

Preparation

**Part Number: PTS20-34040 (VSE)
PTS20-34042 (JBL Wire Harness)**

NOTE: Part number of this accessory may not be the same as the part number shown.

VSE Kit Contents

Item #	Quantity Req'd.	Description
1	1	Vehicle Specific Enclosure (VSE) Subwoofer
4	1	Product Feature Placard
5	1	Service Care Card

Wire Harness Bag Contents

Item #	Quantity Req'd.	Description
1	1	JBL Audio VSE Wire Harness
2	1	Instruction sheet
3	4	7" Wire Ties
4	2	Foam Tape
5	1	10mm Ground Bolt

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1		

Conflicts

None:

Recommended Tools

Personal & Vehicle Protection	Notes
Vehicle Protection	Seat/Floor Covers
Part Protection	Blankets
Special Tools	Notes
Installation Tools	Notes
Panel Removal Tool	Nylon Removal Tool (NRT)
Socket/Ratchet	10mm
Socket Extension	6 inch (optional)
Torque Wrench	3 lbf-ft , and 10 lbf-ft
Pliers	1. Diagonal Cutters 2. Long Nose (optional)
Screwdriver (Manual or Electric)	Magnetized Philips # 2
Clip Removal Tool	
Special Chemicals	Notes
Cleaner	3M™ Prep Solvent-70 (if required)

General Applicability

All Tundra D-Cab Grades w/JBL AUDIO

Recommended Sequence of Application


Item #	Accessory
1a	Install Security/Audio
1b	Install VSE Subwoofer
2	Install Molded Dash


*Mandatory


Vehicle Service Parts (may be required for reassembly)


Item #	Quantity Req'd.	Description
1		


Legend

 **STOP:** Damage to the vehicle may occur. Do not proceed until process has been complied with.

 **OPERATOR SAFETY:** Use caution to avoid risk of injury.

 **CAUTION:** A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.

 **TOOLS & EQUIPMENT:** Used in Figures calls out the specific tools and equipment recommended for this process.

 **REVISION MARK:** This mark highlights a change in installation with respect to previous issue.

Bass Tube Specifications

Woofers Size	6"
Voice Coil Size	1"high power/high temp.
Magnet Size	15 oz.
Frequency Response	39 – 85 hz.
Efficiency	105dB
Power Handling	100 watts
Dimensions	18.125" x 8.5" x 10"
Weight	14 lbs.
Impedance	2 ohms DVC

Procedure

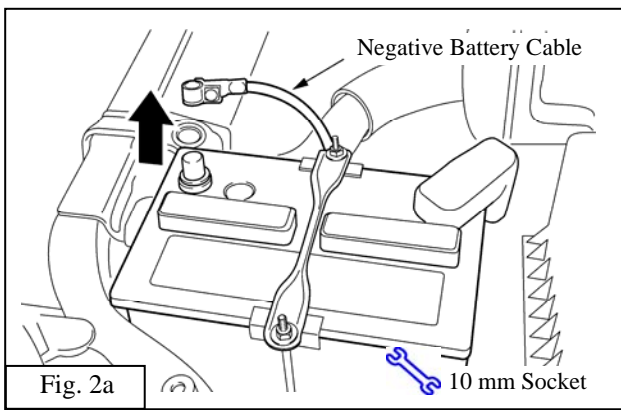
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

These guidelines can be found in the "Accessory Installation Practices" document.

This document covers such items as:-

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

Please see your Toyota dealer for a copy of this document.



1. Pre-installation Precautions

- STOP** (a) Use Seat & Floor Protectors and Fender Covers/Blankets to avoid damage to surfaces. Operator Safety Warning (if applicable.)
- STOP** (b) Place all removed parts on a protective surface.

2. Battery Disconnect

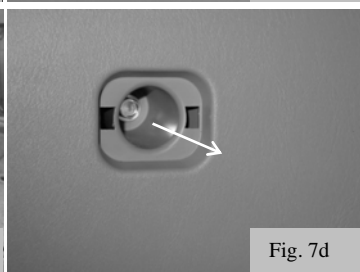
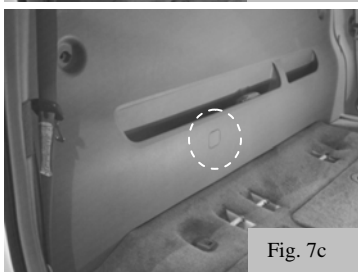
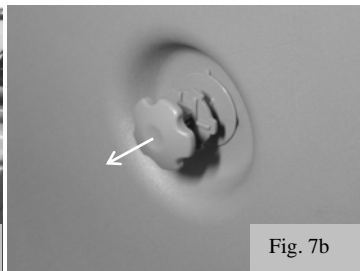
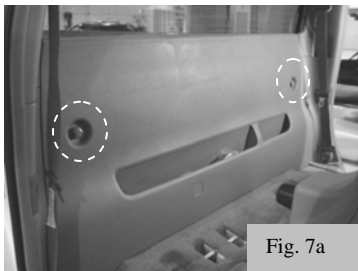
- (a) Remove the NEGATIVE (-) battery terminal using a 10mm socket before any disassembly starts. (Fig. 2a).

