



INSTRUCTIONS

-J06320

2016-05-12

BOOM! AUDIO TOUR-PAK SPEAKER INSTALLATION KIT

GENERAL

Dealer installation is recommended.

Kit Number

76000746

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

Amplifier Kit (part number 76000277).

Loctite[®] 243 Threadlocker and Sealant - Blue (Part No. 99642-97).

These speakers are for use **ONLY** on **2014 and later** Harley-Davidson audio systems. Using these speakers on **2006-2013** Harley-Davidson audio systems **WILL permanently damage these speakers**. Using these speakers on **2005 or earlier** Harley-Davidson audio systems **WILL permanently damage those systems**.

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

The rider's safety depends 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. (00333a)

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 your 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. See an authorized Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories or for necessary wiring changes. (00211c)

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. 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.

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

Kit Contents

See Figure 7 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.
5. Remove trunk liner. See the service manual.
6. Remove trunk door wire harness. Remove trunk plastic panel. Unroute harness. See the service manual.
7. Remove body and place on protective pad. See the service manual. The fenders and Tour-Pak can remain attached to the body.

-J06320

Many Harley-Davidson[®] Parts & Accessories are made of plastics and metals which can be recycled. Please dispose of materials responsibly.

1 / 8

8. Remove speakers from Tour-Pak pods. Cover speaker spade terminals with electrical tape. All speaker connections are available on new harness. See the service manual.

INSTALLATION

NOTE

If concurrent installation of kit Stage I or II Speaker Expansion Kit for Trikes, cut hole in body for left speaker enclosure. This hole in main Trike body provides greater access for cutting grommet hole.

1. Cut hole for rectangular grommet (9). See Figure 1.
 - a. Remove and discard grommet from existing hole (4). Align template (5) over existing hole so the upper right of the template edge aligns with hole. The existing hole becomes the upper edge of the new rectangular hole.
 - b. Trace the template. Center punch the three corner holes.
 - c. Drill 13 mm (0.50 in) diameter hole in the center punch locations.
 - d. Use an air saw (or equivalent) to cut the traced opening.

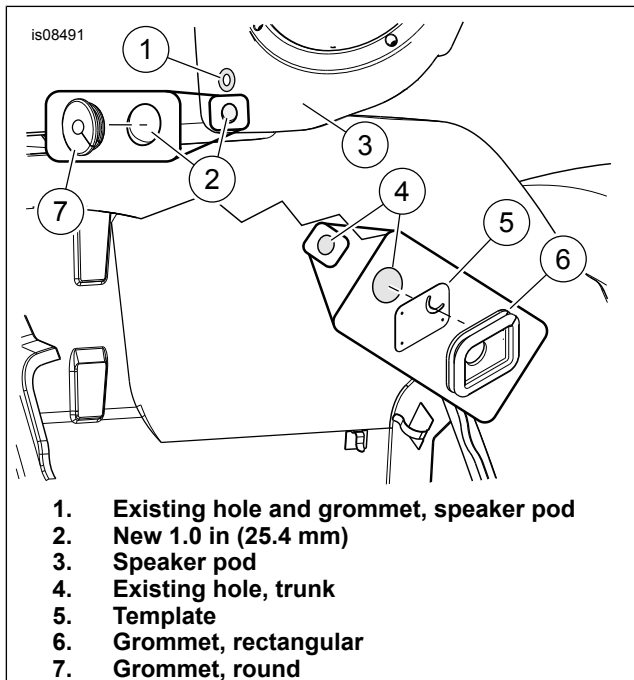


Figure 1. Grommet Installation

2. Lightly sand the body around the grommet hole.
3. Use a step drill to create a new 25.4 mm (1.0 in) hole (2) the speaker pod (3). This hole is used for the new harness.
4. Clean all surfaces of the body work with 50-70% isopropyl alcohol and 30-50% distilled water. Allow to dry completely.
5. See Figure 7. Attach brackets (4 and 8) to amplifier (amplifier sold separately). Secure with screws (6). Tighten to 9.4–12.2 N·m (7–9 ft-lbs).

6. Install amplifier:
 - a. See the service manual. Remove Tour-Pak nuts. Discard the four front nuts.
 - b. See Figure 2. Position amplifier and brackets (2) over the four studs (1). Place a drop of 243 thread lock on special nuts (3). Tighten special nuts to 6.8–8.1 N·m (60–72 in-lbs).

