service manual for fuel tank removal instructions.
4. **For Road King models only:** Remove the handlebar cover from the vehicle. Separate the left and right nacelle halves. Remove the headlamp assembly per service manual instructions.

INSTALLATION

Amplifier and Bracket Installation

1. See Figure 7. Select two screws (8) and the correct amplifier mounting bracket (item 9 or 10) from the kit.
 - **For Road King models:** select bracket (9).
 - **For Dyna and Softail models:** select bracket (10).

NOTE

*The wire exiting the amplifier must face **downward**.*

2. See Figure 7. Install the amplifier (4, part of the wire harness assembly) to the bracket with the screws (5), and tighten to 7.4 N·m (65 in-lbs).
3. **If this kit is being installed on a vehicle with an engine guard (except for Road King models),** use the engine guard hardware to secure the amplifier bracket. **If NOT being installed with an engine guard,** use hardware from the kit to secure the amplifier bracket. See Figure 7.
 - **For Dyna models:** Select one screw (11) and one locknut (12) from the kit.
 - **For Softail models:** Select one screw (13) and one locknut (14) from the kit.
 - **For Road King models:** Select two screws (17), two washers (15) and two locknuts (16) from the kit.
4. See Figure 1. Install the amplifier and bracket to the frame crossmember between the front down tubes as shown.
 - **For Dyna models:** Tighten the fasteners to 40.7–44.8 N·m (30–33 ft-lbs).
 - **For Softail models:** The amplifier bracket installs **behind** the crossbar. Tighten the fasteners to 25.8 N·m (19 ft-lbs).
 - **For Road King models:** Tighten the fasteners to 7.4 N·m (65 in-lbs).

