



GENUINE ACCESSORIES

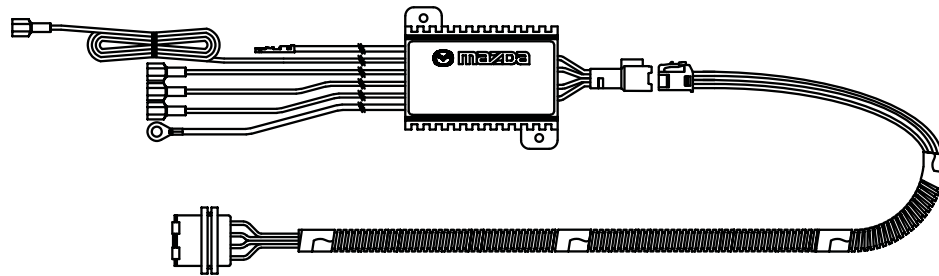
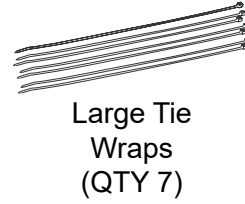
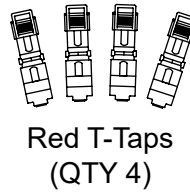
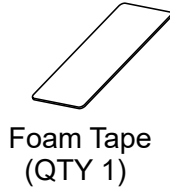
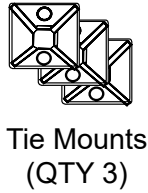
Installation Instructions

Part Number:

KSC2V7780
KSS2V7780

Trailer Hitch Harness Kit**Applicable Models:**

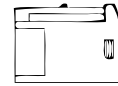
2022> CX-5

Package Contents:

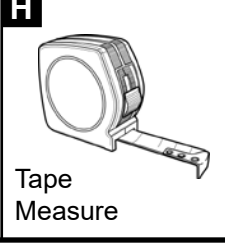
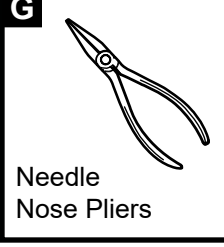
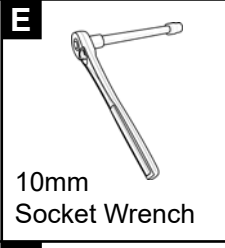
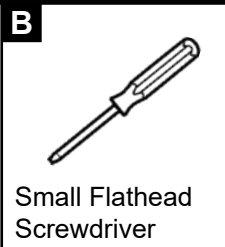
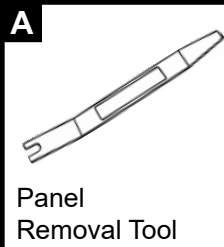
Main Harness (QTY 1)



Grommet (QTY 1)



Female Connector (QTY 1)

Tools Required**Before Installation**

- 1.) Read installation instructions before proceeding.
- 2.) Be careful not to damage vehicle paint or kit components.
- 3.) Do not over tighten bolts, tighten to specified torque.
- 4.) Record customers preset radio stations (if applicable).
- 5.) Using a 10mm socket, remove negative (-) battery terminal.

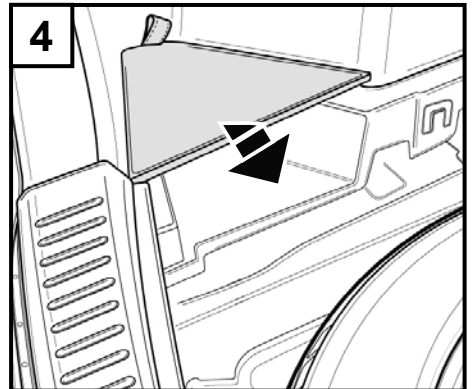
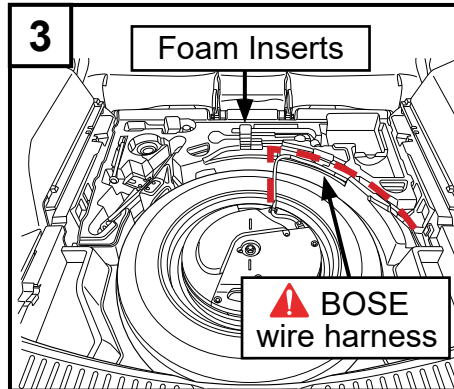
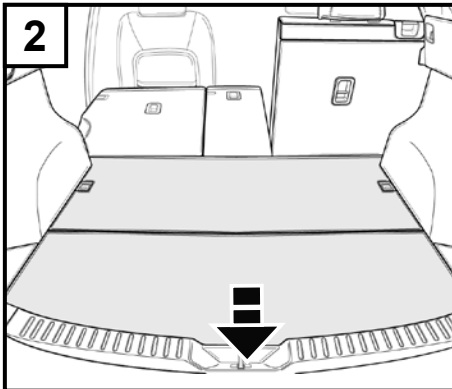
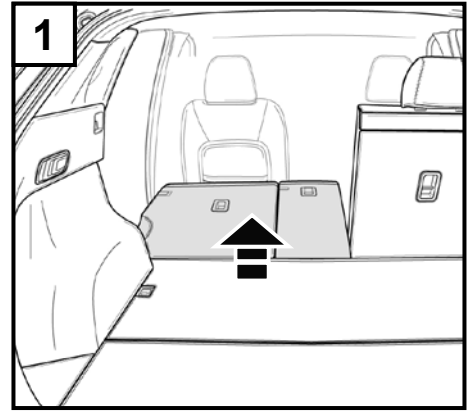
A ACCESS STORAGE COMPARTMENTS