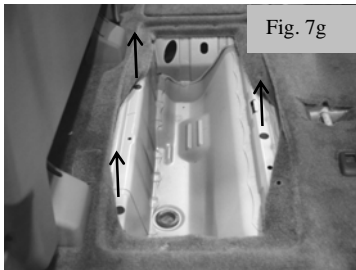
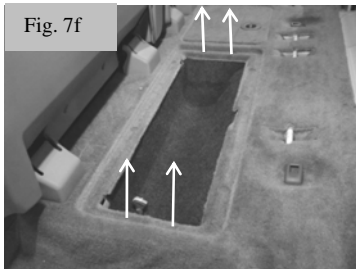
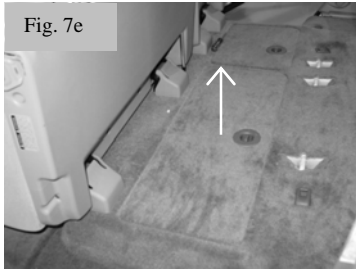
3. Disassemble Driver Rear Scuff Plate

- (a) Remove driver side rear scuff plates by removing the 3 Phillips screws and carefully pulling upward. (Fig. 6c)

4. Remove Rear Cab Panel

- (a) Slide the front seats forward.
- (b) Tumble both the passenger and drivers' rear seats forward.
- (c) Remove the rear cab panel
 - (1) Release the 2 cargo hangers by pulling on the head of the hanger. (Fig. 7a & 7b)
 - (2) Using an NRT, remove the bolt cover. (Fig. 7c)
 - (3) Using a 10mm socket, remove the 10mm bolt that attaches the cab panel. (Fig. 7d)





(4) Unsnap the cab panel from the cab and remove from vehicle.



(5) There are a total of 17 clips attached to the panel, in the event that any clips remained attached to the vehicle, remove them using an approved clip removal tool and reinstall them to the panel.



(d) Remove & discard the rear driver side storage well cover. (Fig. 7e)

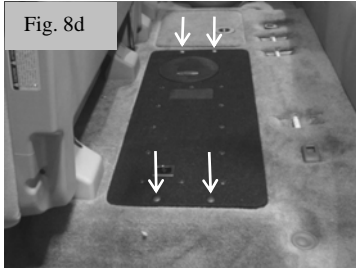
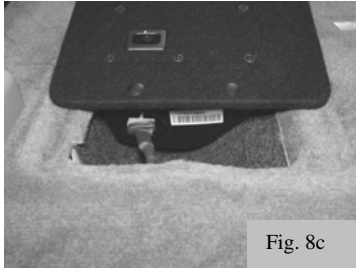
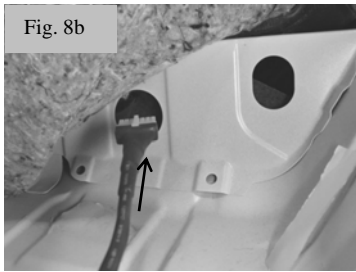
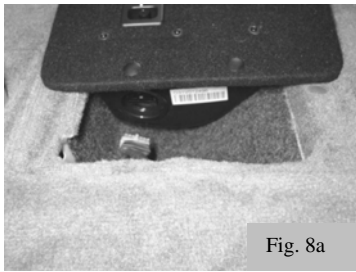
(e) Remove the (4) side X-mas tree fasteners and discard. (Fig. 7f)



(f) Remove storage well liner, (3) fasteners and discard. (Fig. 7g)

(g) Disconnect the vehicle harness from the amplifier.

5. Route Wire Harness



(a) Place the VSE over the storage well as shown. (Fig. 8a)

(b) Route the wire harness through the large hole on the outside of the storage well. (Fig. 8b)

(c) Plug wire harness connector into the connector on the VSE. (Fig. 8c)

(d) Move the VSE toward the driver side.