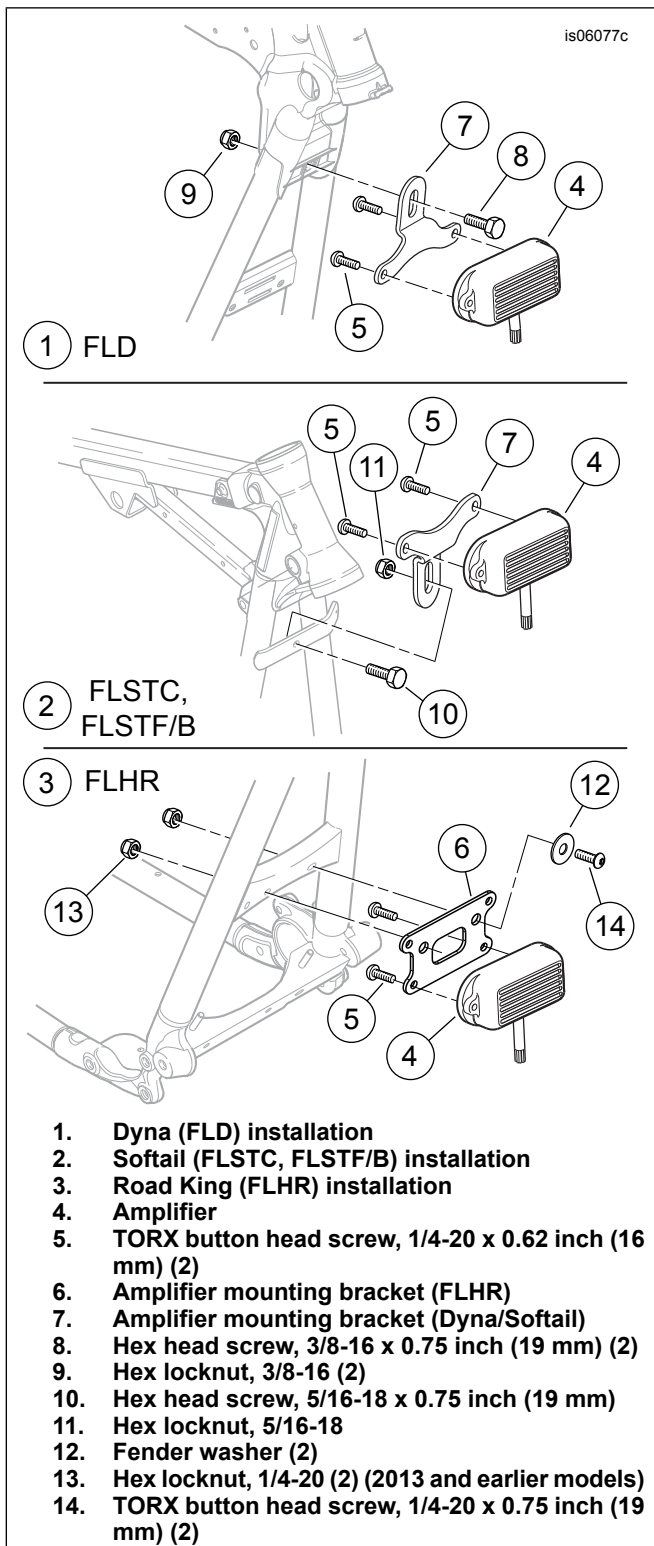


Figure 1. Amplifier and Bracket Installation

Hand Control and Bracket Installation

1. See Figure 2. Remove the front brake lever clamp screws from the vehicle. Remove and retain the clamp (1). The screws can be discarded.
2. Get the hand control bracket (3), two spacers (2), two screws (6) and two screws (4) from the kit.

3. Route the hand control (5) wire harness through the center of the hand control bracket (3) as shown.
4. Position the spacers into the clamp mounting cutouts. Place the hand control bracket onto the spacers. Install the clamp, spacers and bracket to the brake master cylinder with the two screws. Tighten the screws to 6.8–9.1 N·m (60–80 in-lbs).
5. Install the hand control (5, part of the wire harness assembly) to the bracket with the #10-24 screws (6). Tighten securely.
6. Use cable straps from the electrical hardware pack to secure the wiring to the existing hand control wiring.

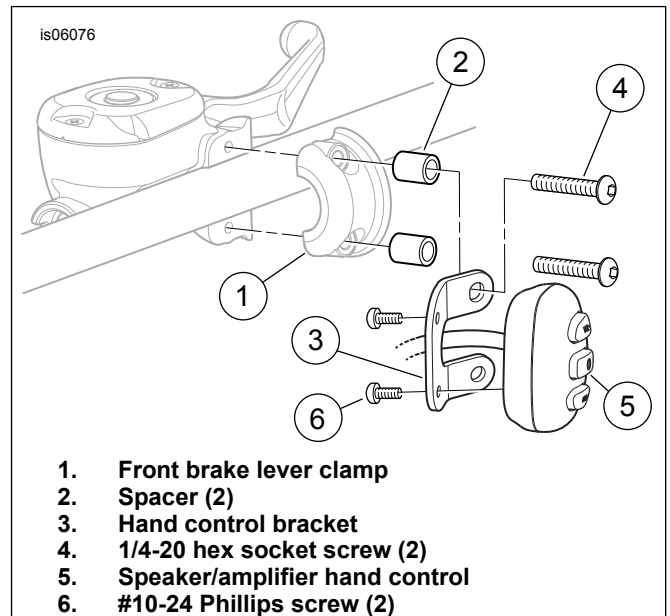


Figure 2. Hand Control and Bracket Installation

Speaker Installation

1. Get the windshield removed earlier. Place it face up on a clean, padded surface.
2. See Figure 3. Holding the acorn nuts (3) on the rear side, remove the three **innermost** TORX screws (2) retaining the horizontal windshield brace (1). Keep the acorn nuts for installation. Discard the screws.
3. See Figure 7. Get **new** screw (4), two screws (5), three washers (6), the assembled speaker pod (1) and mounting bracket (2) from the kit.
4. Place the windshield face down on a clean, padded surface. Position the speaker pod bracket over the top edge of the windshield inner horizontal brace. Align the center hole and end slots with the holes in the brace.
5. Place a black washer on the threads of the short screw. Insert the screw, from the front, through the center hole in the horizontal brace, windshield and speaker pod bracket. Fasten with one of the acorn nuts (A) removed in Step 2.

