




GENUINE TRAILER HITCH HARNESS KIT


INSTALLATION AND USER'S INSTRUCTIONS

Thank you for purchasing a Genuine Mazda Accessory.
Before removal and installation, please thoroughly read these instructions.
For your safety, please read the contents of this booklet to properly install and use the trailer hitch kit.
Keep these instructions with your vehicle records for future reference.

WARNING

- There are several  **WARNING** and  **CAUTION** sections in this booklet concerning safety when installing or removing the trailer hitch harness kit. Always read and follow the instructions in order to prevent injuries, accidents, and possible damage to the vehicle.

 **WARNING:** Indicates a situation in which serious injury or death could result if the warning is ignored.

 **CAUTION:** Indicates a situation in which bodily injury or damage to the vehicle could result if the caution is ignored.

- For areas indicating the tightening torque in this instruction manual, tighten to the specified torque by using a torque wrench. For areas in which the tightening torque is indicated inside parentheses (), the tightening torque is indicated as a reference value, however tightening using a torque wrench is not necessary.
- Do not modify the 7-Way Trailer hitch harness kit.
- Do not install the 7-Way Trailer hitch harness kit in any way other than described in the following instructions.
- If in doubt, please contact your Mazda dealer to install the accessory in order to prevent errors in installation.
- If you have any questions about the use of the accessory, ask your Mazda dealer for proper advice before using it.
- Mazda and its suppliers are not responsible for injuries, accidents, and damage to persons and property that arise from the failure of the dealer or installer to follow these instructions.
- To ensure safety and reliability of the work, installation, removal and disposal work must be carried out by an Authorized Mazda Dealership.
- Be careful not to lose removed parts, and be sure that they are kept free of dirt, scratches, or damage.

PART NAME: 7-WAY TRAILER HITCH HARNESS KIT
PART NUMBER: VA41V7780A / VAS1V7780A
VEHICLE: CX-50

NOTE

To the dealer

- Please turn over these instructions to the customer after installation.

To the customer

- Keep these instructions after installation. The instructions may be necessary for installing other optional parts or removal of this accessory.
- Should the vehicle or this accessory be resold, Always transfer these instructions to the next owner.



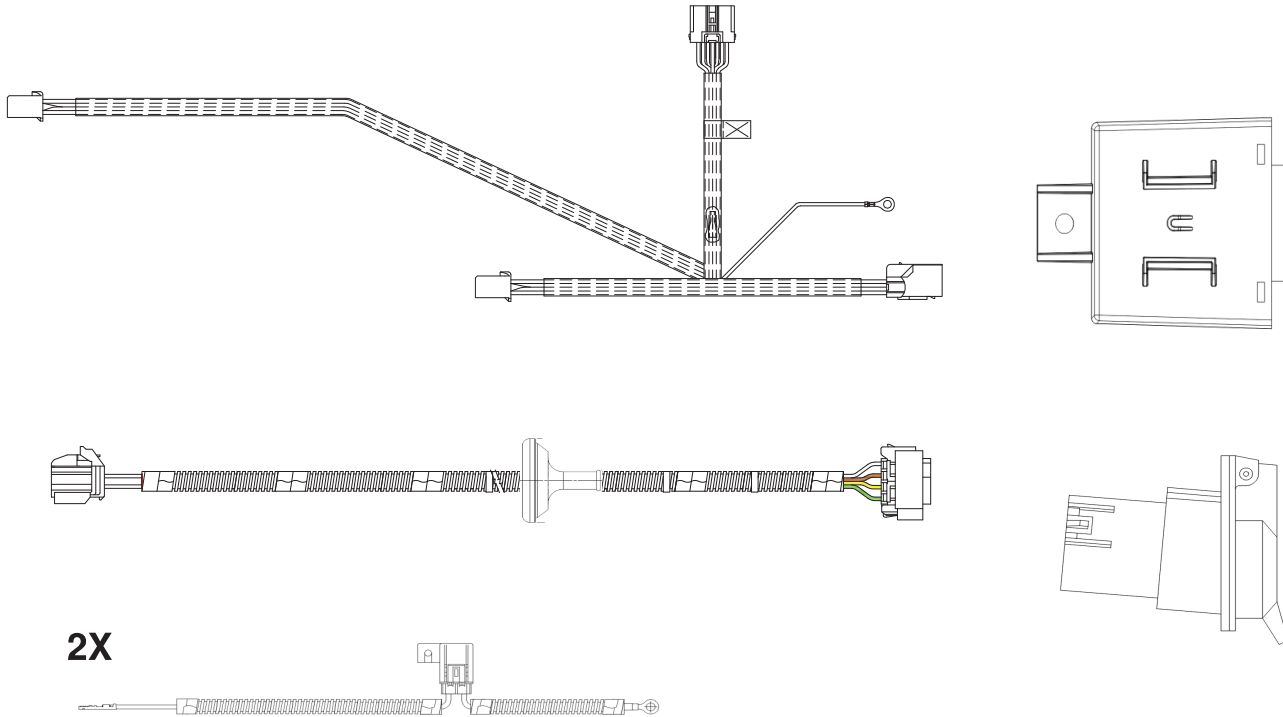
GENUINE ACCESSORIES

Installation Instructions

Part Number:
VA41V7780A
VAS1V7780A

7-Way Trailer Hitch Main Harness Kit


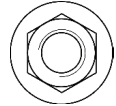



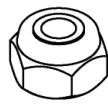
Applicable Models:
2023 > CX-50

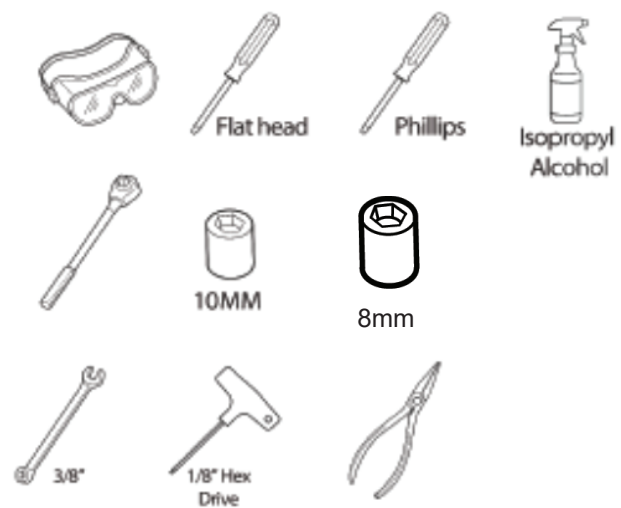


2X

Hardware Kit Contents

Tools Required

A 10X  Cable Tie	B  M6x1 Nut	C  Installation Instructions
D 4X  #10-24 Bolt	E 4X  Flat Washer	F 4X  #10-24 Lock Nut

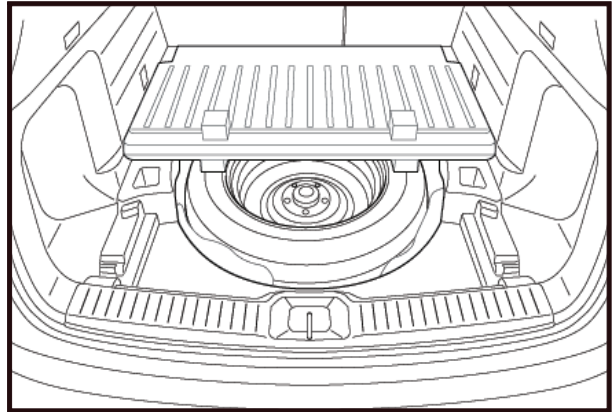
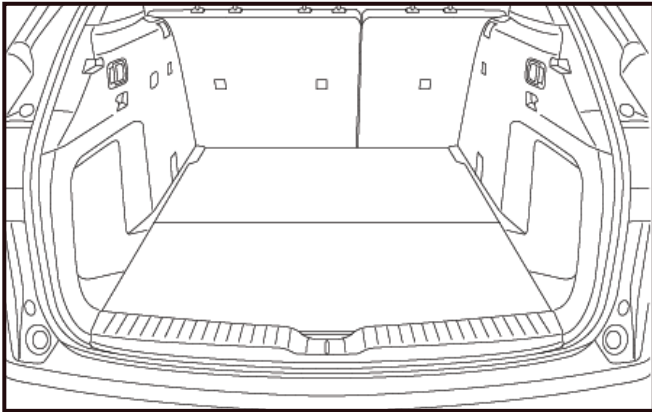


