



# INSTRUCTIONS

J06321

2018-11-02



## BOOM! TRIKE BODY SPEAKER INSTALLATION KIT

### GENERAL

Dealer installation is recommended.

### Kit Number

76000747A

### Models

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

### Installation Requirements

Separate purchase of more parts or accessories may be required for proper installation of this kit. These can be purchased separately from a Harley-Davidson dealer.

Amplifier Kit (part number 76000277). Instructions for amplifier installation are covered in this document.

If installing **more than TWO amplifiers**, a Battery+ Three-Way Y Connector (Part No. 70270-04A, available separately) is needed. **ONE** Battery+ Three-Way Y Connector can be used for up to three (3) more amplifiers

#### NOTE

*DO NOT mix Stage I and Stage II speakers on the same vehicle.*

#### NOTICE

**Radio EQ MUST be updated by a Harley-Davidson dealer BEFORE operating the audio system. Operating the audio system prior to radio EQ update will IMMEDIATELY damage the speakers. (00645d)**

Radio EQ update using the Digital Technician® II diagnostic tool is:

- Recommended **before** speaker INSTALLATION
- Required **before** audio system OPERATION.
- Only available through authorized Harley-Davidson dealers.

#### ⚠ 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. One is available from a Harley-Davidson dealer.*

### Electrical Overload

#### ⚠ 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)**

#### 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)**

This amplifier requires up to **8 amps** more current from the electrical system.

The purchase of this kit entitles you to a specially developed sound equalization software that is used with the Advanced Audio System. This unique equalization was designed to optimize the performance and sound response of the BOOM! Audio fairing lower speakers. Even if this kit is not 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.

### Kit Contents

See Figure 9 and Table 1.

### PREPARATION

#### ⚠ WARNING

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

1. Remove main fuse. See the service manual.
2. Remove seat. See the service manual.
3. Remove passenger grab rail. See the service manual.
4. Remove side covers. See the service manual.



- Remove body and place on protective pad. See the service manual. The fenders and Tour-Pak can remain attached to the body.

## INSTALLATION

### NOTE

The template is used for both sides of the body.

Verify that no wire harness or metal clips reside on the inside surfaces. If metal wire retention clips are present (especially on vehicle left side), use chisel and hammer to remove the clips.

- See Figure 1. Align template (1) with one side of the trike body (2). Edges of the template align to tangent edges of the body work rounds. Secure the template with tape (3). Centerpunch the eight small hole (4) locations. Mark the large hole (5) with a contrasting marker or grease pencil.

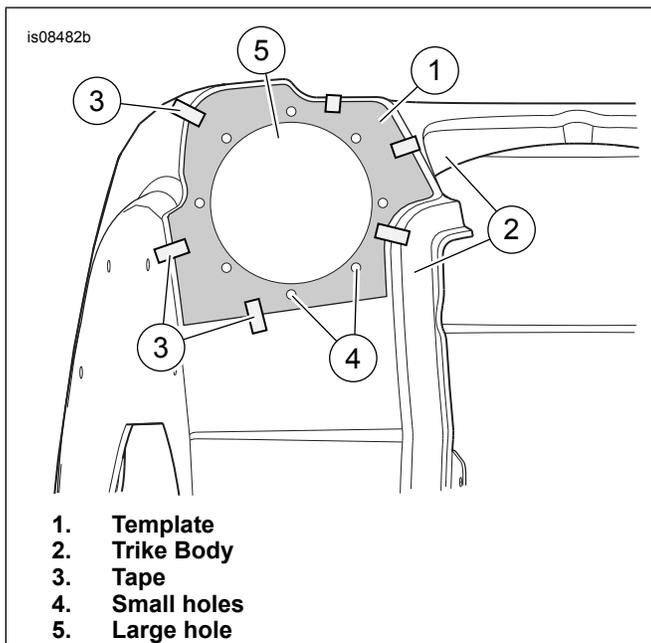


Figure 1. Template Location

- Remove the template. Use a 7/32 in (5.6 mm) drill bit to make the eight small holes. Use an air saw (or equivalent) to cut the center opening.
- Flip template and repeat previous steps for the other side.

### NOTE

If concurrent installation of Stage II Amplifier installation kit for Trike Tour-Pak pods, use rectangular template provided in that kit to cut hole for grommet. Hole in main Trike body for the left side enclosure provides greater access to use 25.4 mm (1 in) drill bit.

- Interior side only** lightly sand the surface of the body around the center and bolt hole openings verifying a good gasket surface. Proper surface preparation helps reduce buzzing, squeaking or rattling caused by the increased sound pressure of your BOOM! audio system.

- See Figure 9. Install bracket (3) to connector side of amplifier (amplifier sold separately). Secure with screws (12). Tighten.

Torque: 9.4–12.2 N·m (7–9 ft-lbs) Screw (12)

- See Figure 2. Position the amplifier and brackets (1) over the four raised pads (4 and 7). Position the connector toward the vehicle left side as shown. Center the lower holes over the lower pads (4).

- Mark the hole locations. Remove amplifier with brackets. Drill four holes with 9/32 in (7.2 mm) drill bit.

- Clean all surfaces of the body work with 50-70% isopropyl alcohol and 30-50% distilled water. Allow to dry completely.

- Speaker enclosure installation.

- See Figure 9. Place one gasket (18) on the exterior surface. Align the holes.