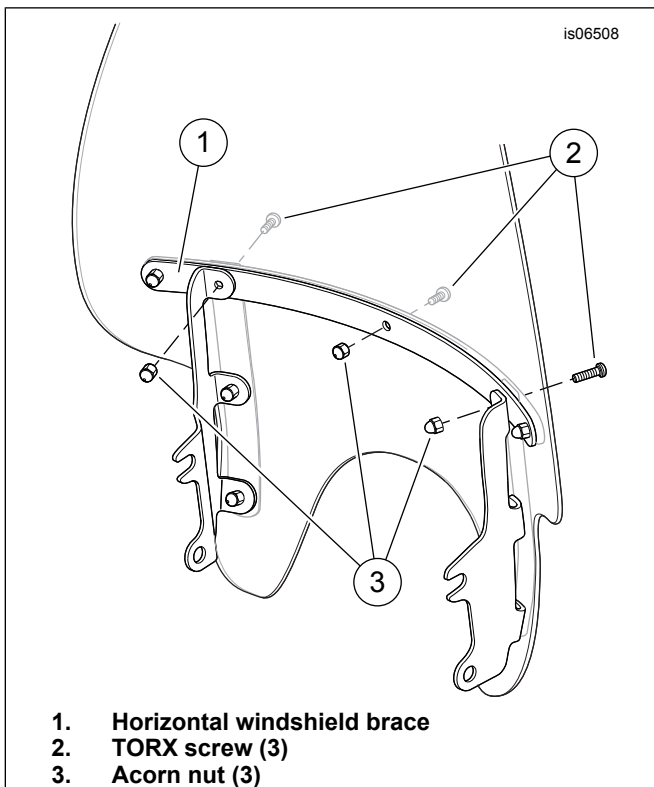


Figure 3. Remove Windshield Upper Fasteners (Typical)

6. Insert the longer screws, from the front, through the horizontal and vertical braces, windshield and slots in the speaker pod bracket. Place a black washer on the threads of each screw, and fasten with the remaining acorn nuts. Alternately tighten all three screws to 2.8 N·m (25 in-lbs).

WIRE HARNESS CONNECTION

General

Splicing of wire leads is necessary in the installation of the speaker and amplifier kit to the motorcycle. Find the instructions for a specific model in the sections that follow, and refer to the service manual appendix for proper wire splicing procedures.

▲ 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.

For 2012 and later Dyna models: Proceed to the next section.

For 2011 and later Softail models: Proceed to the next section.

For 2000-2013 Road King models: Proceed to THAT section.

For 2014-2016 Road King models: Proceed to THAT section.

For 2017 and later Road King models: Proceed to THAT section.

For 2012 and Later Dyna and 2011 and Later Softail Models

NOTE

Requires separate purchase of Electrical Connection Kit (Part No. 72673-11).

1. Install the Electrical Connection Kit:
 - a. See Figure 4. Locate the Digital Technician connector [91A] (Item 1, a gray six-way Deutsch connector with a rubber boot) under the seat. Place the Electrical Connection Harness (2) at the Digital Technician connector, but DO NOT connect them at this time.
 - b. Route the speaker and amplifier harness (3) wires over to the Electrical Connection Harness. Cut the speaker and amplifier wires to a suitable length to easily reach the sealed splice connectors (4 and 5) on the Electrical Connection Harness.
 - c. Splice both the red and the orange/white speaker and amplifier wires to the **red/yellow** wire sealed splice connector (4) in the Electrical Connection Harness.
 - d. Splice the black speaker and amplifier wire to the **black** wire sealed splice connector (5) in the Electrical Connection Harness.
 - e. Use a suitable radiant-heating device to shrink the connector to the wires.
 - f. Use the heating device to seal the open end of the sealed splice connector (6) on the **red/blue** wires in the Electrical Connection Harness.
 - g. Pull the rubber boot out from the gray Digital Technician pin connector [91A]. Cut the boot off of the wires.
 - h. Connect the socket housing of the Electrical Connection Harness to connector [91A].
 - i. Insert the rubber boot into the open pin connector of the Electrical Connection Harness.
 - j. Proceed to **WIRE ROUTING**.

