



INSTRUCTIONS

J05565

2012-03-15



CVO SPEAKER EXPANSION KIT

GENERAL

This kit must be installed by an authorized Harley-Davidson dealer. Proper installation of this kit requires special materials, tools or training only available to an authorized dealer.

Kit Number

76000275

Models

This kit fits 2011 FLHXSE2 and 2012 FLTRXSE models only.

NOTE

The amplifier and speakers in this kit are part of a system that has an impedance of one Ohm, and are for use ONLY with the Advanced Audio AM/FM/CD radio on select fitments. See the P&A retail catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

Using these speakers on 2005 or earlier Harley-Davidson audio systems **WILL cause permanent damage** to those systems.

Advanced Audio system. This unique equalization was designed to optimize the performance and sound response of the saddlebag speakers.

Even if this kit is not being installed by a Harley-Davidson dealer, this special equalization **software** is available without charge from any dealer through Digital Technician II. Dealer labor rates may apply for the upgrade procedure.

⚠ 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, plus either a model year 2011 FLHXSE2 or 2012 FLTRXSE service manual supplement are required for this installation. All are available from a Harley-Davidson dealer.

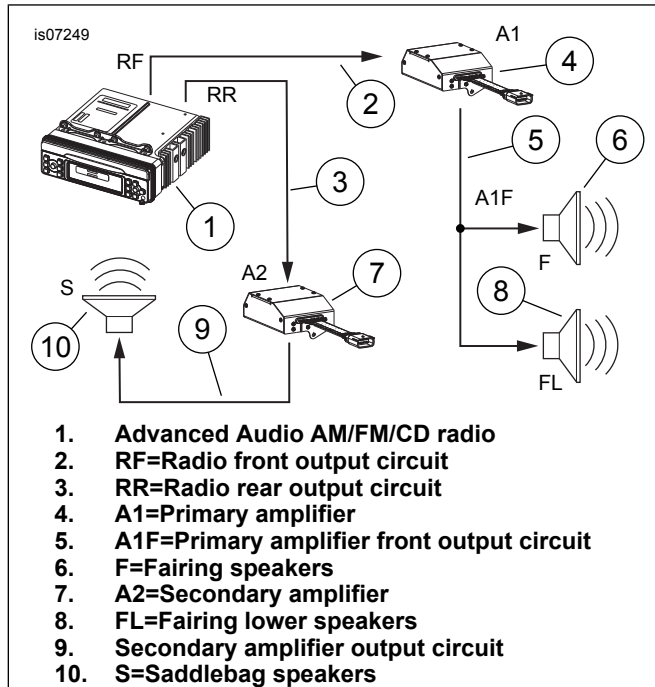


Figure 1. CVO Speaker Expansion Kit System Diagram

Installation Requirements

Replacement of saddlebag lids is required. These items are available from a Harley-Davidson dealer.

NOTE

The purchase of this kit entitles you to a specially developed sound equalization software that is used in conjunction with the

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 amplifier installed with this Speaker Expansion Kit requires up to **16 amps** additional current from the electrical system.

Kit Contents

See Figure 7, Table 1 and Table 2.

SADDLEBAG PREPARATION

Saddlebag Lid Removal

NOTE

- Verify that the Hands-Free Fob is present.



- Remove all items from the saddlebags.
- The saddlebags do not have to be removed from the vehicle to perform the **lid removal** procedure.
- Take care to avoid damage to the saddlebag bottoms when removing the lids.

1. Remove two screws to release the check strap from the **saddlebag lid only**.
2. Remove five screws to release the lid from the saddlebag latch. The latch can remain attached to the saddlebag bottom. Retain the screws and backing plate for installation of the **new** saddlebag lid. The removed lid can be recycled or properly disposed of.
3. Repeat for the remaining saddlebag lid.

Saddlebag Drilling

1. Lay a clean pad or blanket on the work surface to protect the painted surfaces of the saddlebag.
2. Remove one saddlebag bottom from the vehicle per service manual instructions. Lay it, outboard side down, on the protected work surface.
3. See Figure 7. Get the drilling template (7) from the kit.

NOTE

The plastic template is ready for use. The paper template (which may be found in some kits) must be cut before use.

4. See Figure 2. Hook the slot (2) in the template (1) over the saddlebag rear mounting bracket (3). Align the template hole over the rear grommet (4). Tape the template in place as shown (5).
5. Mark the locations of the two holes (6) with a center punch. Trace the outline for the connector cutout (7) on the saddlebag inboard wall. Remove the template.
6. Drill two 7.25 mm (9/32 in) diameter holes at the center punch marks. Carefully cut out the opening for the connector.
7. Set the saddlebag aside, and repeat Steps 2-6 for the opposite side saddlebag.
8. Get the left-side saddlebag See Figure 7. Get the correct saddlebag speaker jumper harness (8), a plug cover (10) and two screws (11) from the kit.
9. Feed the jumper harness connectors [149R] and [42S], from the outside, through the rectangular opening cut in the saddlebag inboard wall so the 12-way panel mount connector [288] (Item E) fits into the opening.