- Place a trim ring (14) over gasket and center hole. (Left side trim ring is marked "A". Right side trim ring is marked "B".) Rotate trim ring so the letter is at the bottom.

- Position the correct enclosure (17 or 4) with a gasket inside the body.

- Reach through the center hole. Align the holes in the enclosure, gasket (18) and body. Insert plastite screw (13) through a counterbored hole.

- Tighten plastite screw two or three turns. Enough turns to allow the enclosure to dangle.

- Insert a plastite screw in the counterbored hole opposite of the first screw. Align the enclosure, gaskets, body trim ring and screw. Rotate the screw several times to hold enclosure in place.

- Insert plastite screws in the two remaining counterbored holes. Align the enclosure, gaskets, body trim ring and screws. Rotate the screw several times to hold enclosure in place.

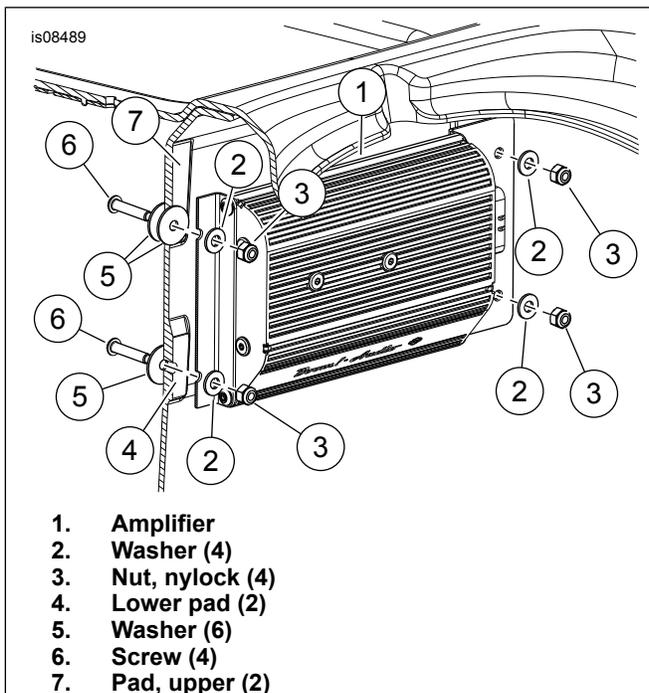
- Tighten plastite screws in an alternating pattern. Tighten.

Torque: 2.2 N·m (20 in-lbs) Plastite screw

- Repeat previous steps to install the other side enclosure and components.

- See Figure 2. Place a washer (5) on screws (6). Install through holes from the inside of the trunk. From the outside of the trunk, place an extra washer (5) over the top screws only to act as a spacer. Position the amplifier and brackets (1) over the four raised pads (4 and 7). Position the connector toward the vehicle left side. Install washers (2) over the brackets and screws. Secure with nut (3). Tighten.

Torque: 10.8–12.2 N·m (96–108 in-lbs) Nut (3)



**Figure 2. Amplifier Installation**

12. See Figure 4. Route existing wire (16).
13. Connect wire harness to amplifier.
14. See Figure 4 and Figure 5. Route harness for speakers and amplifier. Secure wires as necessary.
15. Position body onto frame. See service manual. Body can remain unsecured until all wiring is complete.

**NOTE**

*If the body is removed later for service, the harness must be disconnected from the main vehicle/frame. It may be left connected to the amplifier and speakers.*

**NOTE**

*Configure harness to match amplifier. Incorrect harness configuration can cause improper EQ file to load and damage speakers. Locate configuration wire [32] along the main harness. Verify the male and female terminals are not connected.*

**16. 2017 and 2018 models: Complete Routing harness:**

- a. Route kit harness forward along frame rails following main harness under backbone.
- b. Route harness along the right side of battery cavity between the battery and reverse solenoid. Place the red fuse wire and black ground wire in front of the battery.
- c. See Figure 3. Locate the 2-way Delphi CAN connector [319B] (1) under the right side cover.
- d. The cap is a terminating resistor pack secured to the electrical caddy. Remove connector [319B] (1) from the resistor pack.

- e. Connect [319A] from the harness provided with the kit (See Figure 5 item 7) to [319B] (1) of the vehicle.
- f. If this is the only (rear) amplifier connection in this installation, connect the [319B] (1) side of the harness C from the kit back into the terminating resistor pack from step "B" above. If multiple rear amplifiers are used, daisy chain [319B] from this harness to [319A] of the next amplifier harness. Always verify that the remaining connector [319B] is connected to the terminating resistor of the vehicle.

**17. 2019 and Later models: Complete Routing harness:**

- a. Route kit harness forward along frame rails following main harness under backbone.
- b. Separate the three cable ties that holds the connector [319B] (1) harness.
- c. See Figure 3. Route [319B] (1) and [319A] connector along then under the frame to the left side location of the CAN vehicle connector.
- d. Route the remaining portion of the harness along the right side of battery cavity between the battery and reverse solenoid.
- e. Place the red fuse wire and black ground wire in front of the battery.
- f. See Figure 3. Locate the 2-way Delphi CAN connector [319B] (1) under the right side cover.
- g. The cap is a terminating resistor pack secured to the electrical caddy. Remove connector [319B] (1) from the resistor pack.
- h. Connect [319A] from the harness provided with the kit (See Figure 5 item 7) to [319B] (1) of the vehicle.
- i. If this is the only (rear) amplifier connection in this installation, connect the [319B] (1) side of the harness C from the kit back into the terminating resistor pack from step "B" above. If multiple rear amplifiers are used, daisy chain [319B] from this harness to [319A] of the next amplifier harness. Always verify that the remaining connector [319B] is connected to the terminating resistor of the vehicle.