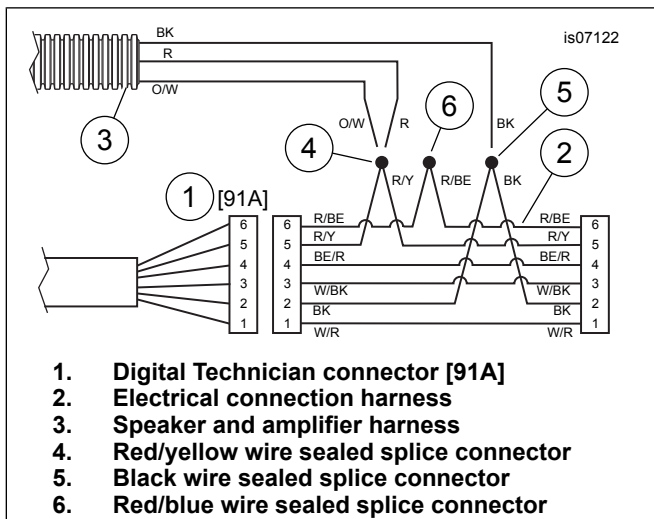


Figure 4. Wiring Diagram, Speaker/Amplifier Harness to Electrical Connection Harness

For 2000-2013 Road King Models:

NOTE

Requires separate purchase of Speaker and Amplifier Relay Service Kit (Part No. 69200397).

1. Route the speaker and amplifier harness to the area under the seat.
2. See Figure 7. Get the electrical hardware pack (24) from **THIS** kit.
3. Select the in-line fuse holder (25) and one blue sealed splice connector (30) from the hardware pack.
4. Get the relay kit (Part No. 69200397), purchased separately. Refer to the instructions **that follow BELOW** for relay installation.
5. See Figure 5. Find a suitable location under the seat for the relay (1), so that the terminals face **down or horizontally**. The terminals should not face upward.
6. Cut the **orange/white** wire (2) in the **main electrical harness** near the rear lighting connector [7].
7. See the service manual appendix. Use a suitable radiant-heating device to splice and seal the two cut orange/white wires to the sealed splice connector (4) on the orange/white wire (3) from relay terminal 2.