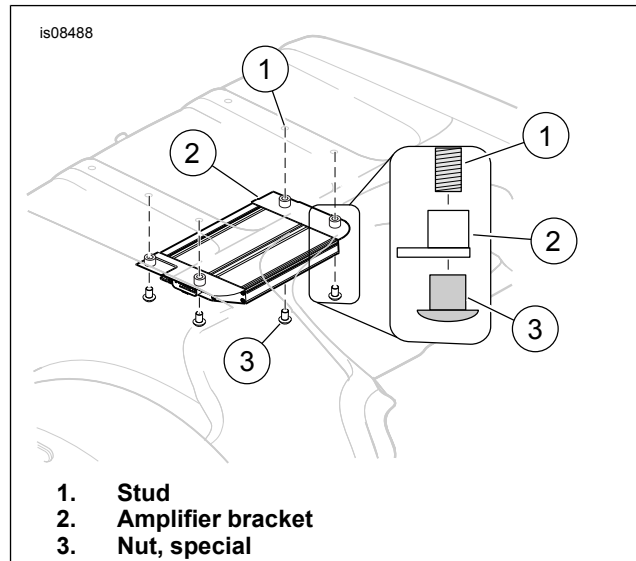


Figure 2. Amplifier Installation

7. See Wire Harness . Route wire harness to speaker pods (12 and 13) and through grommets (7).
8. Route wire harness through grommet (9) and to amplifier. Attach harness to amplifier.
9. See Figure 1. Install round grommets. Install rectangular grommet.
10. Install stage II speakers:
 - a. Install spade terminals from wire harness to the back of speakers. Connectors are different sizes for (-) and (+).
 - b. Install stage II connector (3 and 11) to the back of tweeter/grille combo.
 - c. Rotate tweeter/grille so the tweeter is outward of the vehicle center line.

NOTE

If concurrent installation of kit Trike Body Mounted Speaker Expansion Kit, verify that all amplifier mounting steps and harness routing are complete before attaching body to the frame.

- d. Install grilles securing with screws. tighten screws to 1.6 N·m (15 in-lbs).

NOTE

If the body is removed later for service, the harness must be disconnected from the main vehicle/frame. It can remain connected to the amp 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 and connect male and female terminals.

11. Position body onto frame. See service manual. Body can remain unsecured until all wiring is complete.

12. Complete Routing harness: See Figure 3.

- a. Route kit harness forward along right side frame tube (14).
- b. Route harness along the right side of battery cavity between the battery and reverse module. Place the red fuse wire and black ground wire in front of the battery.
- c. 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] from the resistor pack.
- e. Connect [319A] from the harness provided with the kit (See Figure 4 item 7) to [319B] of the vehicle.
- f. If this is the only (rear) amplifier connection in this installation, connect the [319B] side of the harness (See Figure 4 item 8) from the kit back into the terminating resistor pack from step "B" above.

13.

- a. Locate connector 299 on the vehicle (under the inner fairing, see service manual for location). This connector may already be connected to a faring amplifier.
- b. Install 69200921 "Y" to vehicle side 299, with one end to the faring amplifier harness.
- c. Install the 69201545 jumper to the other end of the 69200921 "Y" inside the fairing. (If a 69201545 jumper has already been installed on vehicle skip ahead to "f" Do not install more than one 69201545 jumper.)
- d. Route the 69201545 jumper through the inner fairing and into the wire trough following the Faring harness routing.

- e. Locate the end of the 69201545 jumper under the RH side cover near the [319] connectors. If a 69201545 is present from a prior install use a 69200921 "Y" under the RH side cover to connect [299].

NOTE

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

- f. Attach (+) (5) and (-) (6) battery cables. If necessary, use 3-way B+ connector for the (+) terminal.