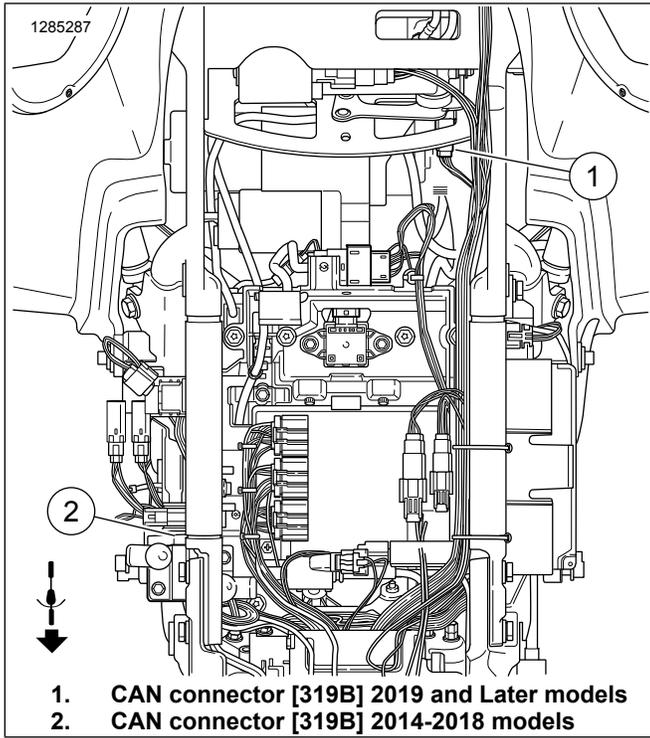
**18.**

- a. Locate connector [299] on the vehicle (under the inner faring, see service manual for location). This connector may already be connected to a faring amplifier.
- b. Install 69200921 "Y" (See Figure 8 ) to vehicle side [299], with one end to the faring amplifier harness.
- c. Install the 69201545 jumper (See Figure 7 ) to the other end of the 69200921 "Y" inside the faring. (If a 69201545 jumper has already been installed on vehicle skip ahead to "e" Do not install more than one 69201545 jumper.)

- d. Route the 69201545 jumper through the inner fairing and into the wire trough following the Fairing harness routing.
- e. Locate the end of the 69201545 jumper under the right side cover near the [319] connectors. If a 69201545 is present from a prior install use a 69200921 "Y" under the right side cover to connect [299].

**NOTE**

If more than one amplifier is installed in rear of vehicle, up to two 69200921 connectors may be used.



**Figure 3. CAN Connector [319B]**

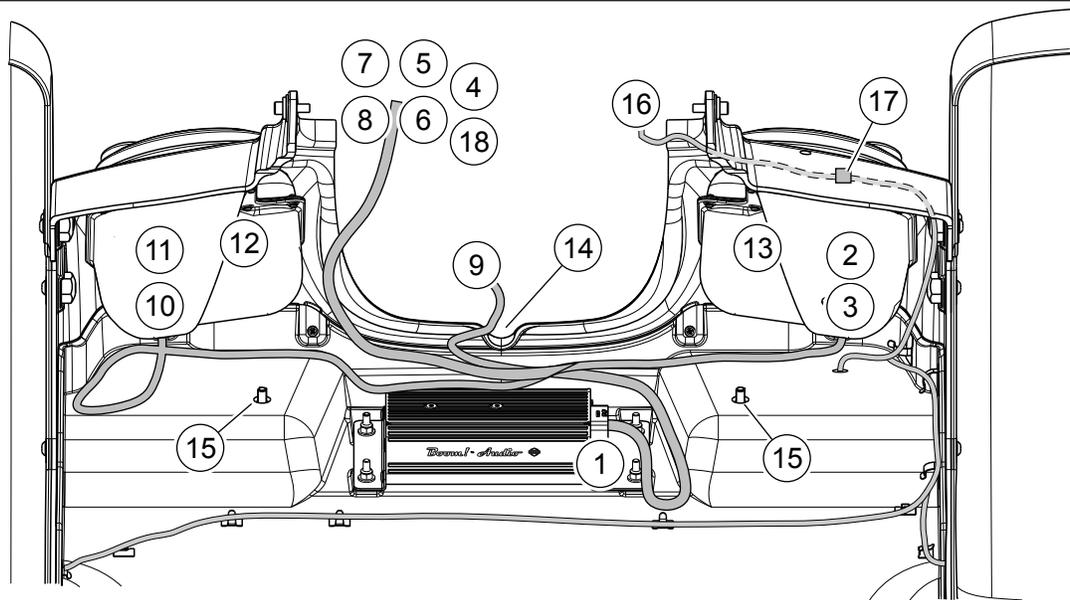
- 19. Attach (+) and (-) battery cables.

**NOTE**

If concurrent installation of Stage II Amplifier installation kit for Trike Tour-Pak pods, attach connector [319B] of one harness to the Original Equipment (OE) vehicle. Connect [319A] of the first harness into [319B] of the second harness and route in front of the battery compartment. Route [319A] of the second harness over to the side cover to serve as the new Digital Tech input. Which harness is designated the first or second harness is not relevant.