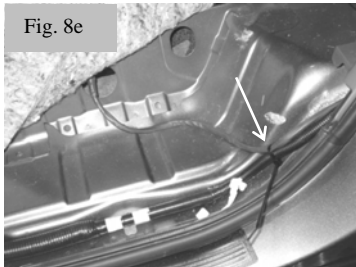


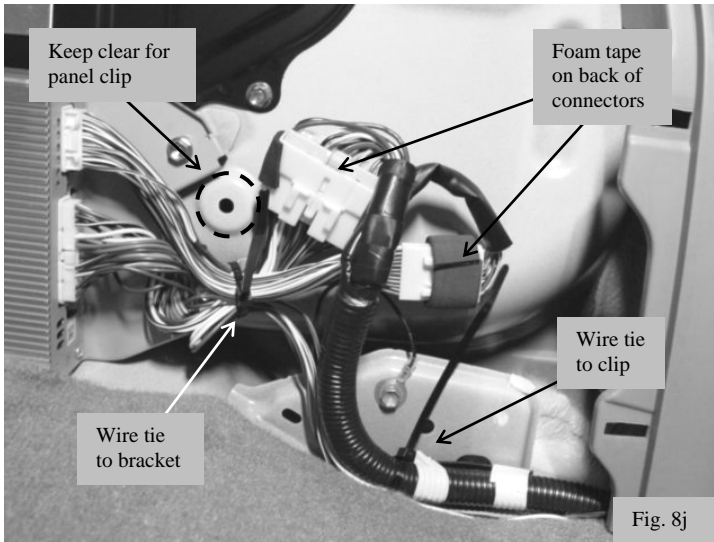
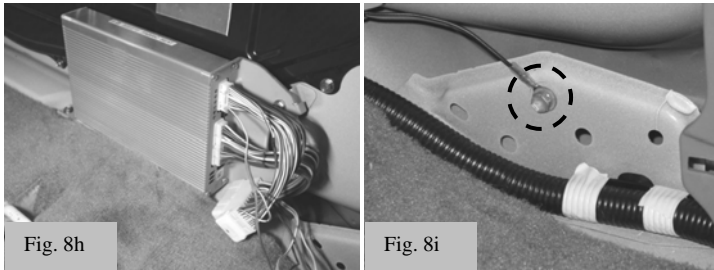
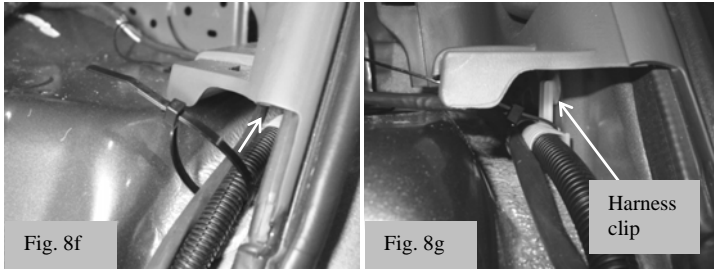
(1) Pull the slack back through the hole.

(e) Align the 4 mounting clips on the VSE with the mounting holes on the vehicle floor, and apply pressure to the clips to securely fasten. (Fig. 8d)



(f) Route the wire harness in the rear driver side foot well and wire tie as shown. (Fig. 8e)

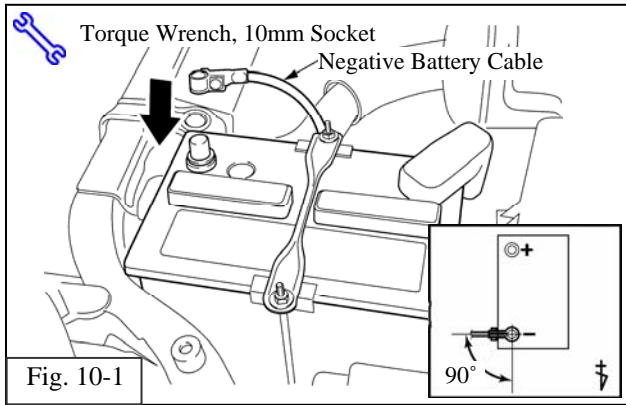




- ➔ (g) Route wire harness along the factory harness and wire tie as shown. (Fig. 8f & 8g)
- ➔ (1) Start the wire tie outside the pillar cover and slide up the harness, tighten to the existing harness clip and cut off excess.
- ➔ (h) Continue to route the wire harness along the factory harness and connect to the amplifier as shown. (Fig. 8h)
- ➔ (i) Using the supplied 10mm bolt, install the ground ring onto the vehicle accommodated weld nut. (Fig. 8i)
 - (1) Torque bolt to 10 lbf·ft
- (j) Connect wire harness to the vehicle wire harness and route as shown.
 - ➔ (1) The wire harness must be routed so as not to interfere with the panel clip. (Fig. 8j)
 - ➔ (2) Foam tape wrap the back of connectors to prevent rattles. (Fig. 8j)
 - ➔ (3) Wire tie to the metal bracket and to the existing wire harness clip as shown. (Fig. 8j)