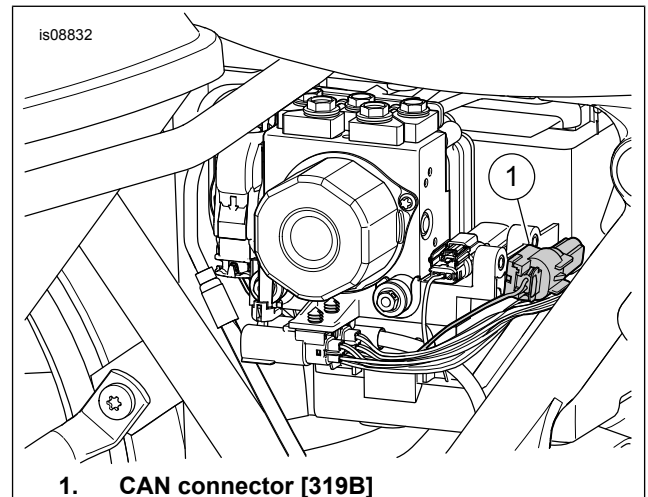
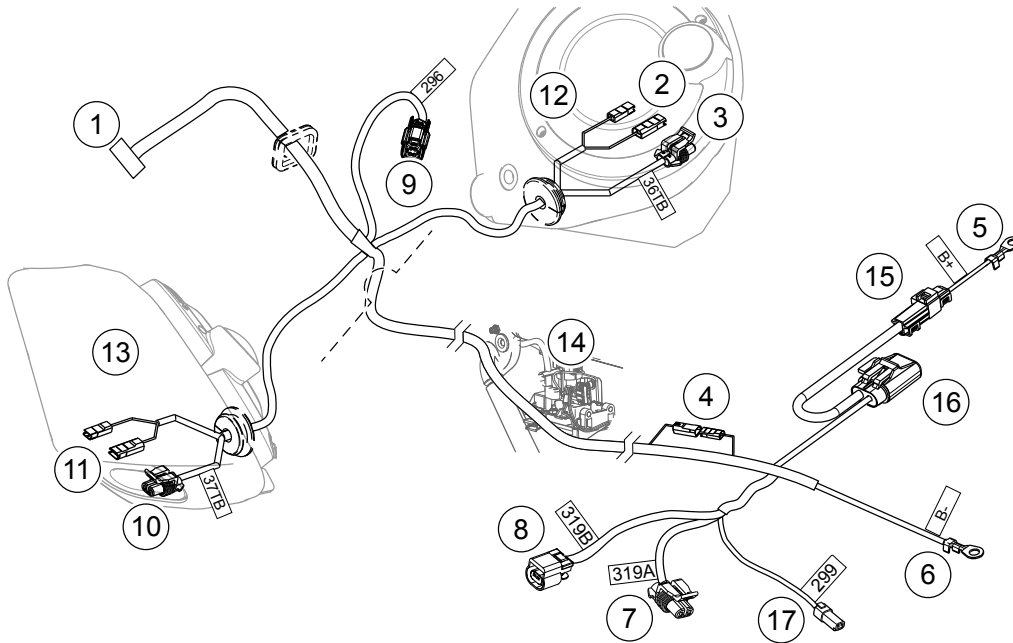


Figure 3. CAN Connector [319B], Under Right Side Cover

14. Connect amplifier input:

- a. **Stage II 4-speaker configuration:** Install harness (9) [296] directly into the 16-way harness (previously installed through fairing amplifier kit), located behind the passenger seat. **Stage II 6-speaker configurations** Install 3-way interconnect harness into the 16-way harness (previously installed through fairing amplifier kit), located behind the passenger seat. Install harness (9) [296] into 3-way interconnector.

15. Secure wire harness with cable straps as needed.



- | | |
|---|---|
| <ul style="list-style-type: none"> 1. Amplifier connector [149] 2. LH Speaker woofer connectors 3. LH Speaker mid/tweeter connector [36TB] 4. Inline configuration wire connector 5. Positive battery terminal [B+] 6. Negative battery terminal [B-] 7. New CAN connector [319A] to OE harness 8. CAN connector [319B] to terminating resistor, or daisy chain to additional amplifier harness 9. Audio input connector [296] | <ul style="list-style-type: none"> 10. RH Speaker mid/tweeter [37TB] 11. RH Speaker woofer connectors 12. Left side speaker pod 13. Right side speaker pod 14. Right side frame tube and reverse module 15. Inline B+ connector 16. Amplifier fuse 17. Accessory/ignition power [299] |
|---|---|