00 Before Installation

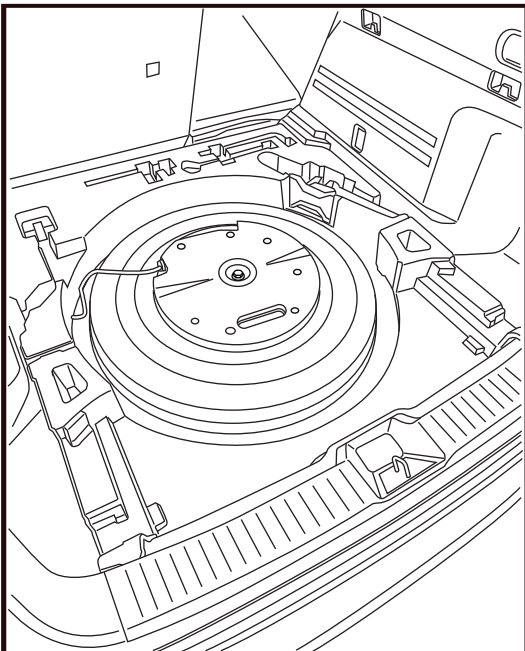
- 1) **Tow Hitch to be installed prior to 7-Way Tow Hitch Harness.**
- 2) Read all installation instructions before proceeding with install.
- 3) Be careful not to damage paint or kit components.
- 4) Do not over-tighten bolts, tighten to specified torque.
- 5) Record customers preset radio stations (If Applicable).
- 6) Using a 10mm socket, remove negative (-) battery terminal.
- 7) Wrap protective tape around screwdrivers and fastener removal tools to prevent scratching the vehicle.

01 Access Storage Compartments

- 1) Open the rear hatch of the vehicle and lower the rear seats.
- 2) Lift and remove the deck panel exposing the spare tire compartment.



- 3) If vehicle is equipped with Subwoofer disconnect wire harness to prevent damage and remove front and rear foam pieces.

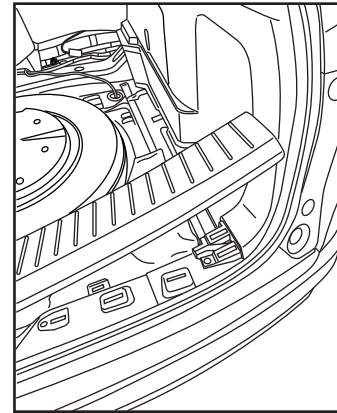
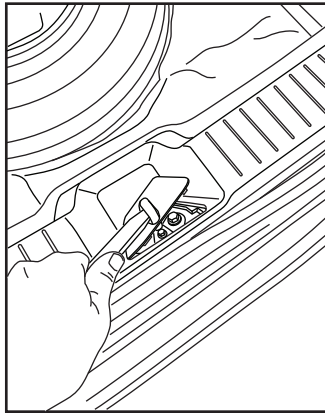
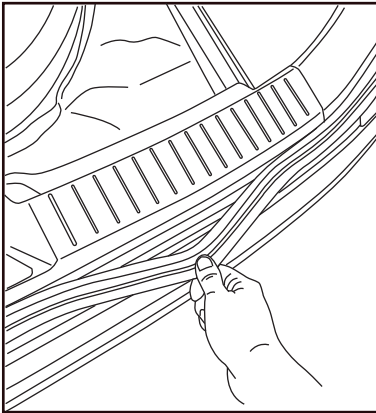


02 Remove Rear Threshold

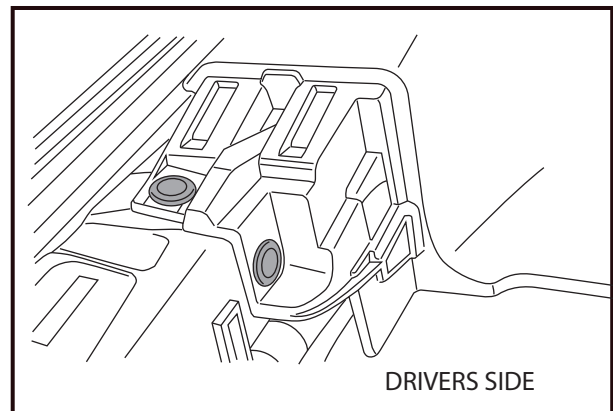
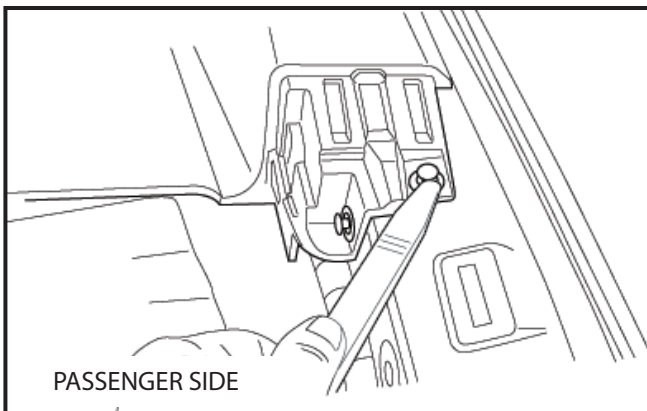
Tools Needed:



- 1) Carefully pull the rubber seal away from the body.
- 2) Firmly pull up the threshold plate and temporarily remove from the vehicle.

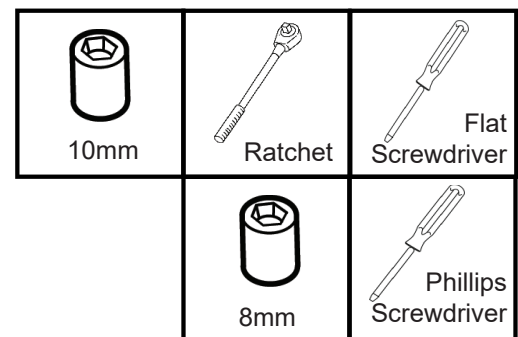


- 3) Locate fasteners holding driver and passenger side panels.
- 4) Using a fastener removal tool, carefully remove the plastic clips located on both sides of interior trim panels.

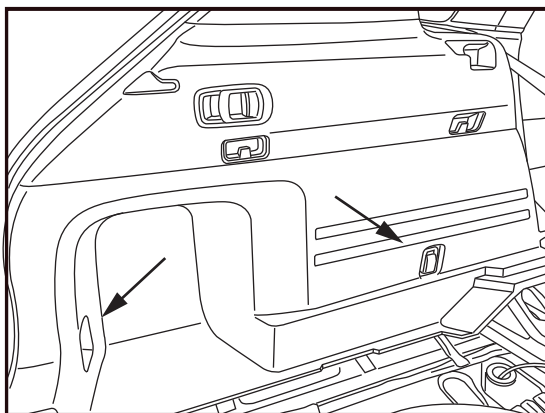


03 Interior Trim Panel Removal

Tools Needed:

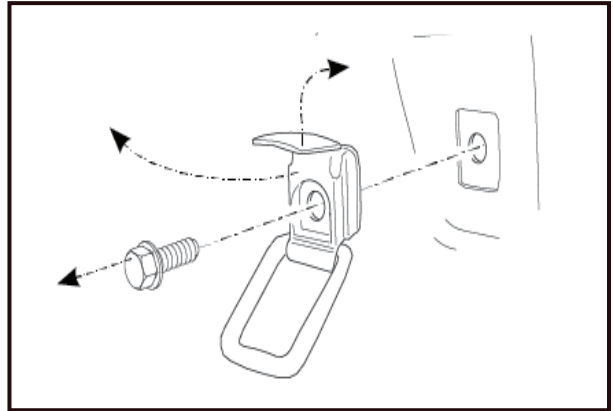
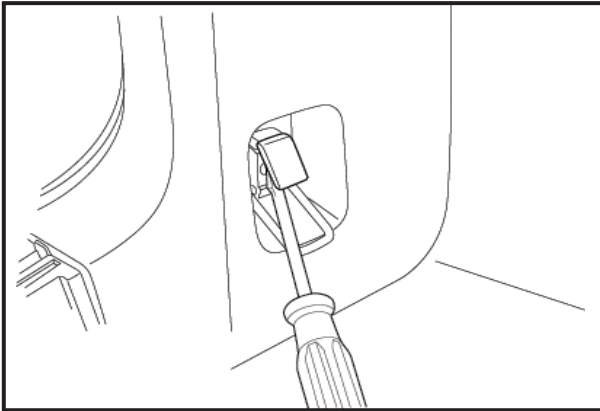


- 1) Starting on the Drivers side remove cargo hooks.