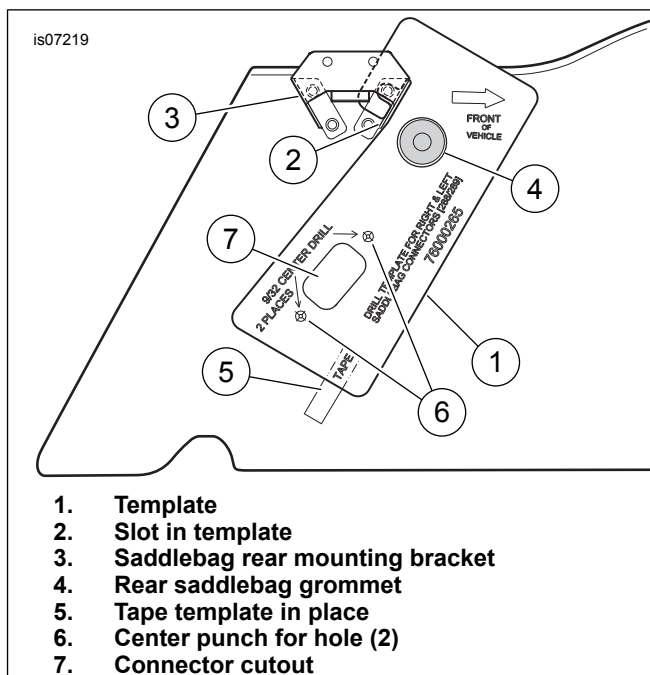


Figure 2. Saddlebag Drilling for 12-Way Panel Mount Connector

10. See Figure 5. Install the plug cover (3) over the panel mount connector (1) and jumper harness from the **inside** of the saddlebag. Insert two screws, from the **outside**, through the connector flange and saddlebag wall, and into the threaded holes in the plug cover. Tighten to 3.95–4.52 N·m (35–40 **in-lbs**) Lay the harness in the bottom of the saddlebag.
11. Install the remaining saddlebag speaker jumper harness (Figure 7, Item 9) in the right-side saddlebag in the same manner

VEHICLE PREPARATION

NOTE

- 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. Follow service manual instructions 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. Refer to the service manual and follow instructions to remove the left side cover and main fuse.
3. Turn the ignition key switch **OFF**.

- Remove the seat. Retain the seat and mounting hardware.

⚠ 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)

- Remove the instrument console (if equipped) from the fuel tank per the service manual.
- See the service manual for fuel tank removal instructions.
- See the service manual to remove the outer fairing and windshield.
- Release the catches on the wire trough cover. Remove the cover.
- Install the saddlebag bottoms to the vehicle per service manual instructions.

SADDLEBAG ASSEMBLY

Saddlebag Lid Assembly

NOTE

Unfinished saddlebag lids must be finish painted before installation.

- See Figure 7. Get the gasket (H), mounting plate (I), two wear plates (G) and the finish painted saddlebag lid (F) from one of the saddlebag lid kits (purchased separately).

NOTE

Ambient temperature should be at least 16 °C (60 °F) for proper adhesion of the wear plates and gasket to the saddlebag lid.

- See Figure 3. Remove the liner from the adhesive backing of one of the wear plates (2). Carefully position the wear plate to the saddlebag lid (1), centering it on the tab (3), and press firmly into place. Hold the wear plate in position with steady pressure for about a minute. Repeat with the second wear plate at the other end of the lid.
- See Figure 7. Lay the mounting bracket (I) onto the saddlebag lid flange, lining up the five mounting holes.

NOTE

- Orient the gasket with the **tall edge** toward the outer lip of the cover as shown in Figure 3.
- Begin gasket installation in the center of the inboard side of the lid, opposite the hinge (see Figure 5, Item 14).
- Gasket adhesive will hold the mounting plate in place.