1. Lift rear hatch door and lower passenger seats behind driver seat as shown.
2. Temporarily remove floor deck panel.

⚠ INSTALLATION ALERT

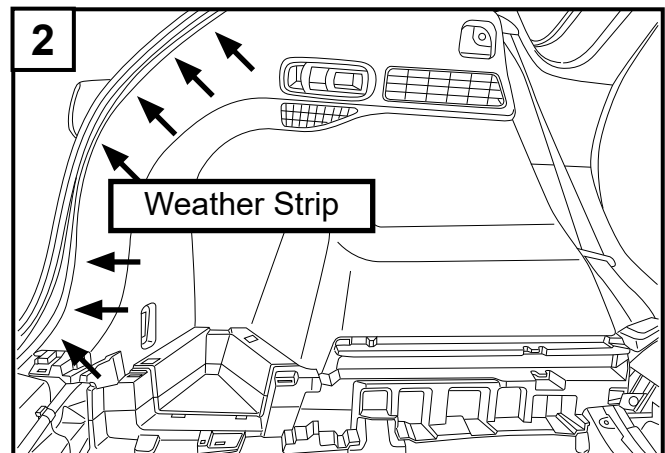
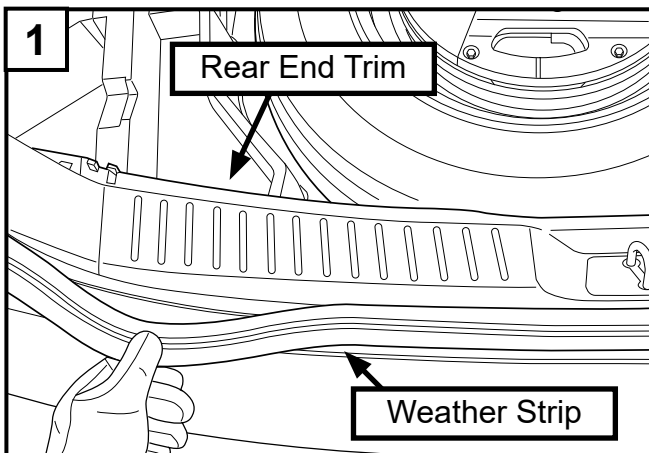
Vehicles equipped with a BOSE sound systems will have a wire harness located in the foam for the sub woofer. This harness will need to be detached from foam before removing inserts to prevent damage. Harness does not need to be unplugged from sub woofer or vehicle.

3. Temporarily remove jack and tow bar foam inserts.
4. Temporarily remove floor deck corner panel.
(Left side shown, repeat for the right side of the vehicle.)