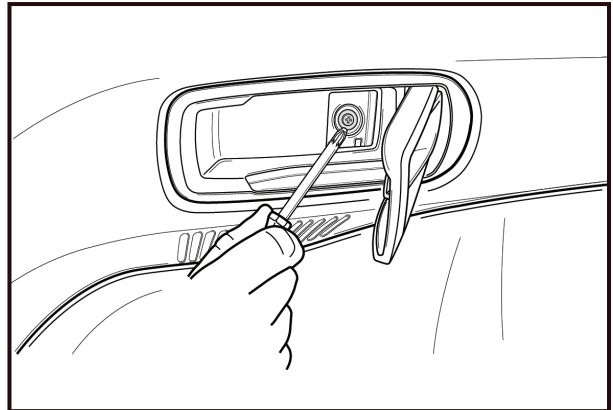
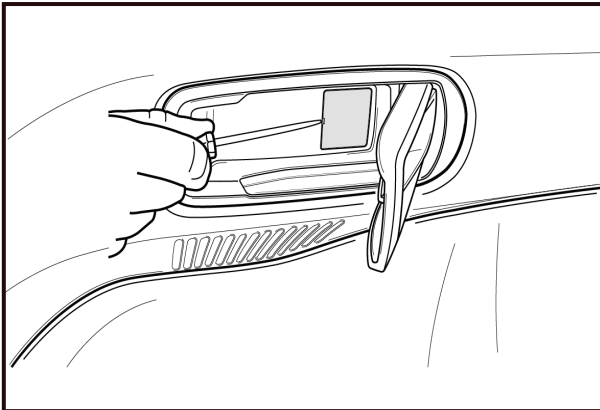


03 Interior Trim Panel Removal(Continued)

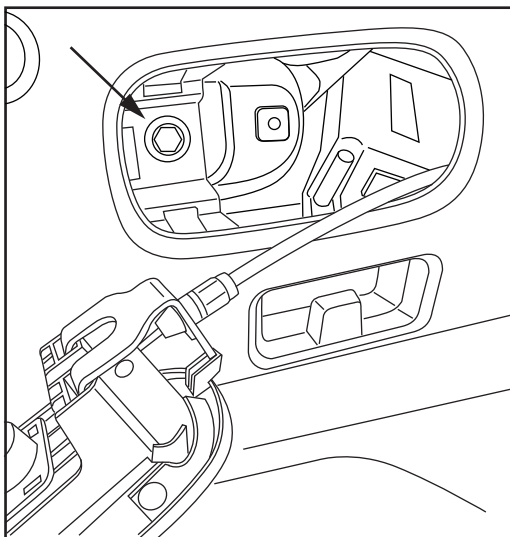
- 2) Pull back hook and using a flat screwdriver open lid to access bolt.
- 3) Remove the bolt securing the lower cargo tie down using a 10mm socket



- 4) Carefully remove latch cover using a small flat head screwdriver on rear seat release handle.
- 5) Remove screw securing seat release handle using a phillips screwdriver. Set aside.
- 6) Using fastener removal tool remove seat release handle from side trim panel, let hang.

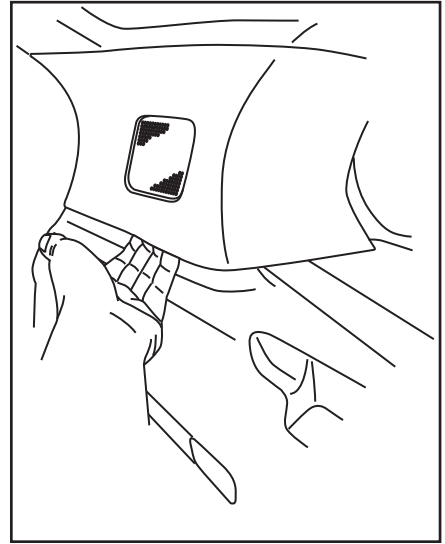
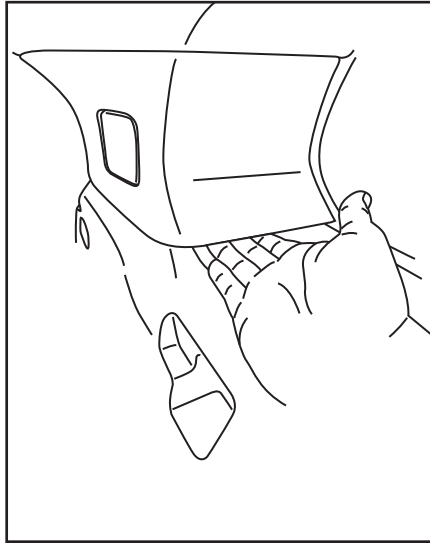
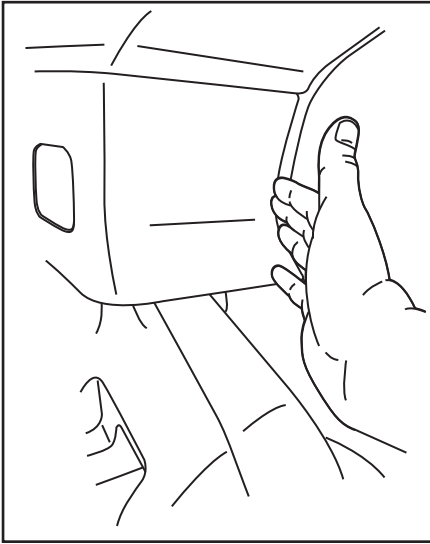


- 7) Using an 8mm socket, remove bolt securing side trim to vehicle body, set aside.

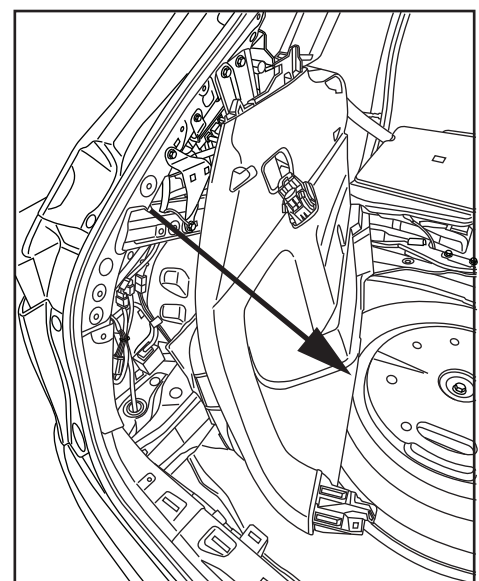
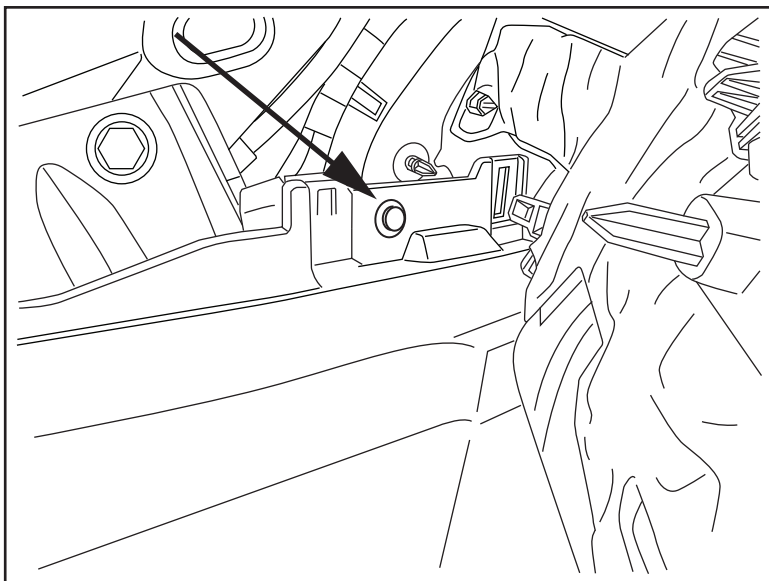


03 Interior Trim Panel Removal(Continued)

- 8) Remove upper trim by grasping edge near side window and seat belt opening. Gently but firmly pull upper trim panel away from vehicle body. Moving along bottom edge, gently but firmly pull upper trim panel working it loose while moving towards the rear of the vehicle.
- 9) Once upper trim panel is removed, locate and remove panel fastener, set aside.