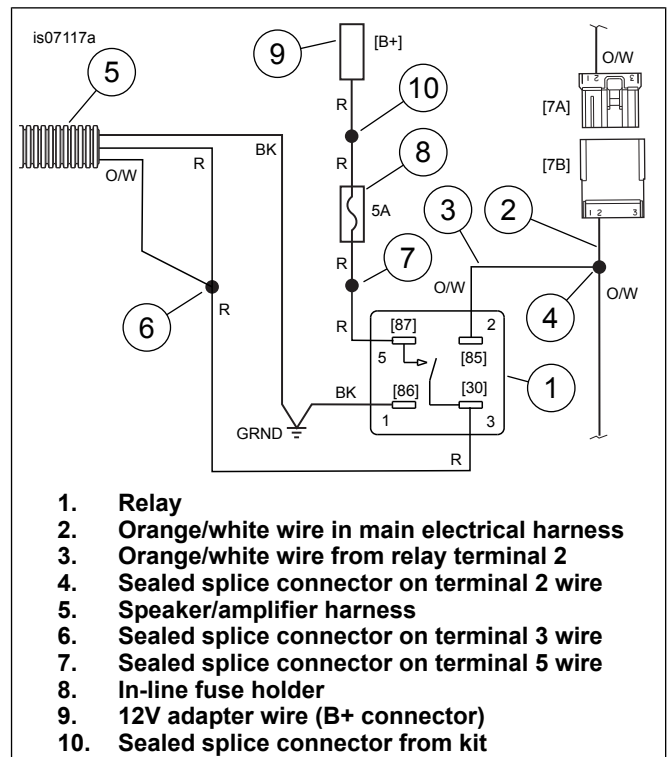


Figure 5. Wiring Diagram, Speaker/Amplifier Harness to Relay

1. Relay
 2. Orange/white wire in main electrical harness
 3. Orange/white wire from relay terminal 2
 4. Sealed splice connector on terminal 3 wire
 5. Speaker/amplifier harness
 6. Sealed splice connector on terminal 3 wire
 7. Sealed splice connector on terminal 5 wire
 8. In-line fuse holder
 9. 12V adapter wire (B+ connector)
 10. Sealed splice connector from kit
8. Cut the speaker and amplifier harness (5) red and orange/white wires to a suitable length to easily reach the sealed splice connectors on the relay. Splice and seal the red and orange/white wires to the sealed splice connector (6) on the red wire of relay terminal 3.
 9. Select the sealed splice connector (7) on the free end of the **red** wire coming from relay terminal 5. Splice the red wire on one end of the in-line fuse holder (8) to the red wire of relay terminal 5.
 10. Splice the opposite end of the in-line fuse holder to the 12V adapter wire (9) with the blue sealed splice connector (10) from the hardware pack.
 11. See Figure 6. Locate the B+ (battery positive) connector (1) on the main electrical harness under the seat (a red wire with an unused gray connector). Remove the cover (2) from the B+ connector.
 12. Mate the **red** 12V adapter wire connector on the wire harness assembly to the B+ connector.

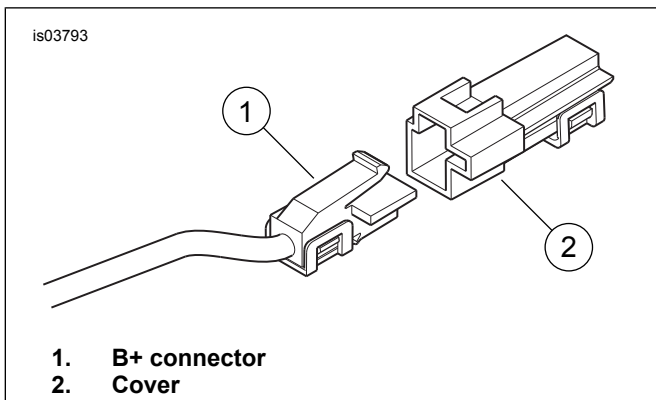


Figure 6. B+ Connector

13. See Figure 7. Select the 6.4 mm (1/4 in) ID ring terminal (28) from the electrical hardware pack.
14. Select the free end of the **black** wire in the speaker and amplifier harness assembly. Cut the black wire to easily reach the location of the vehicle ground. Crimp the ring terminal to the black wire per the instructions in the service manual.
15. Select the black wire from relay terminal 1. Attach both black wire ring terminals to the vehicle ground stud.

2014-2016 Road King Models

Electrical connectors are identified in the service manual by the number and letter shown here within brackets.

NOTE

Wire harness (part no. 69200722) may have been previously installed during the installation of another accessory. If it is already installed, it is not necessary to replace it.

Use Y-connector 70264-94A for additional 4-way connectors. If accessory wires have already been spliced to 69200722 in a prior install, it is possible to splice in up to 3 accessories.

1. Locate the gray 8-way pin-side Molex connector [4A] under the left side cover. It is located in the electrical caddy, directly over the Digital Tech Connector [91A]. If wire harness (part no. 69200722) is already connected to connector [4] from a prior install, then disconnect it.
2. Route the harness from the Electrical Connection Kit per the instructions in that kit. Do not connect the 8-way connectors at this time.
3. The electrical connections will be made to 2 (or 3) of the sealed cap ends of the Electrical Connection kit.
4. See the service manual for detailed instructions on sealed splice connections. If wire harness (part no. 69200722) was previously spliced, cut off existing splices. See Figure 4 for multiple splice configuration. If wire harness (part no. 69200722) was spliced in a prior install, make sure the 8-way Molex connector is disconnected from vehicle connector [4].
 - a. Clip the cap off the black wire, strip back, crimp & seal to BLACK wire of the wire harness of (this kit).