6. In Process Functional Test.

- (a) Reconnect the harness to the radio.
 - (1) Reconnect the Satellite radio harness if so equipped
 - (2) Reconnect antennae cable.
- (b) Reinstall radio.
 - ➔ (1) Be sure the wire harness is not pinched.
- (c) Securely fasten (hand tighten) the four (4) mounting fasteners using the 10mm socket.
DO NOT OVER TIGHTEN



(d) Reconnect the negative battery terminal.
(Fig. 9a)

(1) Position the negative terminal at an angle of 90° to the battery as shown.



(2) Tighten the nut with 4.1 N-m (36 lbf-in) of torque.



(3) Be careful not to touch the positive battery terminal.

(e) Turn ignition key to "ACC" position.

(f) Press the power button on the receiver/player head unit. Verify the backlighting illuminates.



(g) Verify that the green led on the VSE is illuminated, and that sound is coming out of the driver.



NOTE: If the green light on the VSE unit is illuminated, and there is no sound coming from the driver –then one (or more) of the four (4) speaker wires are disconnected.



NOTE: If the green light on the VSE unit is NOT illuminated – then the wire harness is not properly connected to either the radio/amplifier, or is not properly grounded.

7. Reassemble Interior

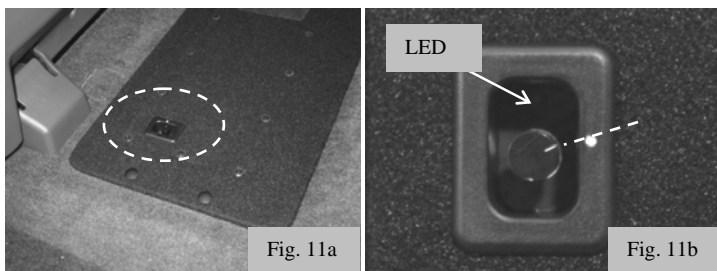
8. Test and Set Up Procedures

(a) Verify Gain Control Adjustment

(1) If necessary, match up white mark on gain control knob with mark on enclosure. (Figs.11a & 11b)



(b) If system is installed correctly, the VSE Subwoofer will power up when the vehicle's ignition is turned on. (indicated by illumination of the POWER L.E.D. on the Gain Control module of the unit.)



- (c) Using the tone controls on the radio, adjust the balance left and right, to verify that VSE Subwoofer produces sound on both sides, and that the sound is loudest when the balance is set to the center.

9. Post Installation

- (a) Clean up and remove any trash.
- (b) If required, wipe down all applicable interior surfaces with a plastic safe, VDC approved cleaner. to remove fingerprints, etc



- (c) Place Service Care Card in glove compartment



- (d) Hang Product Feature Placard onto the rearview mirror.

Check:	Look For:
<p><u>Accessory Function Checks</u></p> <p><input type="checkbox"/> Turn on Radio</p> <p><input type="checkbox"/> Verify CD & Satellite Tuner (if equipped)</p> <p><input type="checkbox"/> Antenna is functioning</p> <p><input type="checkbox"/> Bazooka Tube operation</p>	<p>Radio display turns on & sound is heard</p> <p>CD player functions & Satellite Tuner stations are playing (if equipped)</p> <p>Reception of AM/FM stations</p> <p>Bazooka Tube – Listen to Bazooka Tube to make sure it is functioning properly or by feeling the Bazooka for vibration. Be sure the Phase Switch is in the “UP” position.</p>
<p><u>Vehicle Function Checks</u></p> <p><input type="checkbox"/> Hazard Button</p> <p><input type="checkbox"/> HVAC</p> <p><input type="checkbox"/> Rear Window Defogger</p> <p><input type="checkbox"/> Passenger Seat Belt Warning Light</p>	<p>Functioning Hazard Lights</p> <p>All HVAC controls function properly</p> <p>Functioning Rear Window Defogger</p> <p>Functioning Seat Belt Warning Light</p>



Condition: _____

No sound from VSE Subwoofer, however
factory speakers still play

Distorted Sound

Low Sound

Rattling Noises

Check For: _____

- Is the green L.E.D. lit on the VSE Subwoofer? If not, check for 12 volts on pins of the VSE Subwoofer with the ignition on. If either pin doesn't indicate 12 volts, check T-Harness connectors behind the radio.
- Is the 14-pin connector securely connected to the VSE Subwoofer?
- Is the ground ring securely fastened to the rear anchorage bolt?