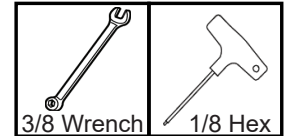


- 10) Starting at the bottom of the side panel pull side trim away from body of vehicle. If a power port is installed in the side trim disconnect harness from power port and continue pulling side trim away from vehicle body. Let the side panel rest on the spare tire as shown below. Repeat for passenger side of vehicle.



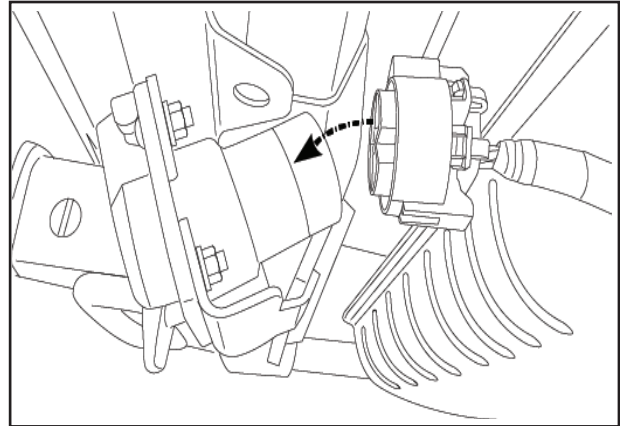
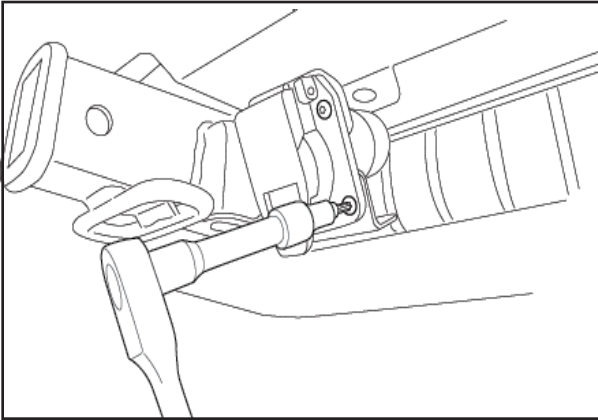
04 Route 7-Way Harness To Interior Of Vehicle

Tools Needed:



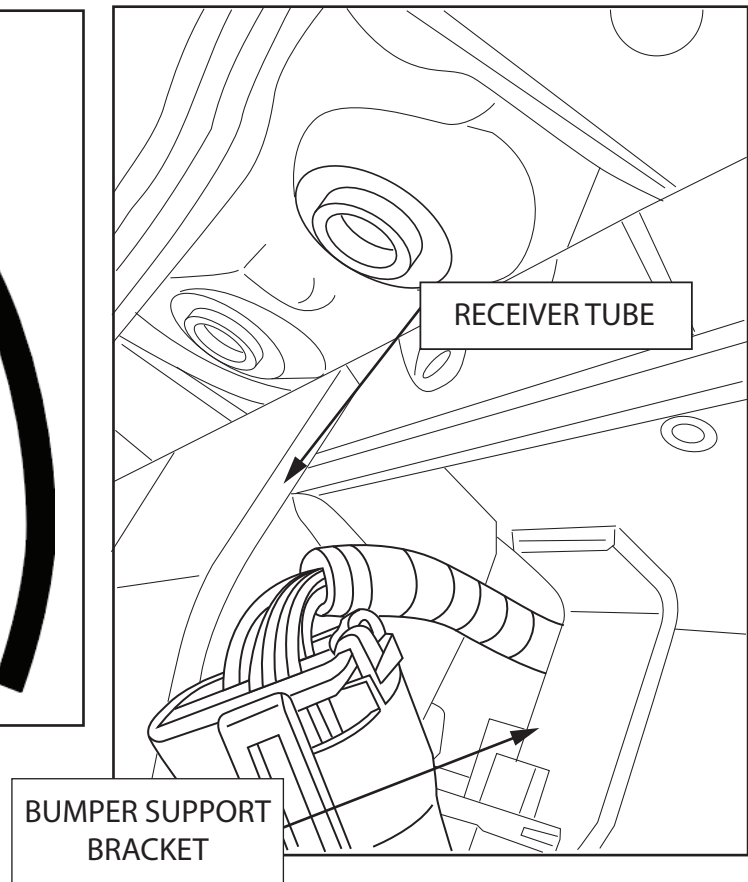
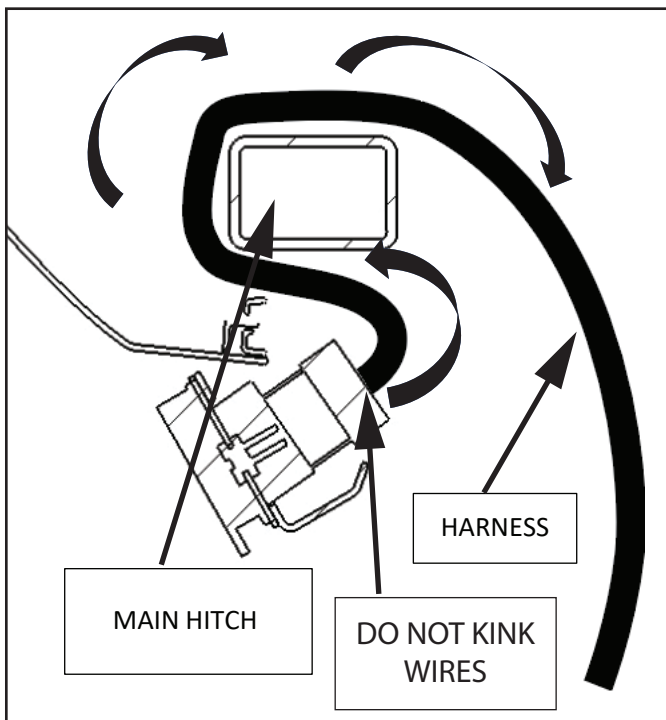
- 1) Place 7-Way trailer connector into hitch bracket and attach using bolts provided. **Torque all four nuts to 19.5 ft. lbs (2.2Nm).**

- 2) After the 7-Way trailer connector is securely attached to the bracket, plug the mating harness into the back of the mounted connector firmly. Ensure it is connected by pulling on it to confirm it is properly seated.