- b. Clip the cap off the violet/blue wire of 69200723, strip back, crimp & seal to orange/white and the RED wire of the wire harness of (this kit).
 - c. DO NOT REMOVE the sealed cap from the RED wire. It will not be used.
5. Remove the weather cap from connector [4A] and connect the 8-way connectors together.

2017 and Later Road King Models

Electrical connectors are identified in the service manual by the number and letter shown here within brackets.

NOTE

Wire harness (part no. 69201599) may have been previously installed during the installation of another accessory. If it is already installed, it is not necessary to replace it.

Use Y-connector 69201706 for additional 4-way connectors. If accessory wires have already been spliced to 69201599 in a prior install, it is possible to splice in up to 3 accessories.

1. Locate the gray 3-way pin-side Molex connector [325B] under the right side cover, connected to the caddy. If wire harness (part no. 69201599) is already connected to connector [325B] from a prior install, then disconnect it.
2. Route the harness from the Electrical Connection Kit per the instructions in that kit. Do not connect the 3-way connectors at this time.
3. The electrical connections will be made to 2 (or 3) of the sealed cap ends of the Electrical Connection kit.
4. See the service manual for detailed instructions on sealed splice connections. If wire harness (part no. 69201599) was previously spliced, cut off existing splices. See Figure 4. for multiple splice configuration. If wire harness (part no. 69201599) was spliced in a prior install, make sure the 3-way Molex connector is disconnected from vehicle connector [325B].
 - a. Clip the cap off the black wire, strip back, crimp & seal to BLACK wire of the wire harness of (this kit).
 - b. Clip the cap off the violet/blue wire of 69201599, strip back, crimp & seal to orange/white and the RED wire of the wire harness of (this kit).
 - c. DO NOT REMOVE the sealed cap from the RED wire. It will not be used.
5. Remove the weather cap from connector [325B] and connect the 3-way connectors together.

Wire Routing

1. Use cable straps (31) from the electrical hardware pack to secure the amplifier wiring to the frame downtube. **For Road King models:** Use the existing P-clamp on the left side of the frame near the steering head to secure the amplifier wiring.

2. Coil excess wire under the fuel tank, inside the nacelle or under the handlebar clamp where it will not interfere with steering function. Install the 5A fuse (26) in the in-line fuse holder on the red wire.
3. Lay the harness along the frame backbone, under the fuel tank and seat, with the four-way connector positioned near the steering head. The connector may be placed inside the nacelle (Road King models) or handlebar clamp.
4. See Figure 7. The 3.5 mm connector from the hand control can be secured to the handlebar with cable straps or secured to the upper triple clamp or nacelle with the adhesive-backed clip (23) from the kit. If using the clip:

5. **NOTE**

- *Ambient temperature should be **at least** 16 °C (60 °F) for proper adhesion of the clip to the vehicle.*
- *Allow **AT LEAST 24 hours** after applying the clip before exposing the area to vigorous washing, strong water spray or extreme weather.*
- *The adhesive bond will increase to maximum strength after about 72 hours at normal room temperature.*

Test-fit the clip to the upper triple clamp or nacelle before installation. Do not remove the liner until ready to apply the clip.

6. Clean the clip mounting area with a 50-50 mixture of isopropyl alcohol and distilled water. Allow to dry thoroughly.
7. Remove the liner from the adhesive backing of the clip. Carefully position the clip to the upper triple clamp or nacelle, and press firmly into place. Hold the clip in position with steady pressure for a few seconds.
8. Secure the hand control wire harness to the clip.

▲ 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)

- Make sure the wires do not restrict steering movement.
- Route the wires along the frame backbone under the tank. Tie to existing wire bundles with cable straps, especially at any change in direction.

RETURN TO SERVICE

1. **For Road King models only:** See the service manual. Assemble the left and right nacelle halves and then the handlebar cover to the vehicle. **For 2011 and later Softail models only:** Install the split conduit (32) over the brake line where it passes closest to the amplifier.
2. **ALL models:** See the correct section (Carbureted or EFI Engine) of the service manual for fuel tank installation instructions.