Figure 4. Wire Harness

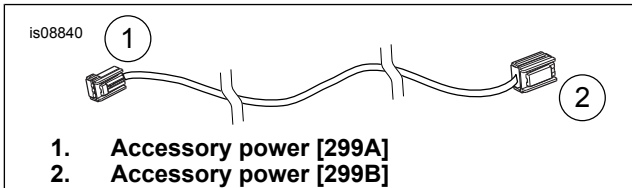


Figure 5. Wire Harness, Jumper

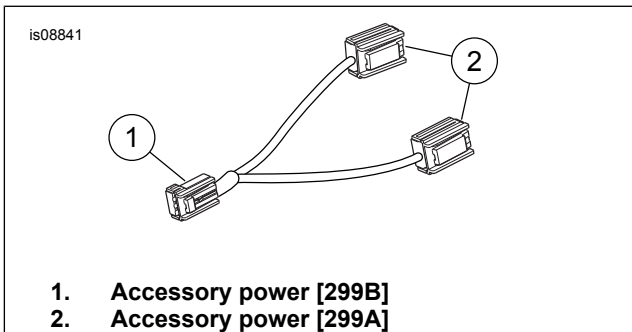


Figure 6. Accessory Power Wire Harness

COMPLETION

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)

1. Install the body. See the service manual.
2. Install passenger grab rail. See the service manual.
3. Install side covers. See the service manual.
4. See the service manual. Install seat. After installing seat, pull up on the seat to verify that it is secure.
5. 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 4. Even though this amplifier is the second or third amplifier physically installed.
2. Channel 1 is left woofer. Channel 2 is right woofer. Channel 3 is left mid/tweeter. Channel 4 is right mid/tweeter.

SERVICE PARTS

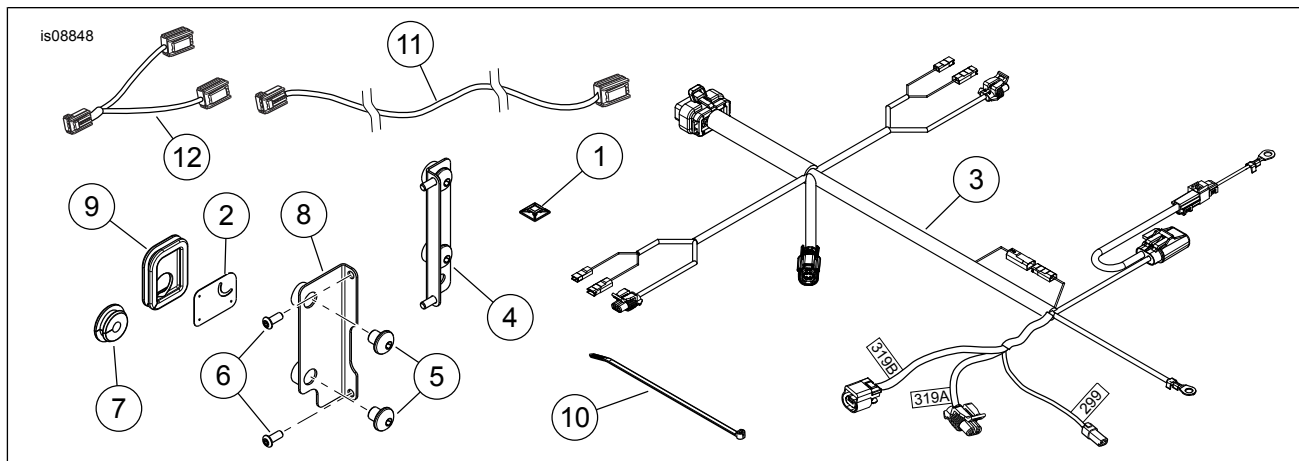


Figure 7. Service Parts, Tour-Pak Speaker Installation Kit

Table 1. Service Parts

| Item | Description (Quantity) | Part Number |
|------|-------------------------------|---------------------|
| 1 | Bracket, wire retainer (4) | 69200342 |
| 2 | Template, Tour-Pak harness | 69201285 |
| 3 | Wire harness, trunk amplifier | Not sold separately |
| 4 | Amplifier bracket | Not sold separately |
| 5 | Nut (4) | 10400027 |
| 6 | Screw (4) | 962 |
| 7 | Grommet, round (2) | 12100071 |
| 8 | Amplifier bracket | Not sold separately |
| 9 | Grommet, rectangular, body | 12100072 |
| 10 | Cable strap (6) | 10006 |
| 11 | Jumper harness | 69201545 |
| 12 | 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.