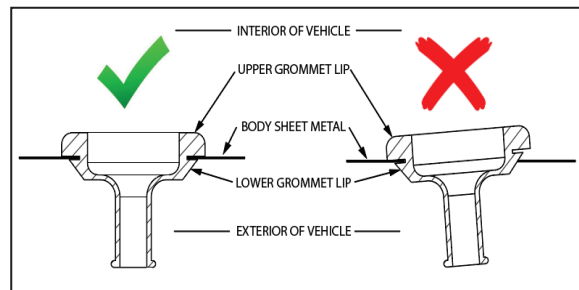
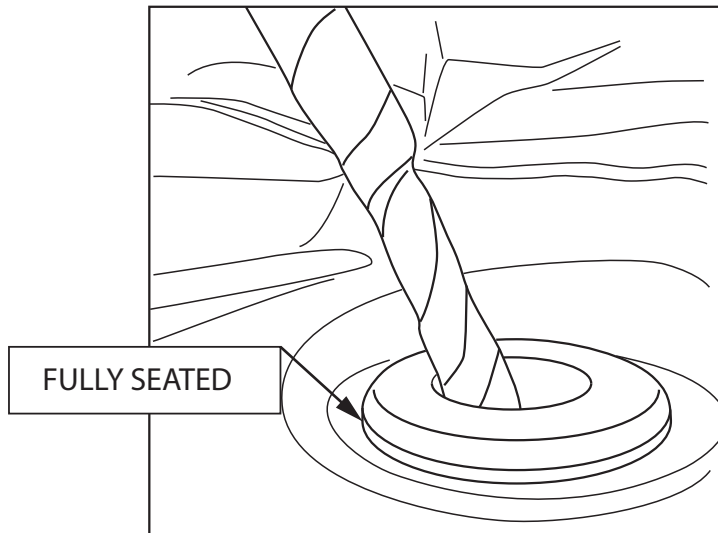
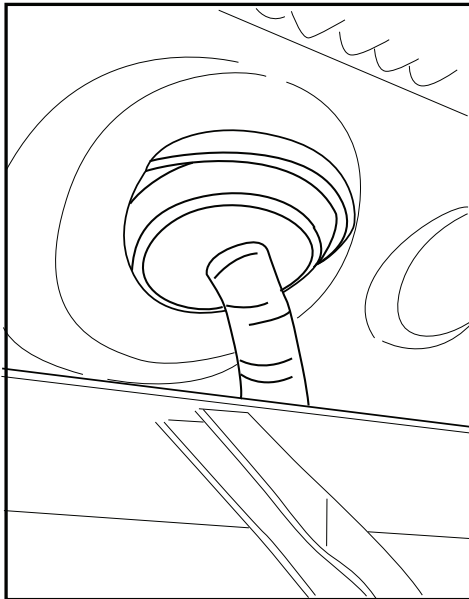
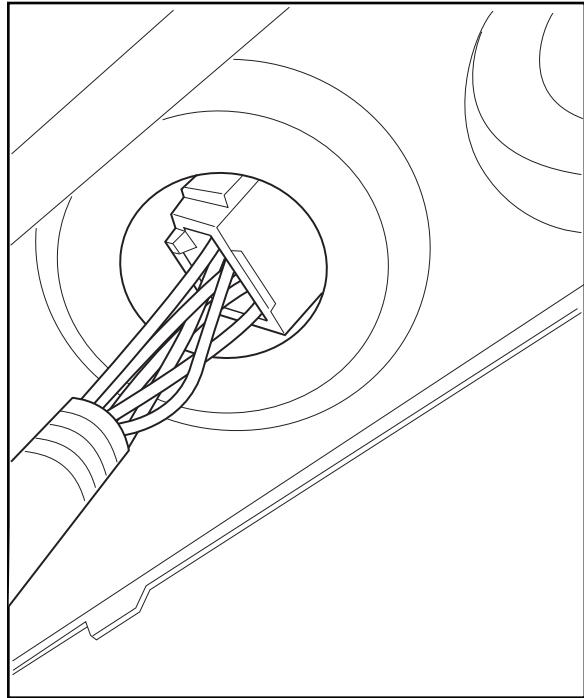
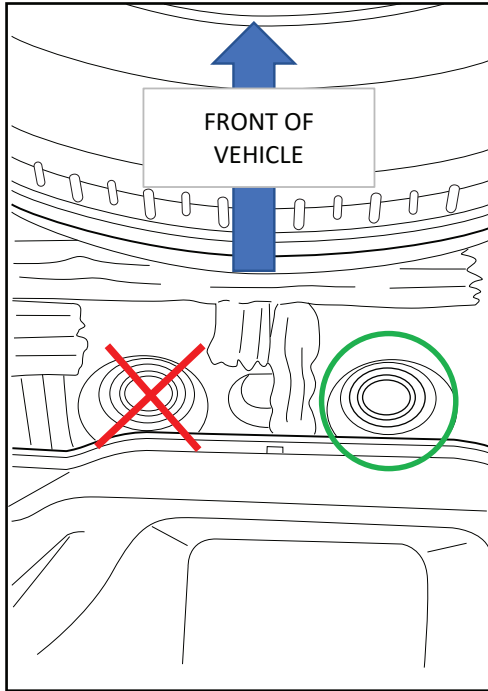
- 3) Route harness up and over main tow bar as shown in diagram. Make sure harness is routed between bumper support bracket and receiver tube as shown below.

⚠ **CAUTION:** Ensure that wires protruding from back of connector are not kinked.



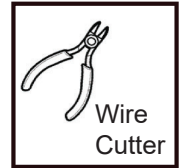
04 Route 7-Way Harness To Interior Of Vehicle(Continued)

- 4) Looking down into spare tire area, remove right side drain plug and discard.
- 5) Insert harness connector up through drain hole and push rubber grommet seal up into vehicle. Ensure grommet is fully seated as per the diagram below

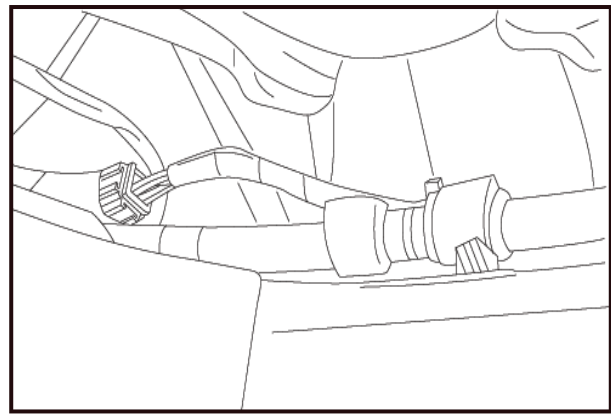
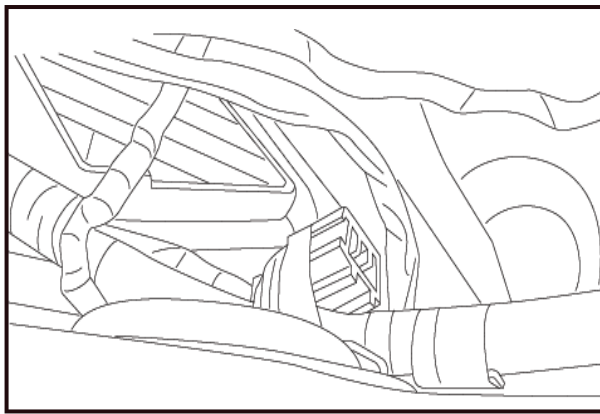
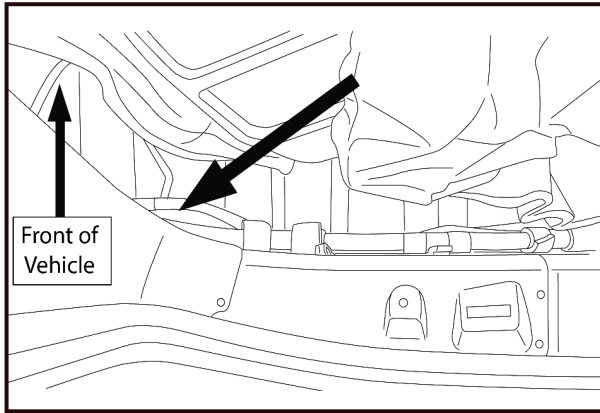


05 Interior Main Harness Routing

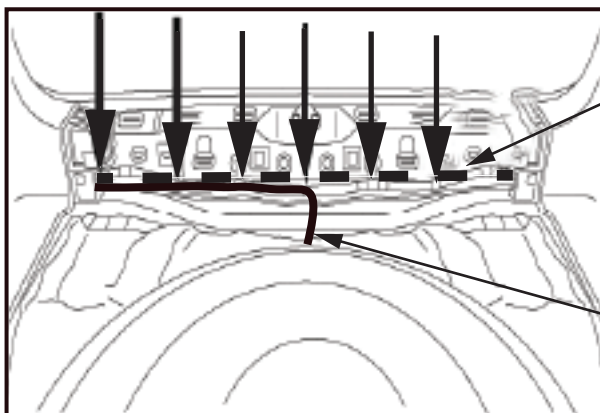
Tools Needed:



- 1) Locate vehicles white, 8 pin connector taped to factory wire harness near floor of vehicle on the drivers side.
- 2) Insert the white 8 pin connector from the long branch of the trailer tow harness into the factory wire harness connector.



- 3) Route interior trailer wire harness described in steps 1 & 2 above along factory wire harness that runs against the back of the spare tire compartment to the passenger side. at the same time, route and secure both wire harnesses to factory wire harness with 7 cable ties as shown below. Securely tighten cable ties and trim with wire cutters.