B SEPERATING WEATHER STRIP

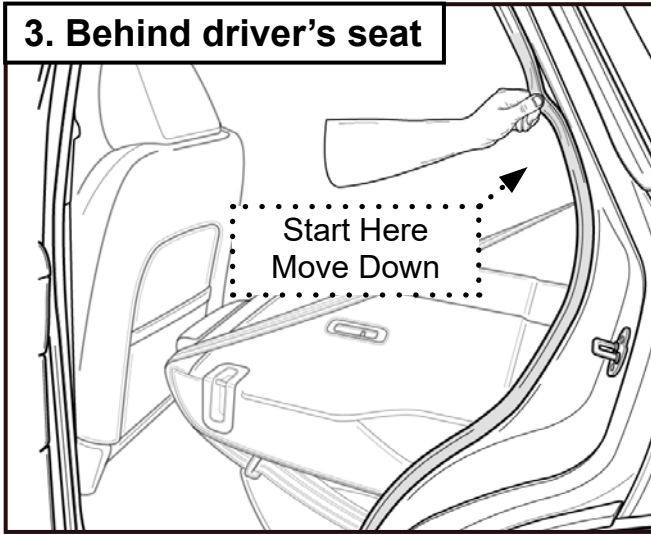
1. Gently lift rear weather strip away from the rear end trim, but do not completely remove from vehicle.
2. Gently lift rear weather strip along the left trunk side trim, but do not completely remove from vehicle.



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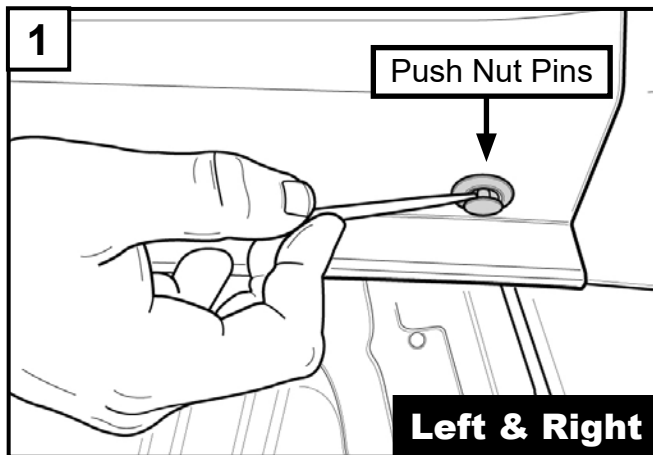
3. Gently lift rear weather strip along rear left passenger door starting at the top of the trunk trim and stopping at the scuff plate.

3. Behind driver's seat



C REAR END TRIM REMOVAL

1. Locate left and right push nut pins on threshold plate and temporarily remove using a small flathead screwdriver.



Tools Needed:

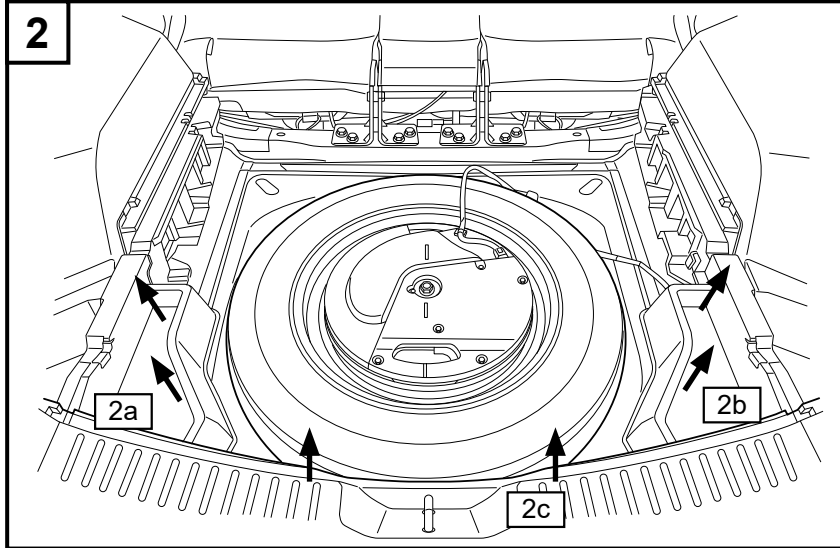


Small Flathead
Screwdriver

2. The rear end trim is made up of 3 separate portions that are attached. Each portion will need to be detached before the rear end trim can be fully removed. Take note that all three pieces will come out at the same time once they are all detached.

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- 2a. Firmly pull up on section 2a to detach from vehicle attachment points and set aside.
- 2b. Firmly pull up on section 2b to detach from vehicle attachment points and set aside.
- 2c. Firmly pull up on section 2c to detach from vehicle attachment points and set aside.