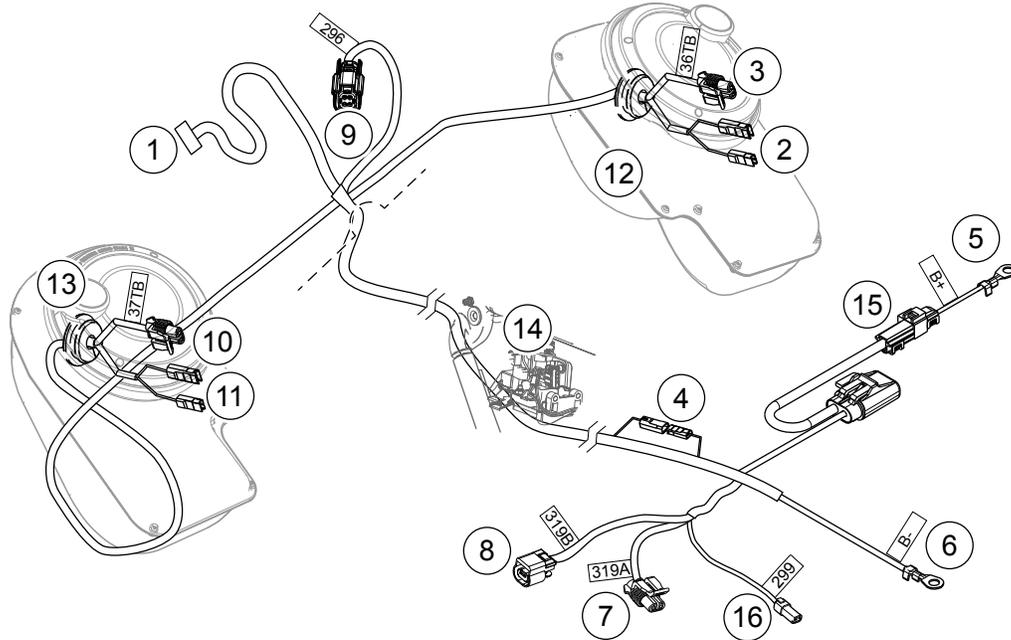
- 20. Connect amplifier input:

- a. **Stage I 6-speaker configuration:** Install harness [296] directly into the 16-way harness (previously installed through fairing amplifier kit), located behind the passenger seat. **Stage II 6-speaker configuration:** Install 3-way interconnect harness (item 15, Figure 9 ) into the 16-way harness (previously installed through fairing amplifier kit), located behind the passenger seat. Install harness [296] into 3-way interconnector.



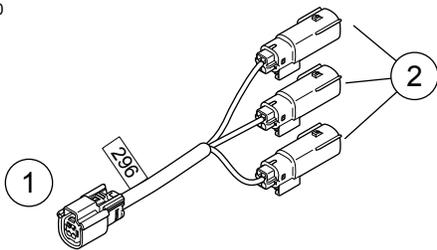
- |   |  |
|---|--|
| 1. Amplifier connector  | 10. Left side speaker mid/tweeter [37TB] |
| 2. Right side speaker woofer connectors   | 11. Left side speaker connectors         |
| 3. Right side speaker mid/tweeter connector [36TB]  | 12. Left side speaker enclosure          |
| 4. Amp configuration setting connector [32]   | 13. Right side speaker enclosure         |
| 5. Positive battery terminal [B+]   | 14. Center notch                         |
| 6. Negative battery terminal [B-]   | 15. Body mounting hardware               |
| 7. New CAN connector [319A] to OE harness   | 16. Wire, existing                       |
| 8. CAN connector [319B] to terminating resistor, or daisy chain to additional amplifier harness | 17. Wire bracket, existing               |
| 9. Audio input connector [296]  | 18. Accessory/ignition power [299]       |

Figure 4. Wire Harness (viewed from bottom up)



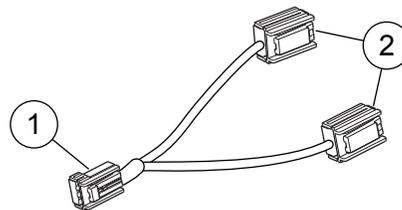
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|---|--|
| <ol style="list-style-type: none"> <li>1. Amplifier connector</li> <li>2. Left side speaker (woofer) connectors</li> <li>3. Left side speaker (mid/tweeter) connector [36TB] (stage II only)</li> <li>4. Inline configuration wire connector</li> <li>5. Positive battery terminal [B+]</li> <li>6. Negative battery terminal [B-]</li> <li>7. New CAN connector [319A] to OE harness</li> <li>8. CAN connector [319B] to terminating resistor, or daisy chain to additional amplifier harness</li> </ol> | <ol style="list-style-type: none"> <li>9. Audio input connector [296]</li> <li>10. Right side speaker (mid/tweeter) connector [37TB] (stage II only)</li> <li>11. Right side speaker (woofer) connectors</li> <li>12. Left side speaker enclosure</li> <li>13. Right side speaker enclosure</li> <li>14. Right side frame tube and reverse module</li> <li>15. Inline B+ connector [160A/B]</li> <li>16. Accessory/ignition power [299]</li> </ol> |
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Figure 5. Wire Harness and Connectors