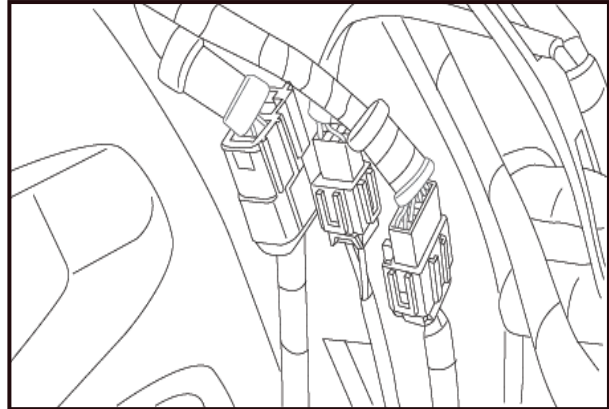
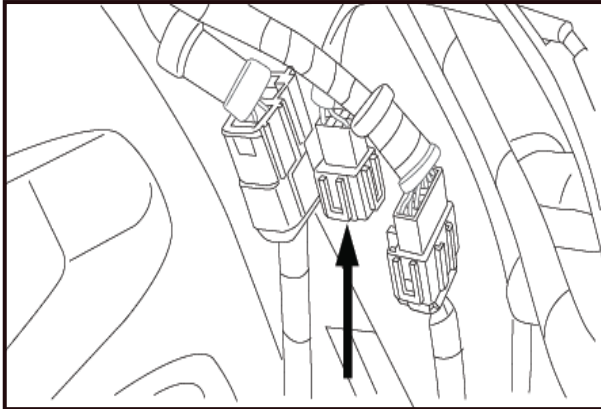


INTERIOR WIRE HARNESS

EXTERIOR WIRE HARNESS

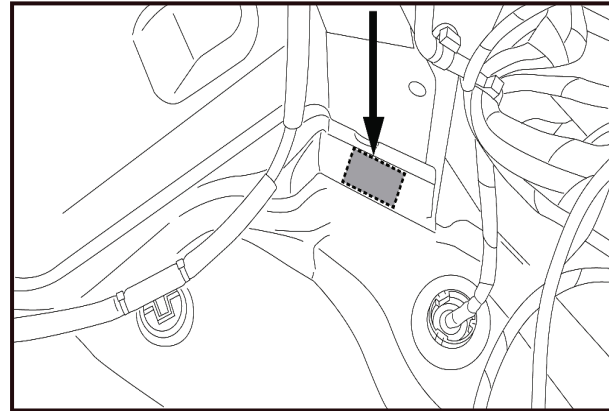
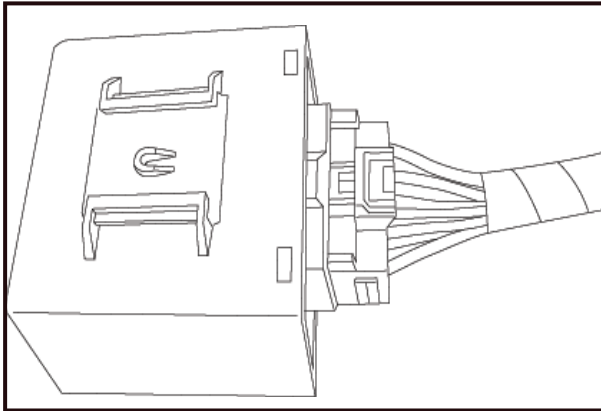
05 Interior Main Harness Routing(Continued)

- 4) On passenger side of vehicle insert remaining white 8 pin connector on the trailer tow harness into factory harness connector as shown.



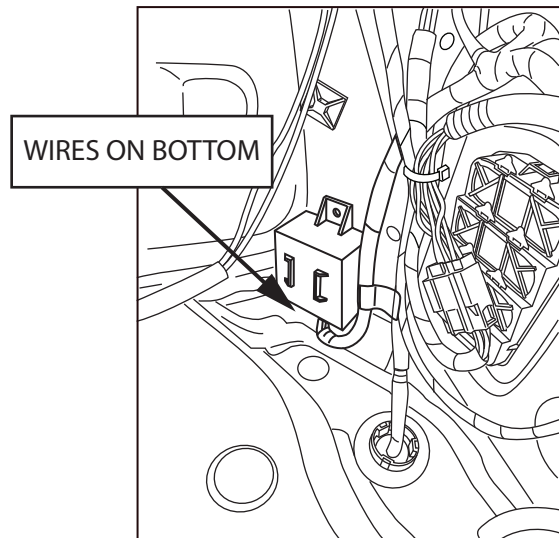
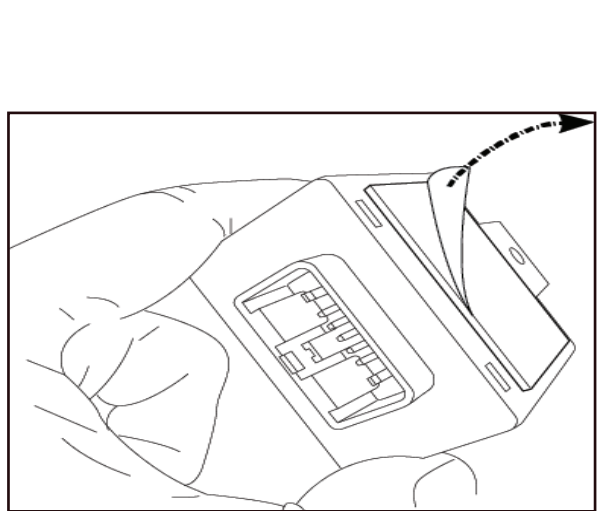
- 5) Insert 14-pin connector on main harness into trailer module.

- 6) Clean the indicated area on vehicle sheet metal with alcohol.



- 7) Remove adhesive backing from trailer tow module and secure to sheet metal with wires on bottom.

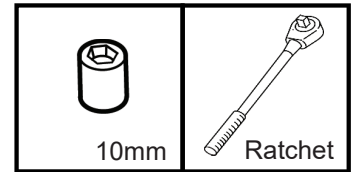
- 8) Press firmly to ensure the trailer tow module is attached to sheet metal.



CRITICAL STEP: Confirm harness wires oriented as shown in image with main harness wires on bottom

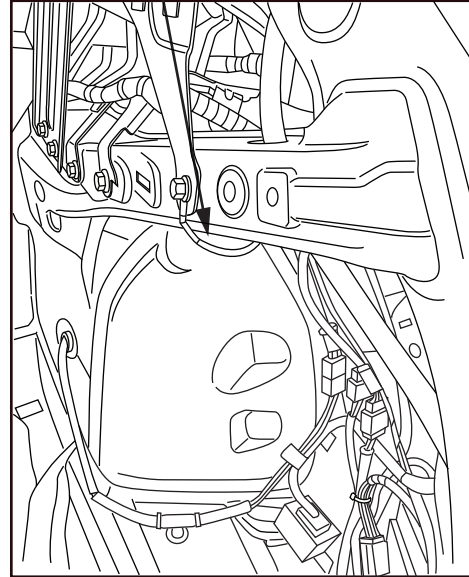
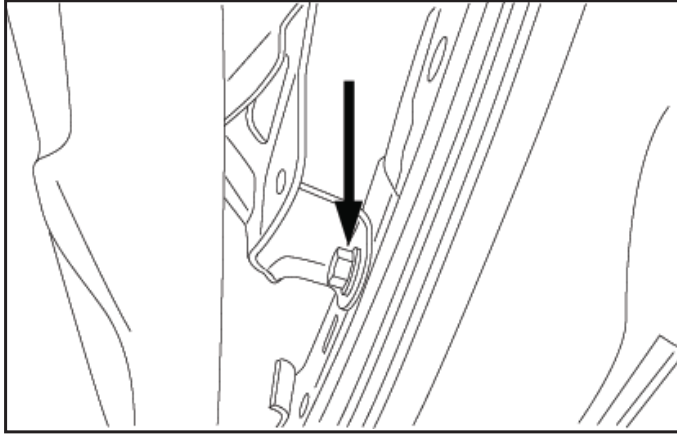
06 Ground Wire Attachment

Tools Needed:



- 1) Locate bolt behind passenger side interior panel as shown.
- 2) Remove the bolt using a 10mm socket and ratchet
- 3) Route white ground wire in front of bracket and attach to bolt location.
- 4) Tighten bolt to 9.0 to 12.0 Nm.