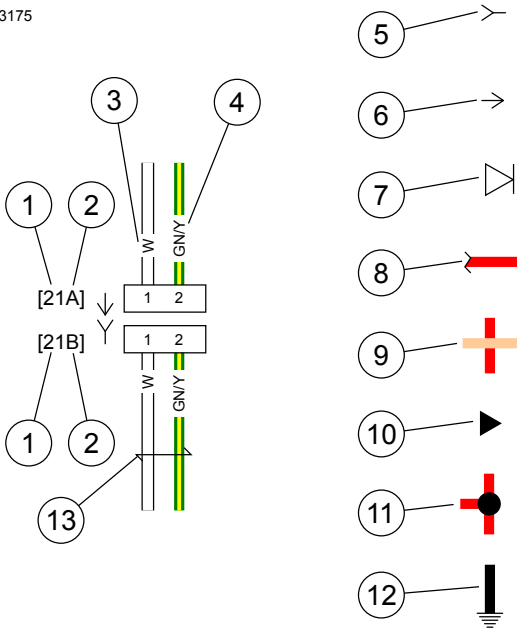
Ground: Grounds can be classified as either clean or dirty grounds. Clean grounds are identified by a (BK/GN) wire and are normally used for sensors or modules.

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.



- 1. Connector number
- 2. Terminal code (A=pin, B=socket)
- 3. Solid wire color
- 4. Striped wire color
- 5. Socket symbol
- 6. Pin symbol
- 7. Diode
- 8. Wire break
- 9. No connection
- 10. Circuit to/from
- 11. Splice
- 12. Ground
- 13. Twisted pair