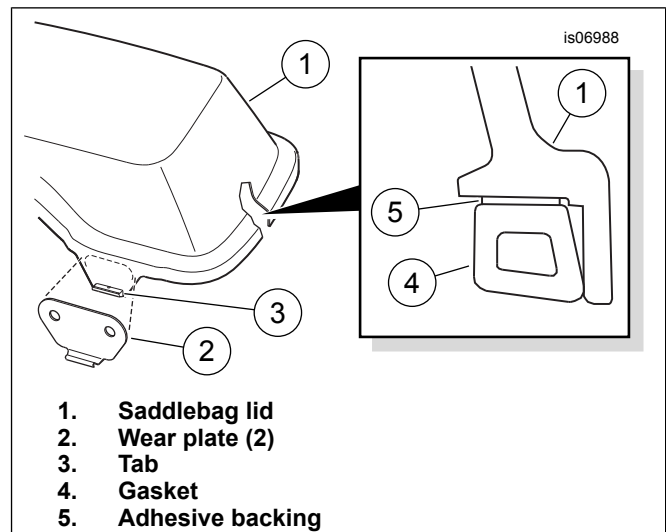


Figure 3. Assemble Wear Plates and Gasket to Saddlebag Lid

- Gradually remove the liner from the adhesive backing (Figure 3, Item 5) of the saddlebag lid gasket (4) as the gasket is pressed into place around the inside perimeter of the lid (1) as shown.
- Set the lid, gasket side down, on the clean pad or blanket of the work surface.
- See Figure 7. Get a saddlebag speaker assembly (22), speaker basket (19) and four #8-18 x 31.8 mm (1.25 in) long screws (23) from the kit.
- From the underside of the saddlebag lid, and with the large rectangular opening (B) toward the front, place the speaker basket under the speaker cavity and snap it into the lid.
- Insert a screw, from the top, through each mounting hole in the speaker. With the tweeter (A) toward the front of the saddlebag, install the speaker into the cavity at the front of the saddlebag lid.
- Align the four screws with the mounting holes in the basket, and tighten to 25.4–38.1 N·m (10–15 in-lbs).
- Get the correct speaker grille (20 or 21), four rubber washers (24) and four #8-18 x 19 mm (0.75 in) long screws (25) from the kit.
- Place a rubber washer into the well surrounding each grille mounting hole in the lid.
- Place the speaker grille into position over the speaker face. From the underside of the saddlebag lid, insert the screws through the holes in the lid and into the mounting pads in the grille. Tighten the screws to 25.4–38.1 N·m (10–15 in-lbs).
- Repeat Steps 1 through 12 for the opposite-side saddlebag lid.
- Fasten the **new** lid to the saddlebag latch and bottom with the five screws (C) removed earlier. Tighten to 2.3–2.8 N·m (20–25 in-lbs).

NOTE

See Figure 4. The saddlebag latch hinge is shown with the pins removed for clarity.

15. Get two foam pads (Figure 7, Item 12) from the kit. Cut one piece in half as shown in Figure 4. Remove the liner from the adhesive backing of the **uncut** pad and affix to the flat side of the latch hinge connector segment (3). Remove the liner from the adhesive backing of one cut pad and affix to the hinge side of the latch connector segment as shown.

NOTE

The remaining foam pad segment can be cut and used as needed to eliminate any saddlebag vibration induced by speaker operation.

16. Assemble the remaining saddlebag in the same manner.

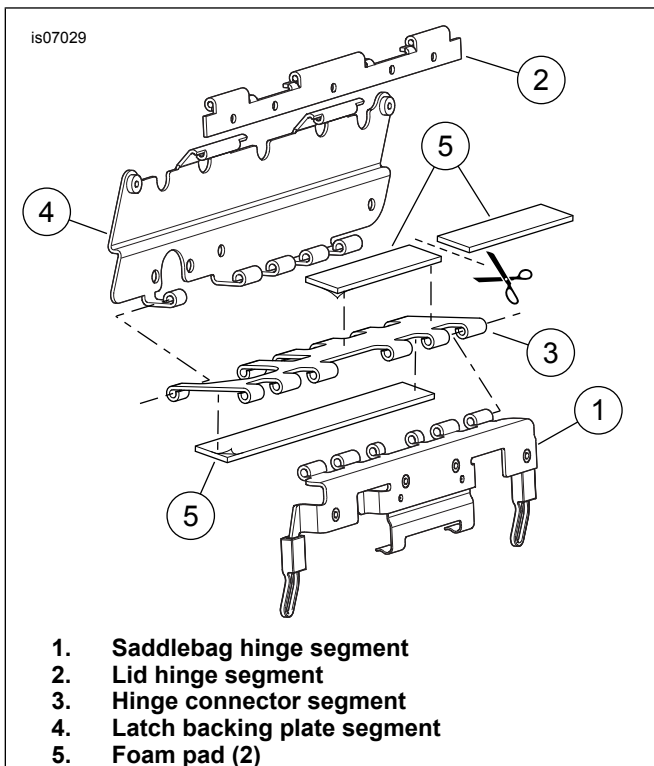


Figure 4. Install Foam Pads to Saddlebag Latch Hinge (Left Side Shown)

Left Saddlebag Harness Installation

1. Go to the left-side saddlebag.
2. See Figure 5. Route the saddlebag speaker jumper harness (installed into the saddlebag earlier):
 - a. downward to the bottom of the saddlebag, and
 - b. rearward along the inboard wall.
 - c. Route the long leg of the harness, with connector [42S], across the rear of the saddlebag,
 - d. forward along the outboard wall, and
 - e. upward in front of the saddlebag lid tether.