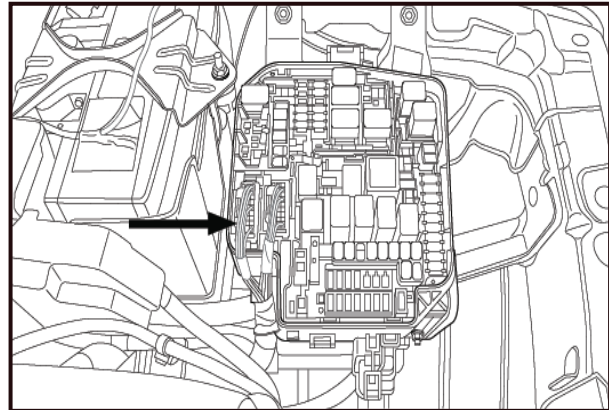
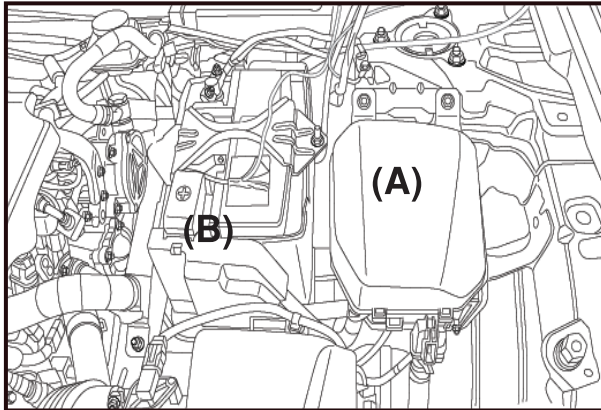
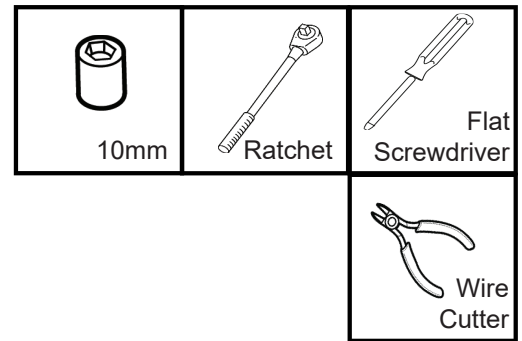
(Note* Ensure ground wire is not in contact with sheet metal of vehicle)



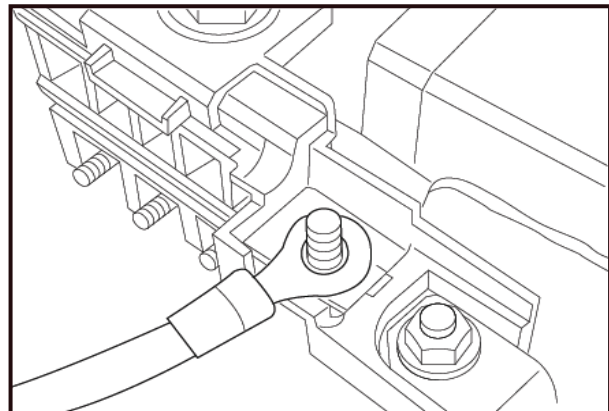
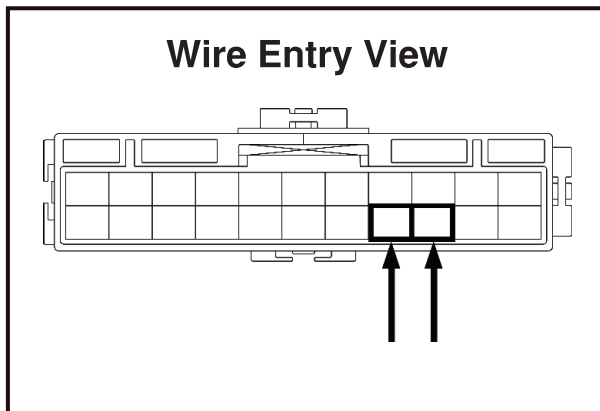
07 Battery Jumper Installation

- 1) Open hood of car and locate fuse box(A) and battery(B).
- 2) Remove fuse box cover and positive battery cover using a flat screwdriver.
- 3) Locate and identify 22-Pin connector in fuse box that the main harness power wire will be inserted to and unplug.

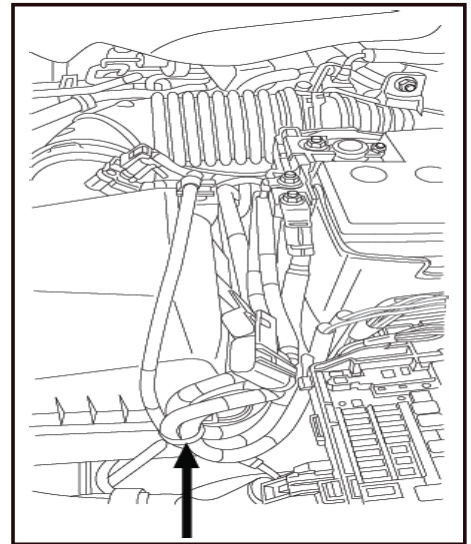
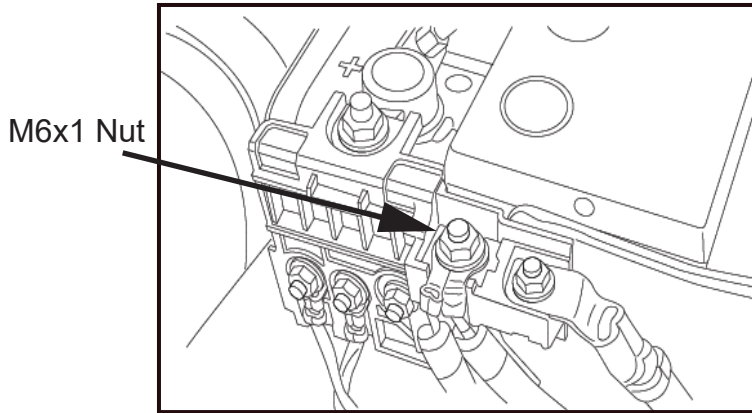
Tools Needed:



- 4) Locate the proper cavities to be populated. Grip the wire behind the terminal of Battery jumper harnesses and firmly insert into the rear of connector with existing wires. Repeat until both Battery jumpers are plugged into the 22-Pin factory connector.
- 5) Reinsert connector back into fuse box.
- 6) Place ring terminals of battery jumper harnesses over stud on battery. Locate the M6x1 nut provided in kit, fasten and using a 10mm socket tighten **(Torque Spec 9.0 - 12.0 N-m)**.
- 7) Place cable tie around battery jumper harnesses to factory wire harness and securely tighten cable tie and trim with wire cutters.
- 8) Reconnect positive (+) battery terminal, replace battery cover and fuse box cover, close hood.



07 Battery Jumper Installation(Continued)

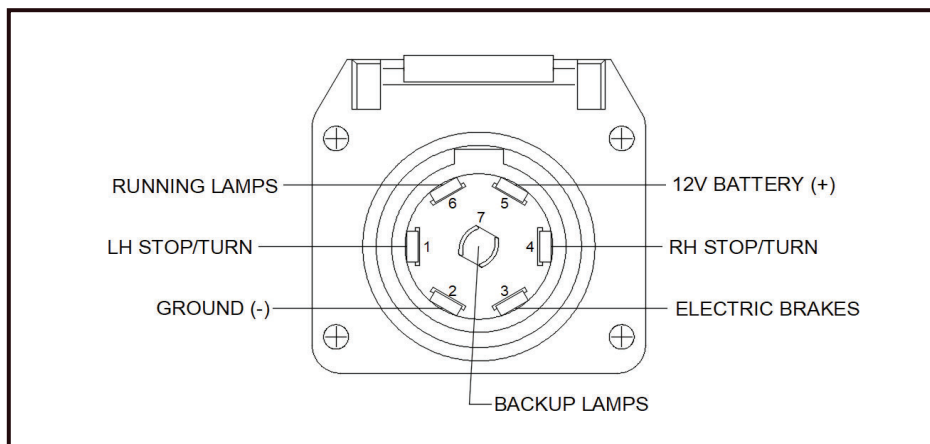


08 Finishing Steps

- 1) Reinstall all trim, cargo hooks and interior panels in reverse order of removal, ensuring all fasteners are properly installed and tightened.
- 2) Clean vehicle.
- 3) Place installation instructions in glove box for customer retention.