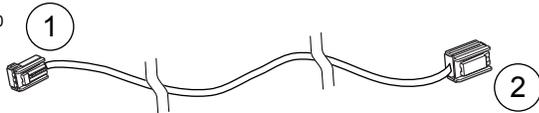
1. Radio rear channel output connector [296]
2. Audio input connector (3)

Figure 6. Audio Input and Output Wire Harness



1. Accessory power [299B]
2. Accessory power [299A]

Figure 8. Accessory Power Wire Harness



1. Accessory power [299A]
2. Accessory power [299B]

Figure 7. Wire Harness, Jumper

**NOTICE**

Radio EQ **MUST** be updated by a Harley-Davidson dealer **BEFORE** operating the audio system. Operating the audio system prior to radio EQ update will **IMMEDIATELY** damage the speakers. (00645d)

21. Install the body. See the service manual.
22. Install passenger grab rail. See the service manual.
23. Install side covers. See the service manual.
24. See the service manual. Install seat. After installing seat, pull up on the seat to verify that it is secure.
25. Install main fuse. See the service manual.

## DIGITAL TECHNICIAN NOTES

1. With the harness configured properly, the amplifier installed in this kit is recognized as AMP 2. Even though this amplifier may be the second or third amplifier physically installed. See Figure 5 In order for Digital Technician to recognize amplifier 2 connector (4) See must be unplugged.

- When used with Stage I speakers, channels 3 & 4 shows open. Channel 1 is left speaker, channel 2 is right speaker.
- When used with Stage II speakers: channel 1 is left woofer. Channel 2 is right woofer, channel 3 remains mid/tweeter, channel 4 is right mid/tweeter.

## SERVICE PARTS

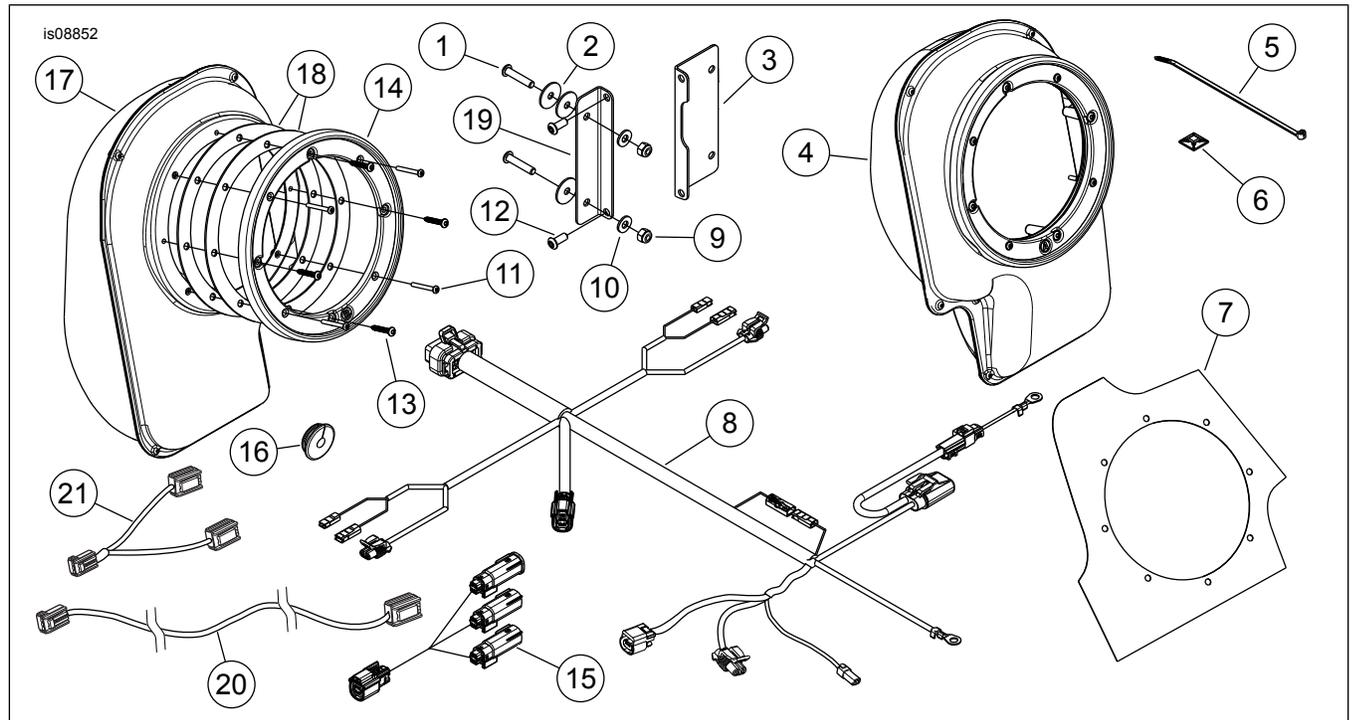


Figure 9. Service Parts, Speaker Expansion Installation Kit

Table 1. Service Parts

Item	Description (Quantity)	Part Number
1	Screw (4)	2513
2	Washer (6)	6036
3	Bracket, amp mount, connector side	Not sold separately
4	Speaker enclosure, left side	Not sold separately
5	Tie strap (9)	10006
6	Bracket, wire retainer (4)	69200342
7	Template	76000628
8	Wire harness, amplifier	Not sold separately
9	Nut, nylock	7686
10	Washer (4)	6110
11	Screw (8)	2963
12	Screw (4)	926
13	Screw, plastite (8), #8-16 x 1 in.	Not sold separately
14	Trim ring, (left "A")	76000612
	Trim ring, (right "B")	76000611
15	Wire harness, audio input	Not sold separately
16	Grommet, round (2)	12100071
17	Speaker enclosure, right side	Not sold separately
18	Gasket, speaker enclosure (4)	76000619
19	Bracket, amp mount, non-connector side	Not sold separately
20	Jumper harness	96201545
21	Power connector	69200921