3. Route connector [42S] through the bottom opening (6) of the speaker basket (5) closest to the speaker connector, and plug into the speaker connector.
4. Get five wire retainers (7) and five cable straps (8) from the kit. Remove the liner from the adhesive backing of each wire retainer and affix to the inside walls of the saddlebag, about 25 mm (1 in) above the bottom of the saddlebag as shown. Fasten the jumper harness to the wire retainers with the cable straps.
5. See Figure 7. Get the rear amplifier (1), bracket (2), T-stud anchor (3), screw (4), cover (5) and three push-in clips (6) from the kit.
6. Remove the liners from the adhesive backing of the amplifier bracket. Carefully position the bracket to the rear inboard corner of the saddlebag in the orientation shown, and press firmly into place. Hold the bracket in position with steady pressure for a few minutes.
7. Position the amplifier onto the bracket, with the metal cones on one end fitting firmly into the rubber grommets in the bracket.
8. Fasten the amplifier to the bracket with the screw (4).
9. Attach the T-stud connector to the amplifier connector.
10. Plug saddlebag speaker jumper harness connector [149R] into the amplifier connector. Attach the anchor to the T-stud on the amplifier bracket.
11. Place the foam cover over the amplifier, and install the cover to the amplifier bracket with the three push-in screws.

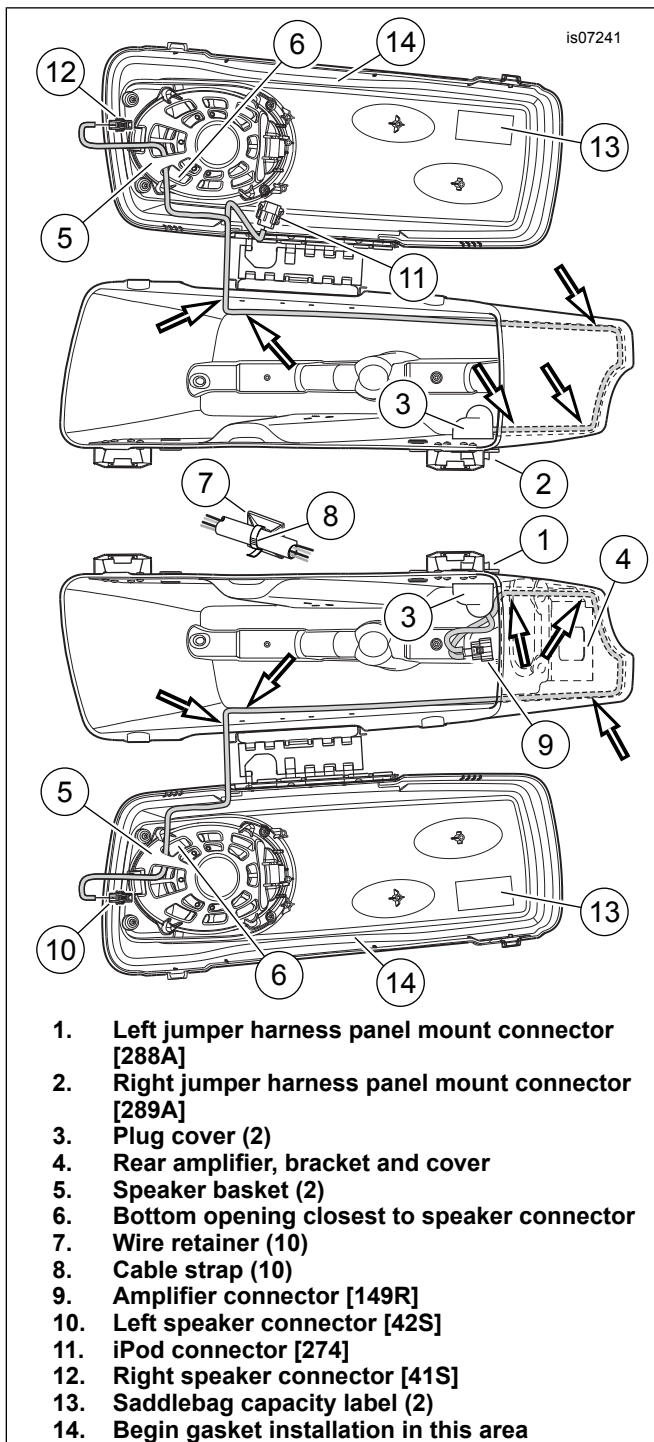


Figure 5. Harness Routing Inside Saddlebags

Right Saddlebag Harness Installation

1. Go to the right-side saddlebag. Route the saddlebag speaker jumper harness (installed into the saddlebag earlier) in the same manner as the left saddlebag, with the following exception:
 - See Figure 5. Route **both** legs of the harness downward, then rearward around to the outboard wall and upward in front of the saddlebag lid tether to the saddlebag lid.
2. Route connector [41S] (Item 12) through the bottom opening (6) of the speaker basket (5) closest to the speaker connector, and plug into the speaker connector .
3. Affix five wire retainers (7) to the inside walls of the saddlebag, about 25 mm (1 in) above the bottom of the saddlebag as shown. Fasten the jumper harness to the wire retainers with cable straps (8).
4. **If an iPod module is being mounted to the saddlebag lid**, follow the instructions later in this document. **If an iPod module is NOT being mounted to the saddlebag lid**, coil the connector [274] (11) leg of the harness against the side wall of the saddlebag lid. Tie the coil with a cable strap (8). Use a wire retainer (7) affixed to the lid to prevent damage to the connector or saddlebag.