09 Confirm Correct Operation

- 1) Ensure all connections are complete.
- 2) Use a 12V tester to check each signal function.
 - A) Verify tail light, right turn/brake, left turn/brake and backup circuits by activating each function on the vehicle individually using the appropriate terminal on the trailer connector.



10 Inspection: Trailer Hitch Wiring Kit

Inspect the installed/reinstalled parts for the following items:

INSPECTION PARTS	INSPECTION ITEMS			
	Clearance and fit	Scratches, dirt, and harness interference	Installation, tightening and engagement	Operation check
50MM clearance between the wire harness and all exhaust surfaces	●	●	●	--
Tow harness functions	--	--	--	●
Tow harness	●	●	●	--
Driver-side left interior trim panels	--	--	●	--
Passenger-side right interior trim panel	--	--	●	--
Rear Cargo Sill Trim	●	●	●	--
Rear storage compartment foam	●	●	●	--
Rear trunk board	●	●	●	--
Vehicle negative cable	--	--	●	--
Check that Harness is routed per instruction	●	●	●	●
Check that grommet is fully seated	●	--	●	●
Cable ties secure	--	--	●	--
No slack in harness	●	--	●	●

Notes:

1. Verify signal functionality at the trailer harness plug using the test procedure on page 15.

10 Inspection: Trailer Hitch Wiring Kit(Continued)

Caution: When the battery is disconnected, the DSC may stop operating.

(The DSC OFF indicator will flash at this time, and the TCS / DSC operation indicator will illuminate.)

1. Turn the ignition switch to 'OFF' and then turn it back to 'ON'.
2. Turn the steering wheel clockwise as far as it will go, and then turn it back counterclockwise as far as it will go.
3. Check that the TCS / DSC operation indicator is turned off.
4. Turn the ignition switch to 'OFF' and then turn it back to 'ON'.
5. Check that the TCS / DSC operation indicator is turned off. If the TCS / DSC operation indicator is still illuminated or the DSC indicator is not turned off when the ignition switch is turned back to 'ON' contact your Mazda dealer.

Caution: If the battery is disconnected, the power windows may no longer fully open or fully close automatically.

1. Turn the ignition key to the 'ON' position.
2. Press the power window switch to fully open the power windows.
3. Lift up the power window switch to fully close the power windows, and keep it pulled up for approximately two seconds.
4. Position the engine switch at 'OFF', and then at 'ON' again.
When the function doesn't work after these procedures, please contact your Mazda dealer.

Caution: If the battery is disconnected, the TPMS (Tire Pressure Monitoring System) initial setting is reset and the system may not operate normally.

1. Adjust the tire pressure (verify tire pressure using label on body side with driver's door open).
2. Turn the ignition switch to the 'ON' position.
3. Press the TPMS (SET) switch (long-press it until TPMS warning light in meter flashes two times and a beep sounds one time).
4. Turn the ignition switch to 'OFF'.
5. If the TPMS warning light illuminates or flashes even though the above procedure has been performed, contact an Authorized Mazda Dealer.

Date:		
Vehicle:		
VIN:		
Approved	Checked	Person in charge

TROUBLESHOOTING GUIDE (TURBO)

PART NUMBER:
VA41V7780A
VAS1V7780A

APPLICABLE MODELS:
2023> CX-50

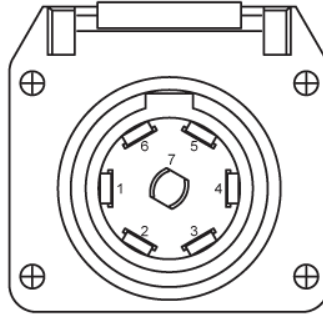
7-WAY TRAILER HITCH WIRING KIT

TOOLS REQUIRED

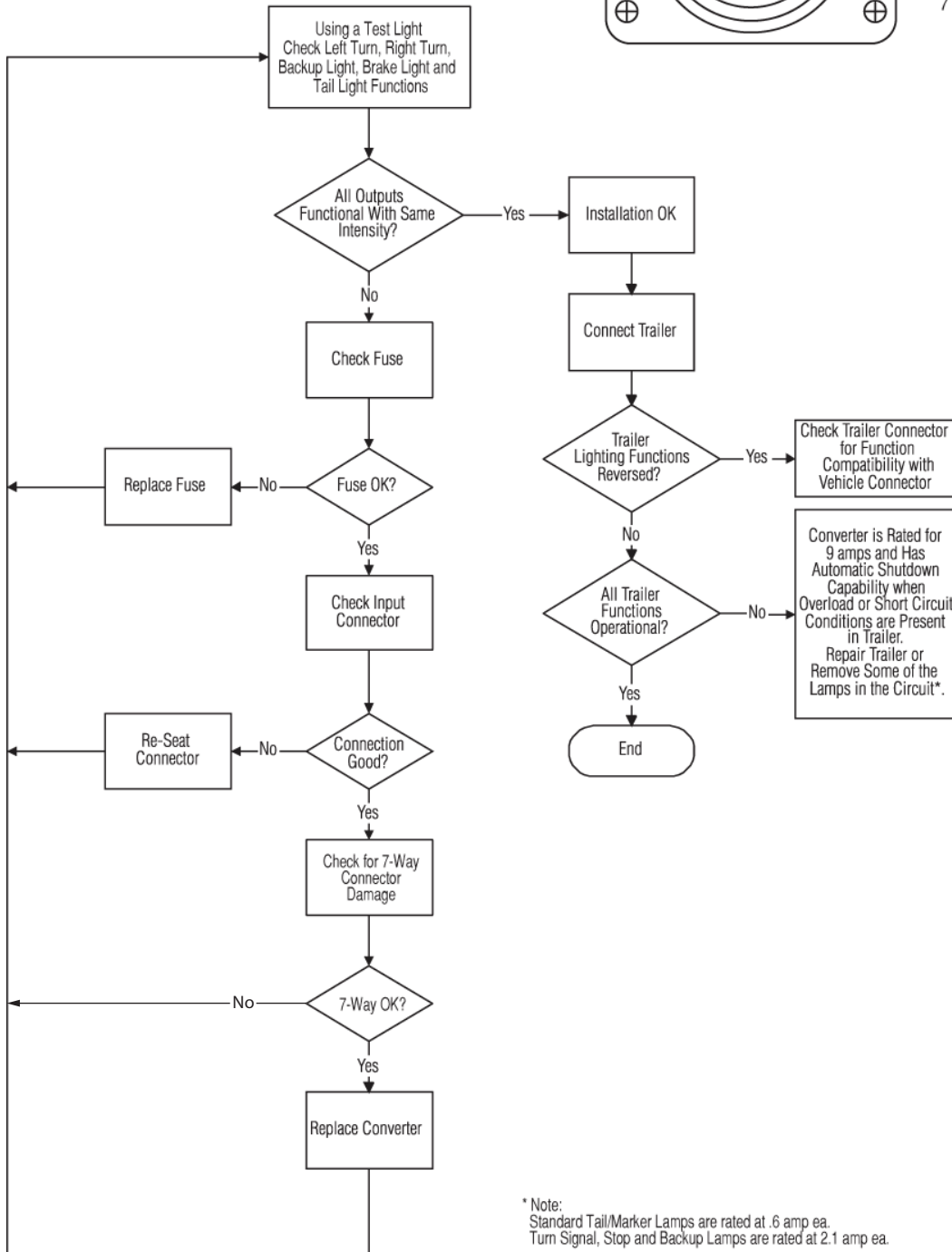
TEST LIGHT

METHOD

1. Insert Tester into 7-Way trailer connector.
2. Confirm individual circuit operations.



- | | |
|-------------------|----------|
| 1 LH STOP/TURN | YELLOW |
| 2 GROUND (-) | WHITE |
| 3 ELECTRIC BRAKES | BLUE |
| 4 RH STOP/TURN | GREEN |
| 5 12V BATTERY (+) | RED/BLUE |
| 6 RUNNING LAMPS | BROWN |
| 7 BACKUP ALARM | ORANGE |



* Note:
 Standard Tail/Marker Lamps are rated at .6 amp ea.
 Turn Signal, Stop and Backup Lamps are rated at 2.1 amp ea.