## Wiring Diagram Information

### Wire Color Codes

**For Solid Color Wires:** See Connector/Wiring Diagram Symbols (Typical). The alpha code identifies wire color.

**For Striped Wires:** The code is written with a slash (/) between the solid color code and the stripe code. For example, a trace labeled GN/Y is a green wire with a yellow stripe.

### Wiring Diagram Symbols

See Connector/Wiring Diagram Symbols (Typical). Brackets [ ] indicate connector numbers. The letter inside the brackets identifies whether the housing is a socket or pin housing.

**A=Pin:** The letter A and the pin symbol after a connector number identifies the pin side of the terminal connectors.

**B=Socket:** The letter B and the socket symbol after a connector number identifies the socket side of the terminal connectors. Other symbols found on the wiring diagrams include the following:

**Diode:** The diode allows current flow in one direction only in a circuit.

**Wire break:** The wire breaks are used to show option variances or page breaks.

**No Connection:** Two wires crossing over each other in a wiring diagram that are shown with no splice indicating they are not connected together.

**Circuit to/from:** This symbol indicates a complete circuit diagram on another page. The symbol is also identifying the direction of current flow.

**Splice:** Splices are where two or more wires are connected together along a wiring diagram. The indication of a splice only indicates that wires are spliced to that circuit. It is not the true location of the splice in the wiring harness.

**Ground:** Grounds can be classified as either clean or dirty grounds. Clean grounds are identified by a (BK/GN) wire and are normally used for sensors or modules.

#### NOTE

*Clean grounds usually do not have electric motors, coils or anything that may cause electrical interference on the ground circuit.*

Dirty grounds are identified by a (BK) wire and are used for components that are not as sensitive to electrical interference.

**Twisted pair:** This symbol indicates that the two wires are twisted together in the harness. This minimizes the circuit's electromagnetic interference from external sources. If repairs are necessary to these wires, they should remain as twisted wires.