Both Saddlebags

1. Affix a saddlebag capacity label (13) to the inside of the lid of each saddlebag.

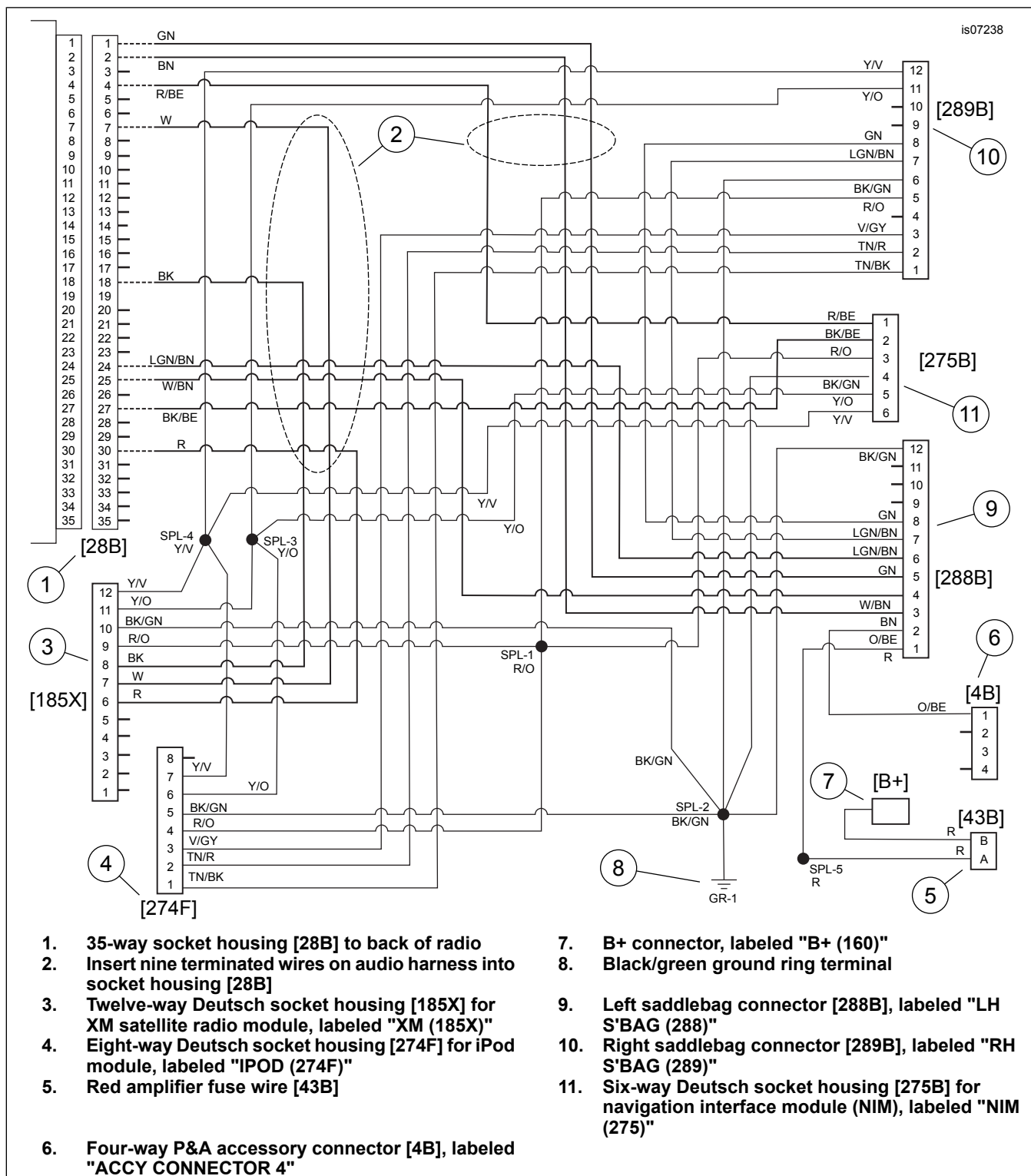


Figure 6. Wiring Diagram, Audio Harness 69200477

VEHICLE WIRING

Install Audio Harness

1. See Figure 7. Get the audio harness (17) from the kit.

NOTE

Each connector on the harness is labeled with the mating connector location on the vehicle. See the service manual for connector description and location.

2. Plug the twelve-way connector, labeled "LH S'BAG 288" into the receptacle on the left-side saddlebag (see Figure 5, Item 1). The connector has a key feature to prevent improper assembly. Listen for a definite "click".
3. Route the wire harness forward to the front of the rear fender. Use cable straps from the kit to fasten that leg of the wire harness to the upper rear of the saddlebag support so there is just enough harness loose at the rear to comfortably reach the saddlebag.

4. Plug the twelve-way connector, labeled "RH S'BAG 289" (2) into the receptacle on the right-side saddlebag. Listen for a definite "click". Fasten that leg of the wire harness to the upper rear of the saddlebag support in the same manner.
5. Route the harness forward, tucking the harness inboard of the right-side frame tube and along the right side of the battery cavity. Avoid the forward saddlebag guard mounting screw head so the harness does not get pinched by the seat.

NOTE

If the B+ connector or pin housing [4A] on the vehicle are already in use, an Electrical Accessory Adapter (Part No. 70270-04) is available from a Harley-Davidson dealer.

6. See Figure 6. Position the "B+ (160)" connector (7) and "ACCY CONNECTOR 4" (6) in the area under the seat. Position the fuse holder (5) in an easily accessible location. Mate connector [160] (7) to the B+ connector on the vehicle. Mate gray four-way socket housing [4] (6) to pin housing [4A] on the vehicle.
7. Fasten the ring terminal [GR-1] (8) to the right-side ground stud.
8. Route the harness forward to the harness tray. Route the harness through the right side of the tray, using cable straps to fasten to the main harness. Continue the audio harness forward into the fairing.

▲ 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)