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 |

Figure 8. Connector/Wiring Diagram Symbols

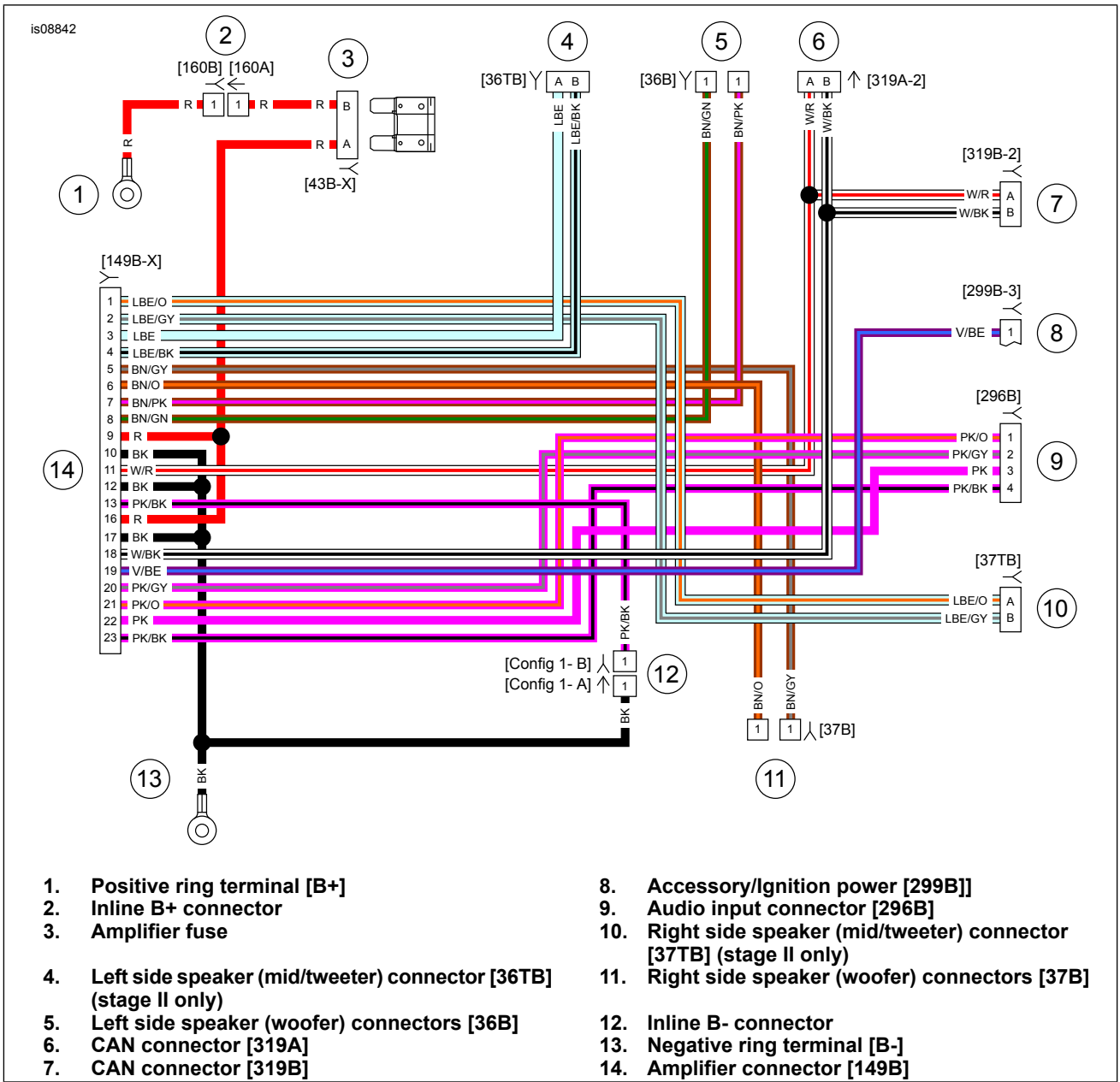


Figure 9. Main Amplifier Wiring Schematic

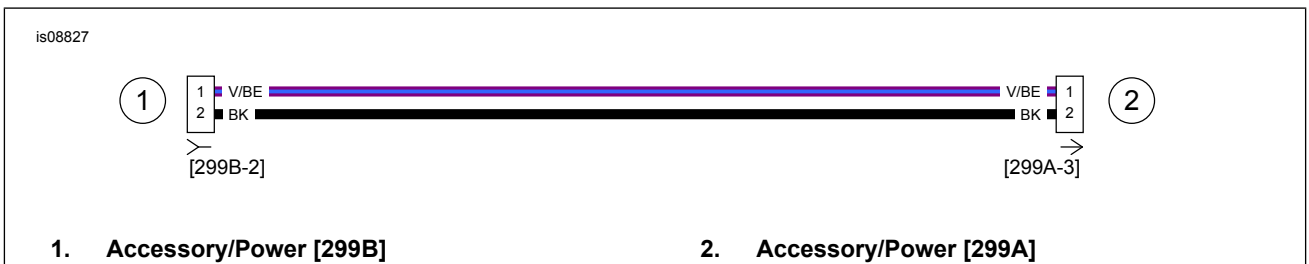
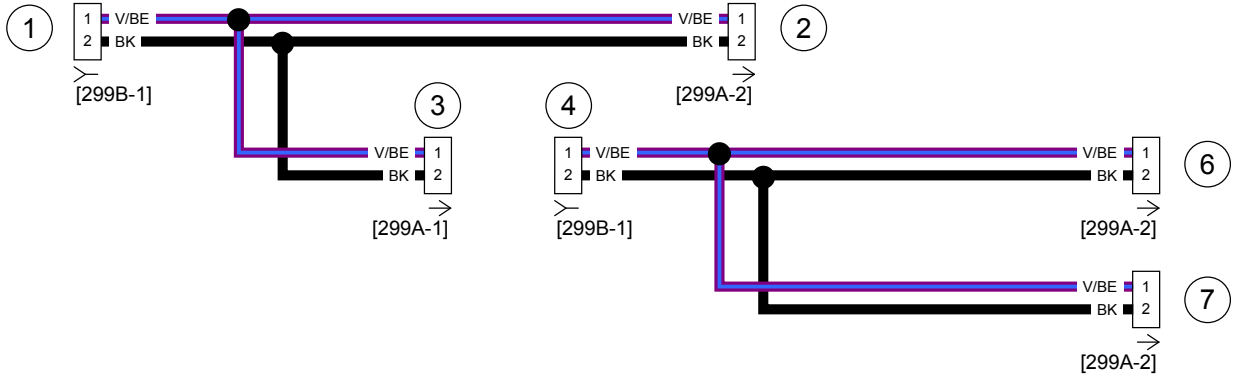


Figure 10. Rear Jumper Wire Harness



- 1. Accessory power [299B], socket
- 2. Accessory power [299A], pin
- 3. Accessory power [299A], pin

- 4. Accessory power [299B], socket
- 5. Accessory power [299A], pin
- 6. Accessory power [299A], pin

Figure 11. Accessory Power Harness