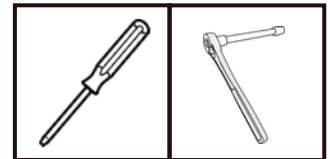


D REMOVING LEFT TRUNK SIDE TRIM FASTENERS

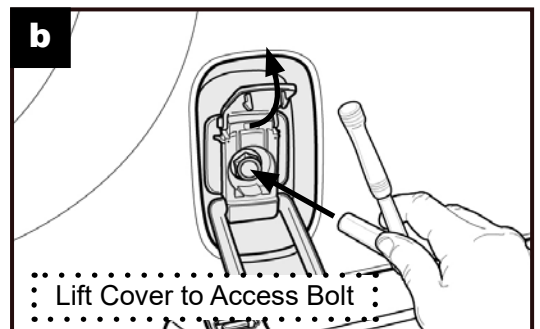
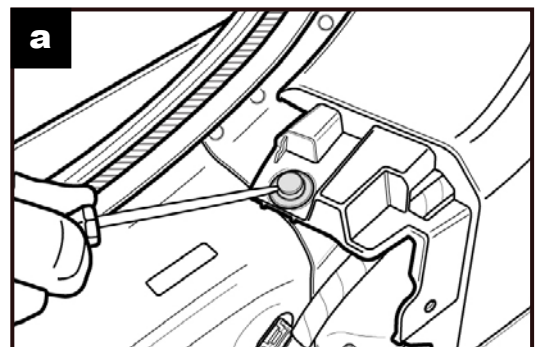
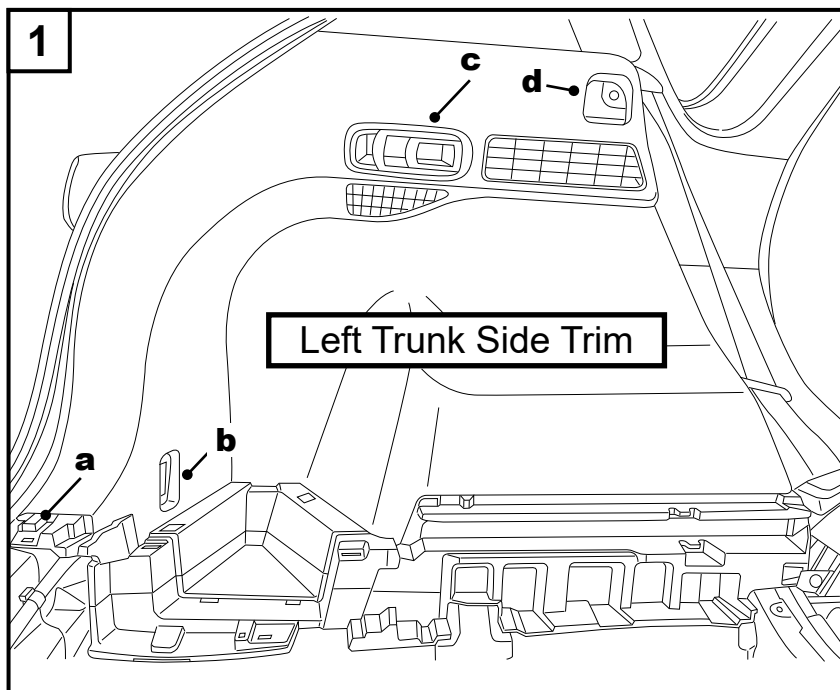
1. Locate driver's side interior trim panel and follow sequence to remove. **(a-b-c-d)**

- a.) Temporarily remove push nut pin of trim panel using a small flathead screwdriver for sequence (a).
- b.) Remove trim panel piece (b). Lift cover to access bolt and remove using a 10mm socket wrench. **(Torque Spec 9.0 - 12.0 N m).**

Tools Needed:



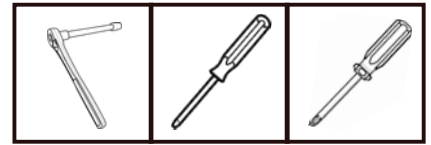
Small Flathead Screwdriver 10mm Socket Wrench



c.) Remove trim panel piece (c). Carefully release latch cover using a small flat head screwdriver. Remove phillips head screw securing the lift handle to the vehicle.

d.) Remove trim panel piece (d), using a phillips head screw driver.