- Be sure wires do not pull tight when handlebars are turned fully to left or right fork stops.
9. See Figure 7. Route the four branches of the front section of the audio harness (17) inside the fairing along the path of the interconnect harness to the top left of the inner fairing.

NOTE

*If **neither** an XM Satellite Radio module **nor** a navigation interface module (NIM) are being installed in the front fairing, leave connectors [185], [274] and [275] of the audio harness unconnected, and secure with cable straps from the kit. Proceed to Step 12.*

*If **either** an XM **or** navigation module is being installed, the existing iPod module **must be moved** to the right-side saddlebag.*

Separate purchase of the following items is required:

- iPod module mounting bracket (Part No. 69200244)
- TORX head screw (Part No. 3658)
- (3) Self-tapping TORX head screws (Part No. 3612)
- iPod docking harness (Part No. 69200157)

10. To relocate the iPod module:
 - a. Unplug iPod module connector [274] from the vehicle harness, and disconnect the iPod cable from the round connector on the module.

- b. Remove the iPod module attaching screw at the back of the radio, and set it aside for later installation. Remove the iPod module from on top of the radio.
- c. Remove the iPod cables from the vehicle.
- d. Mate pin connector [274] from the audio harness to the socket connector of the vehicle harness unplugged in Step 10a.
- e. Plug the iPod cable hole in the inboard wall of the right-side saddlebag with a 16 mm (5/8 in) diameter hole plug (available from most automotive parts or home improvement stores).
- f. Position the iPod module (removed in Step 10b) onto the iPod module mounting bracket (Part No. 69200244), with the metal cones on one end fitting firmly into the rubber grommets in the bracket.
- g. Fasten the module to the bracket with the TORX head screw removed in Step 10b. Tighten to 1.7–2.3 N·m (15–20 in-lbs).
- h. Fasten the bracket to the saddlebag lid with three self-tapping TORX head screws (Part No. 3612). Tighten to 1.7–2.3 N·m (15–20 in-lbs).
- i. Connect the iPod module to connector [274] in the right-side saddlebag.
- j. Connect the iPod cable (Part No. 69200157) from the module to the iPod inside the saddlebag.