3. See the service manual or instructions in the accessory kit. Install the windshield to the vehicle. Be sure to protect the windshield and speaker pod from scratches during installation.
4. Mate the four-way connector from the speaker pod to the four-way connector on the wire harness assembly.
5. Connect the 3.5 mm plug at the end of the speaker pod wire harness to the 3.5 mm stereo jack from the hand control.

▲ 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)

6. Make sure the speaker pod will not interfere with steering function, controls operation or visibility of instruments.

NOTE

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

7. **Models with main fuse:** See the service manual. Install the main fuse. **Models with main circuit breaker:** See the service manual. 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.
8. See service manual. Install seat. After installing seat, pull up on the seat to verify that it is secure.
9. Turn the ignition key switch to IGNITION, but do not start the motorcycle.
10. Connect one end of the audio input cable (22) from the kit to the 3.5 mm stereo jack on the front of the speaker pod.
11. Connect the free end of the audio input cable to the headphone jack (or line out) of the portable audio player (purchased separately).

- a. Turn the audio player on. Set the player volume output at 75-80 percent of maximum.
- b. Turn the amp on using the hand control on/off push button switch. The switch will illuminate when power is on.
- c. Use the handlebar control to adjust the volume level. VOL+ increases the volume. VOL- decreases the volume.
- d. The amp and speakers can be operated with the ignition switch in either the "ACC" or "IGNITION" position.

NOTE

***DO NOT** secure an audio player with a **hard drive memory** on or to the vehicle. Vehicle vibration can permanently damage the device.*