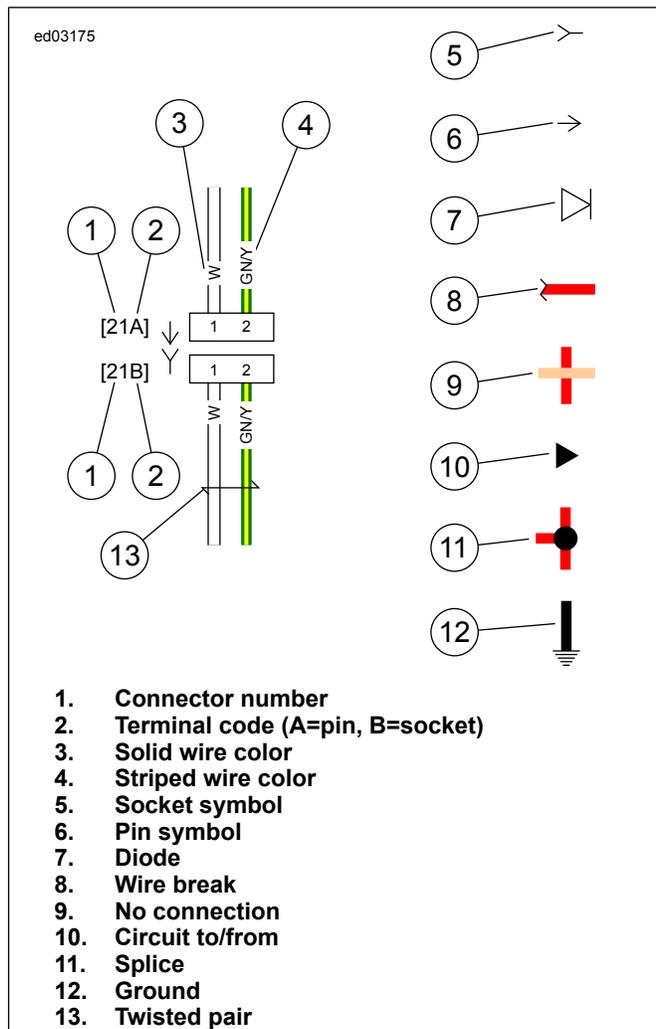
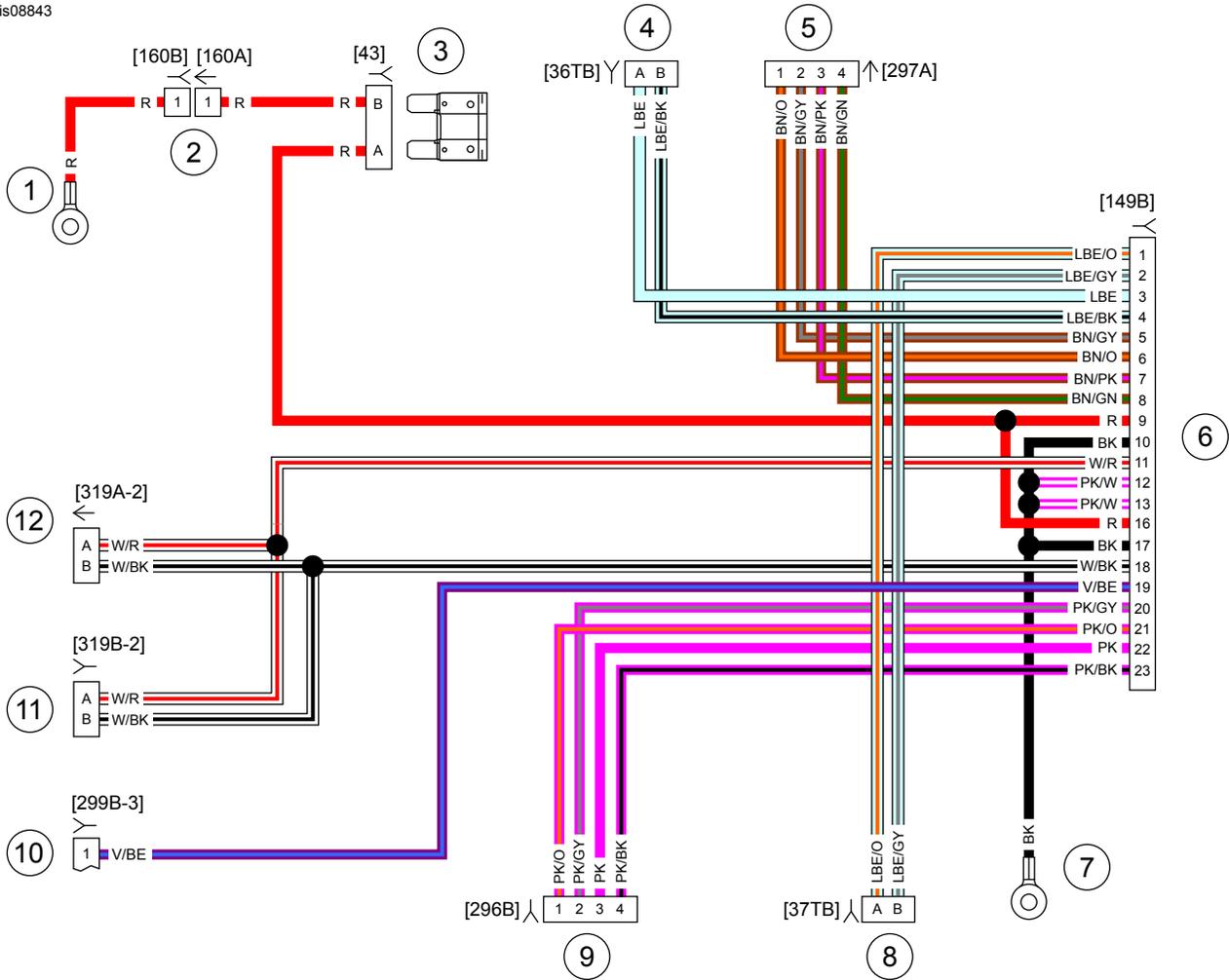


Figure 10. Connector/Wiring Diagram Symbols

Table 2. Wire Color Codes

ALPHA CODE	WIRE COLOR
BE	Blue
BK	Black
BN	Brown
GN	Green
GY	Gray
LBE	Light Blue
LGN	Light Green
O	Orange
PK	Pink
R	Red
TN	Tan
V	Violet
W	White
Y	Yellow



- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>1. Positive ring terminal [B+]</li> <li>2. Inline B+ connector [160A/B]</li> <li>3. Amplifier fuse</li> <li>4. Right side speaker (mid/tweeter) connector [36TB]</li> <li>5. Rear speaker pod woofer [297A]</li> <li>6. Fairing amplifier connector [149B]</li> </ul> | <ul style="list-style-type: none"> <li>7. Negative ring terminal [B-]</li> <li>8. Left side speaker (mid/tweeter) connector [37TB]</li> <li>9. Amplifier input [296B]</li> <li>10. Accessory/ignition power [299B]</li> <li>11. CAN connector [319B]</li> <li>12. CAN connector [319A]</li> </ul> |
|--|---|

Figure 11. Main Amplifier Wiring Harness (Fairing)