11. **If an XM Satellite Radio module is being mounted in the front fairing**, connect the twelve-way socket housing labeled "XM (185)" to the XM module. **If a navigation interface module (NIM) is being mounted in the front fairing**, connect the six-way socket housing labeled "NIM (275)" to the navigation module.
12. Unplug the 35-way socket housing [28B] from the back of the radio (clutch-lever side).
13. Follow instructions in the service manual appendix to unplug the secondary lock from [28B]. **For 2011 FLHXSE models:** Remove the short wires from cavities 1, 2, 24 and 25. Remove the seal pins from cavities 4, 7, 18, 27 and 30. **For 2012 FLTRXSE models:** Remove the seal pins from cavities 1, 2, 4, 7, 18, 24, 25, 27 and 30.
14. Insert the nine terminated wires from the audio harness into socket housing [28B] as follows:
 - **Green** wire into **cavity 1**
 - **Brown** wire into **cavity 2**
 - **Red/Blue** wire into **cavity 4**
 - **White** wire into **cavity 7**
 - **Black** wire into **cavity 18**
 - **Light Green/Brown** wire into **cavity 24**
 - **White/Brown** wire into **cavity 25**
 - **Black/Blue** wire into **cavity 27**
 - **Red** wire into **cavity 30**
15. Snap the secondary lock into the housing.
16. Plug socket housing [28B] into the back of the radio.
17. Use cable straps from the kit to fasten the harness legs to nearby wiring.

AUDIO SOFTWARE UPGRADE

The purchase of this kit entitles you to a specially developed sound equalization software that is used in conjunction with the Advanced Audio system. This unique equalization was designed to optimize the performance and sound response of the saddlebag speakers.

Even if this kit is not being installed by a Harley-Davidson dealer, this special equalization **software** is available without charge from your dealer through Digital Technician II. Dealer labor rates may apply for the upgrade procedure.

RETURN TO SERVICE

1. Have a Harley-Davidson dealer apply the specially developed sound equalization **software** to the vehicle to optimize the performance and sound response of the saddlebag speakers.

NOTE

*To prevent possible damage to the sound system, verify that the ignition key switch is in the OFF position **before** installing the main fuse.*

2. Verify that the ignition switch is in the OFF position. Refer to the service manual and follow the instructions to install the main fuse.

3. Test the radio and speaker controls for proper operation.
4. After the test is complete, remove the left-side saddlebag and disconnect the main fuse again. Install the wire trough cover. Install the tank per service manual instructions.
5. Install the outer fairing and windshield. Refer to the service manual. Install the main fuse, side cover and saddlebag.

▲ 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)

6. Refer to the service manual and follow the instructions to install the seat.

IN USE

A small amount of water may at times collect in the speaker cavities while parked outdoors. The saddlebag speakers are weatherproof, and the heat from speaker operation would soon evaporate the water, but there could be a temporary effect on sound quality. To promptly empty the speaker cavities, lift the saddlebag lids.