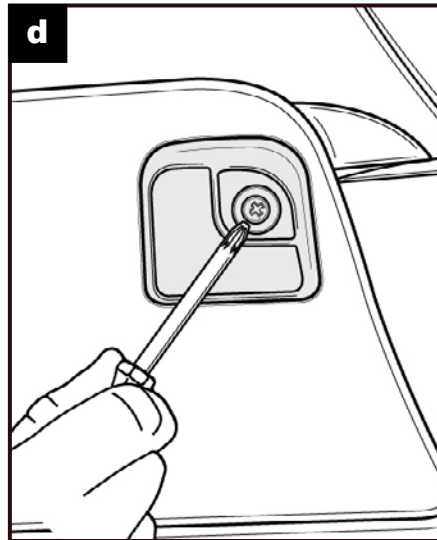
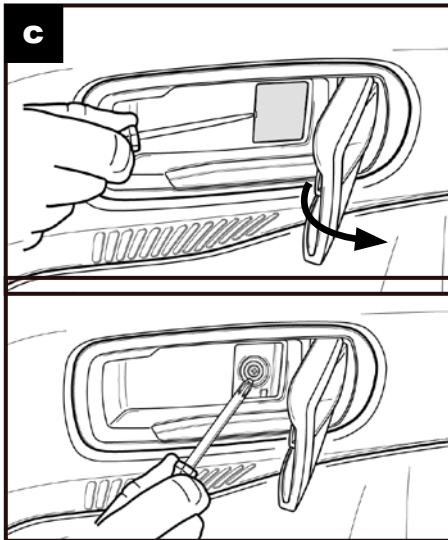
Tools Needed:



10mm Socket Wrench

Small Flathead Screwdriver

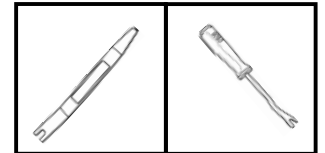
Phillips Screwdriver



E ACCESSING VEHICLE WIRE HARNESS BEHIND LEFT TRUNK SIDE TRIM

Tools Needed:

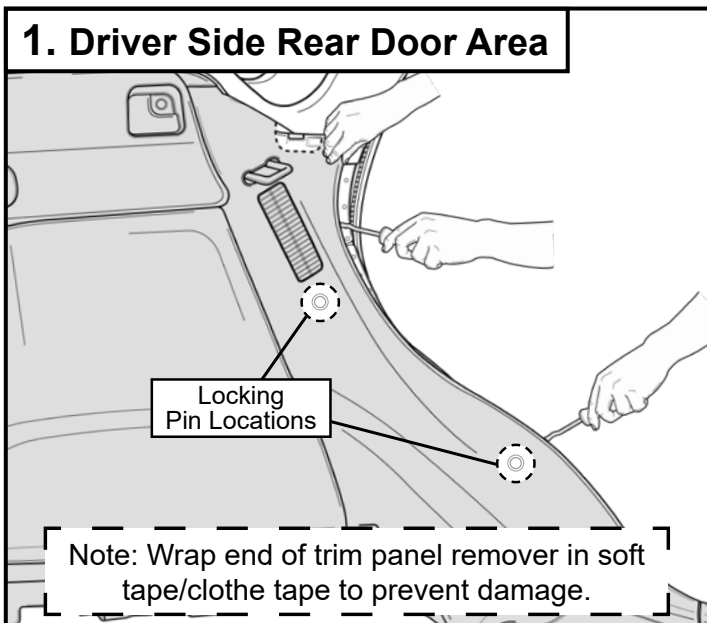
1. Carefully lift trim panel starting from inside driver side rear door area behind driver's seat using trim panel remover tool.