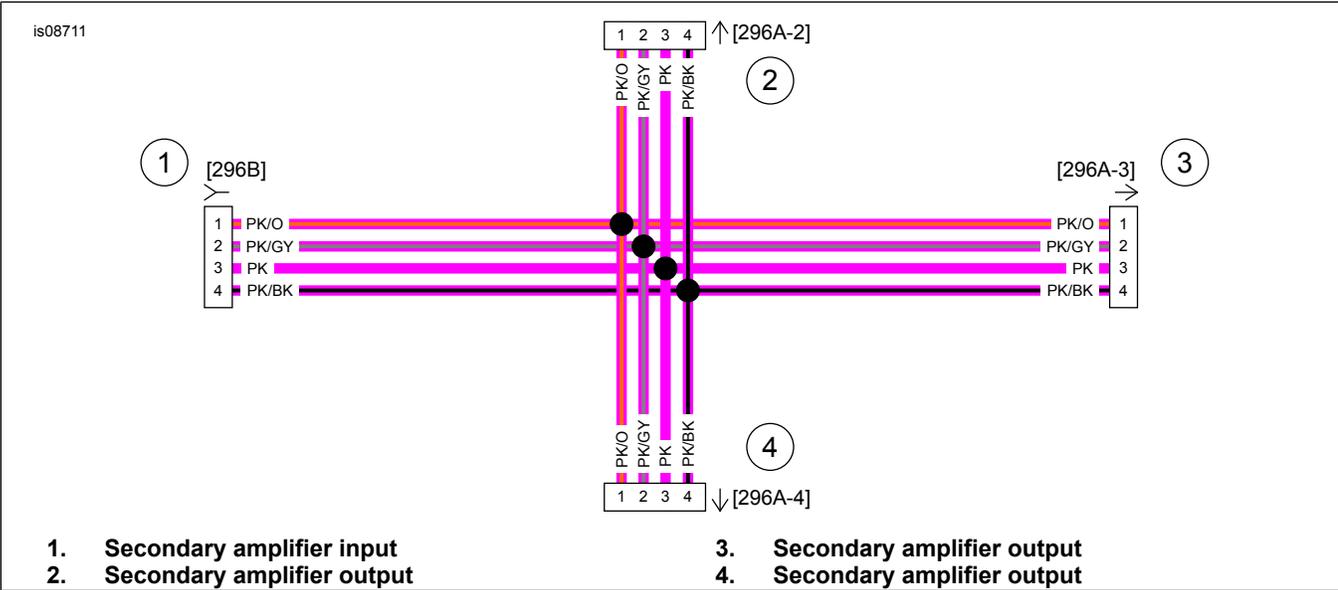


Figure 12. Audio Input Harness

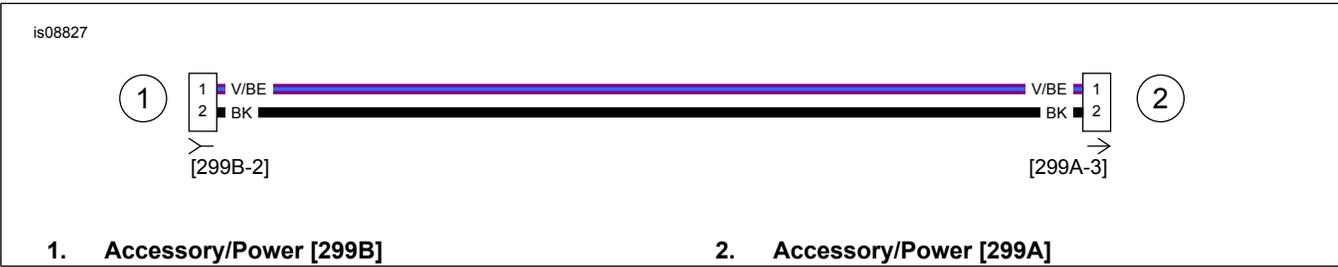


Figure 13. Rear Jumper Wire Harness

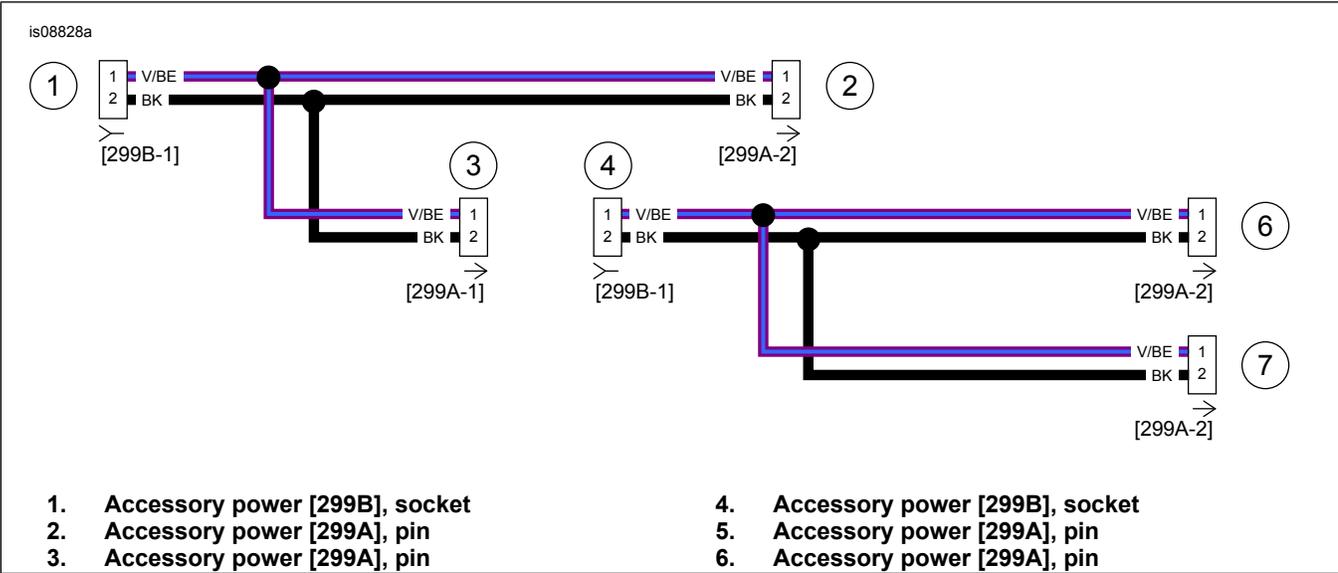


Figure 14. Accessory Power Harness