- Fold down the rear seat.
- Adjust the radio to a comfortable listening level, and then turn the "gain control" knob on the VSE Subwoofer counter-clockwise until the sound becomes clean.

- Fold down the rear seat.
- Adjust the radio to a comfortable listening level, and then turn the "gain control" knob on the VSE Subwoofer clockwise until the sound becomes audible. Do not adjust the level too high, as this will result in distorted sound.

- Rattling will be evident in some panels at extreme volume conditions, but make sure you have performed the following to minimize noise:
- Securely tightened Mounting Hardware so VSE Subwoofer does not move.



Condition: _____

Check For: _____

- Dimming Radio Lights

- Radio does not come on

- No Sound at all

- VSE Subwoofer produces sound on the right or the left, but not both.

- Dimming Radio Lights could occur when the VSE Subwoofer is played at high volumes.

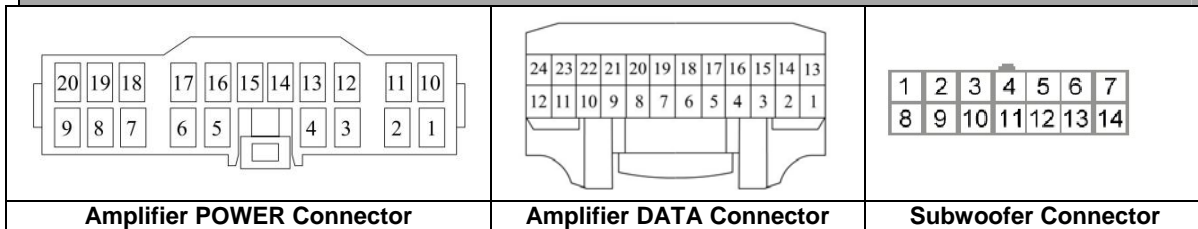
- Check to ensure that the main connector, antenna connector, and auxiliary connector have been correctly plugged back in.

- Is the fuse under the hood still operational?
- Is the battery ground reconnected?
- Is the radio connector securely seated?

- Check T-Harness connections at the back of the radio. All connectors must be securely fastened to the correct wiring for both channels to produce audio output.



WIRING CONNECTOR SCHEMATICS:



Amplifier POWER Connector Amplifier DATA Connector Subwoofer Connector

Amplifier POWER Connector

Pin No.	Wire Color	Function
1	NA*	Right Rear Negative Speaker Wire
2	NA*	Right Rear Positive Speaker Wire
3	NA*	Dimmer
4	NA*	Power
5	White	Left Front Speaker (+)
6	Grey	Right Front Speaker (+)
7	NA*	Ground
8	NA*	Mute
9	NA*	Power
10	NA*	Left Rear Negative Speaker Wire
11	NA*	Left Rear Positive Speaker Wire
12	NA*	Dimmer
13	NA*	Power Antenna
14	NA*	NA*
15	NA*	Dimmer Return
16	Grey/Black	Right Front Speaker (-)
17	White/Black	Left Front Speaker (-)
18	NA*	Ground
19	NA*	Mute
20	Battery Power	Battery Constant

Amplifier DATA Connector

Pin No.	Wire Color	Function
1	Blue/White	Remote Turn On
2	N/A*	N/A*
3	N/A*	N/A*
4	N/A*	N/A*
5	N/A*	N/A*
6	N/A*	N/A*
7	N/A*	N/A*
8	N/A*	N/A*
9	N/A*	N/A*
10	N/A*	N/A*
11	N/A*	N/A*
12	N/A*	N/A*
13	N/A*	N/A*
14	N/A*	N/A*
15	N/A*	N/A*
16	N/A*	N/A*
17	N/A*	N/A*
18	N/A*	N/A*
19	N/A*	N/A*
20	N/A*	N/A*
21	N/A*	N/A*
22	N/A*	N/A*
23	N/A*	N/A*
24	N/A*	N/A*

NA* indicates No connection made to this wire.



Subwoofer Connector		
Pin No.	Wire Color	Function
1	Black	Chassis Ground
2	N/A	NA*
3	N/A	NA*
4	N/A	NA*
5	White	Left Front Speaker (+)
6	Grey	Right Front Speaker (+)
7	N/A	NA*
8	Red	12 Volt Battery Connection (B+)
9	Blue/White	Remote Turn-On/Ignition (Switched+)
10	N/A	NA*
11	N/A	NA*
12	White/Black	Left Front Speaker (-)
13	Grey/Black	Right Front Speaker (-)
14	N/A	NA*

NA* indicates No connection made to this wire.