SERVICE PARTS

is07236

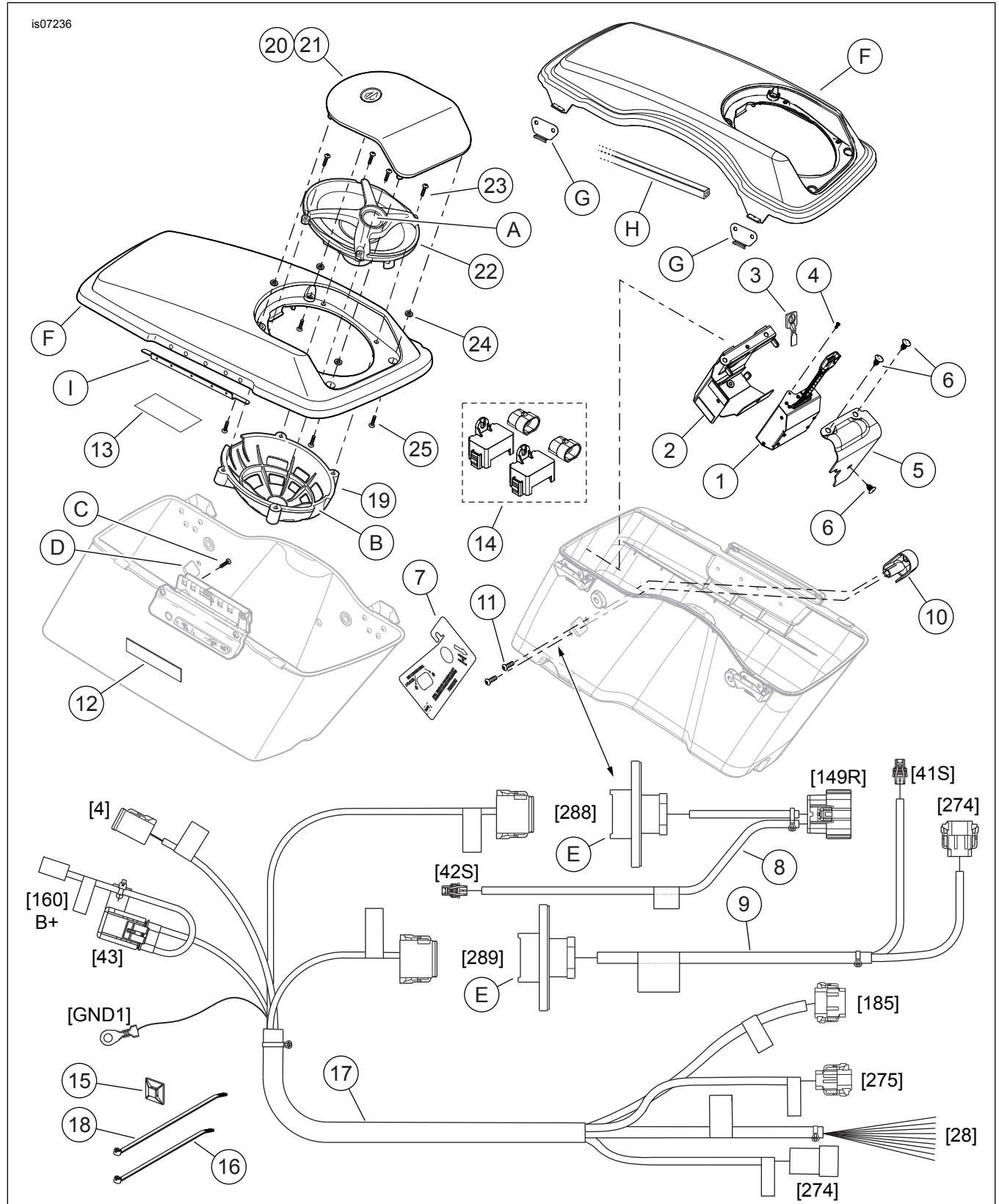


Figure 7. Service Parts, CVO Speaker Expansion Kit

SERVICE PARTS

Table 1. Service Parts, CVO Speaker Expansion Kit

Item	Description (Quantity)	Part Number
1	Amplifier	76000141
2	Amplifier bracket	76000139
3	T-stud anchor	73212-07
4	Screw, TORX, #10-24 x 12.7 mm (0.50 in) long	3658
5	Cover, amplifier	76000140
6	Clip, push-in (3)	12600068
7	Drill template, saddlebag connector	76000265
8	Harness, saddlebag jumper (left)	69200159
9	Harness, saddlebag jumper (right)	69200160
10	Plug cover (2)	69200329
11	Screw, TORX button head, 1/4-20 x 19 mm (0.75 in) long (4)	940
12	Pad, saddlebag latch (4)	Not sold separately
13	Saddlebag capacity label (2)	14000069
14	Weather cap kit	Not sold separately
15	Wire retainer, adhesive back (10)	Not sold separately
16	Cable strap, 152 mm (6.0 in) long (10)	10065
17	Audio harness	Not sold separately
18	Cable strap, 190 mm (7.5 in) long (10)	10006
19	Basket, speaker protective (2)	76000182
20	Grille, speaker (left)	76000180
21	Grille, speaker (right)	76000181
22	Speaker assembly, 5x7 (2)	76000142
23	Screw, Hi-Lo, #8-18 x 31.8 mm (1.25 in) long (8)	10200095
24	Rubber washer (8)	25700117
25	Screw, Hi-Lo, #8-18 x 19 mm (0.75 in) long (8)	10200012
Items mentioned in text, but not included in kit:		
A	Tweeter (2), part of rear speaker assemblies	
B	Large opening in speaker protective basket	
C	Saddlebag lid to bottom attaching screw (10)	
D	Panel mount connector hole in saddlebag side wall (2)	
E	12-way panel mount connector (2)	

Table 2. Service Parts, Touring Model Saddlebag Lids With Speaker Mount

Item	Description (Quantity)	Kit or Part Number
	Saddlebag Lid Kit (includes items F-I); Available separately. Not part of CVO Speaker Expansion Kit 76000275.	
F	• Lid (cover), saddlebag	Not sold separately
G	• Wear plate (2)	90962-93
H	• Gasket, cover	90675-93A
I	• Mounting bracket	12700035