SERVICE PARTS

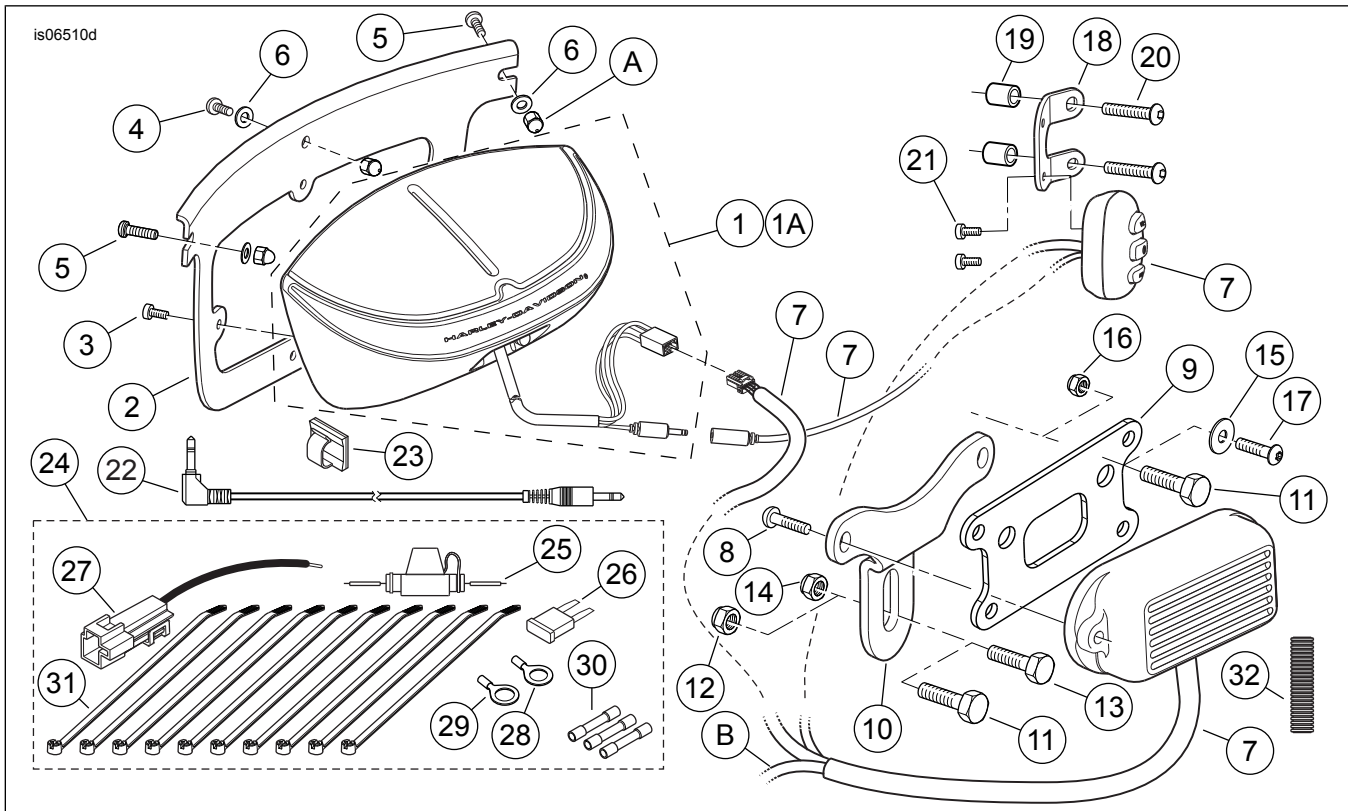


Figure 7. Service Parts, Windshield-Mounted Speaker and Amplifier Kit

Table 1. Service Parts

Item	Description (Quantity)	Part Number
1	Speaker pod assembly (includes speakers and wiring harness)	76345-09
1A	Speaker enclosure	76421-09
2	Speaker bracket, windshield mount	Not sold separately
3	Screw, M5 (4)	Not sold separately
4	Screw, pan head, TORX, #12-24 x 21 mm (0.81 in)	2452
5	Screw, pan head, TORX, #12-24 x 25 mm (1 in) (2)	Not sold separately
6	Flat washer, black (3)	Not sold separately
7	Amplifier/hand control/wire harness assembly	70220-08
8	Screw, button head, TORX, 1/4-20 x 16 mm (0.62 in) long (4)	924
9	Bracket, amplifier mounting (Road King models)	76551-08A
10	Bracket, amplifier mounting (Dyna and Softail models)	Not sold separately
11	Cap screw, hex head, 3/8-16 x 19 mm (0.75 in) long (2)	4713W
12	Hex locknut, 3/8-16 Nylock (2)	7778
13	Cap screw, hex head, 5/16-18 x 19 mm (0.75 in) long	3987
14	Hex locknut, 5/16-18 Nylock	7739
15	Fender washer, M6 (2)	Not sold separately
16	Hex locknut, 1/4-20 Nylock (2)	7686
17	Screw, button head, TORX, 1/4-20 x 19 mm (0.75 in) long (2)	7686
18	Bracket, hand control	Not sold separately
19	Spacer, hand control mounting (2)	Not sold separately
20	Cap screw, button head, 1/4-20 x 44.4 mm (1.75 in) long (2)	3129
21	Cap screw, button head, Phillips, #10-24 x 13 mm (0.5 in) long (2)	Not sold separately
22	Audio input cable	92383-09
23	Clip, adhesive back	Not sold separately
24	Electrical hardware pack (includes items 25 through 31)	Not sold separately
25	• In-line fuse holder	70306-02
26	• Fuse, blade type, 5A (light tan)	72331-95
27	• Adapter wire, 12 V positive	Not sold separately

Table 1. Service Parts

Item	Description (Quantity)	Part Number
28	• Ring terminal, #18-22 AWG (6.4 mm (1/4 in) stud)	9858
29	• Ring terminal, #18-22 AWG (7.9 mm (5/16 in) stud)	9859
30	• Sealed splice connector, #14-16 AWG (blue) (3)	70586-93
31	• Cable strap (10)	10006
32	Conduit, split loom, convoluted 6.4 x 127 mm (x in) long	62519-03
Items mentioned in text, but not included in kit:		
A	Original equipment acorn nut (3)	
B	To power and ground	