Panel Removal Tool

Trim Panel Remover

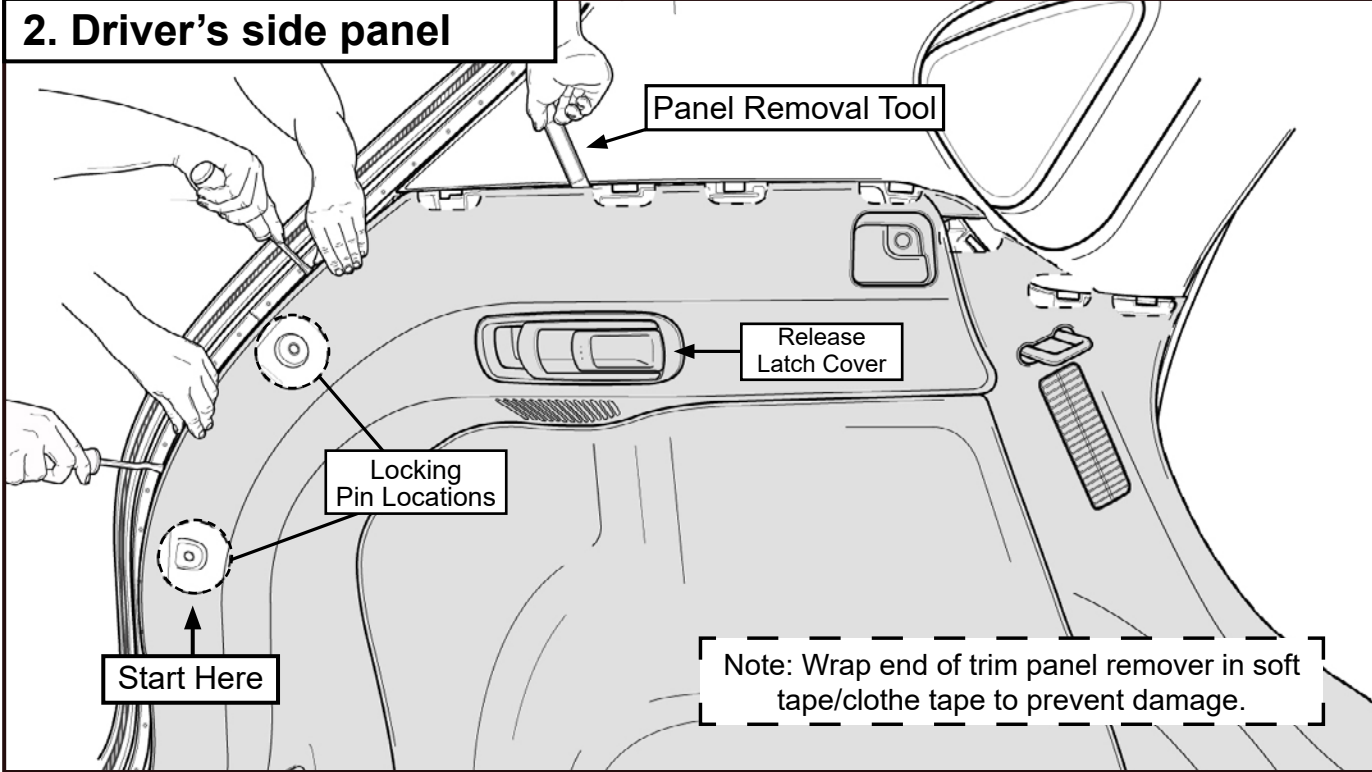
1. Driver Side Rear Door Area



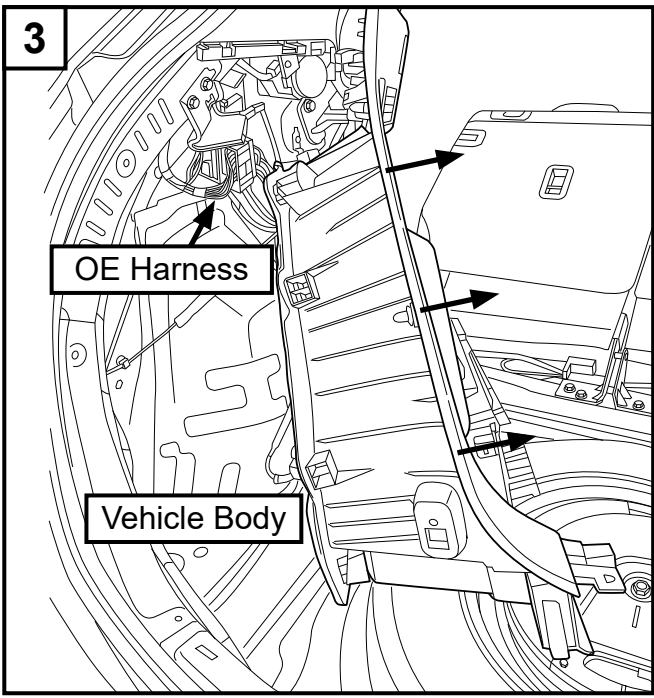
Note: Wrap end of trim panel remover in soft tape/cloth tape to prevent damage.

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2. Use trim panel remover tool to disengage two locking pin locations along trim panel side. Revert to the panel removal tool to disengage locking pin locations along top portion of trim panel.



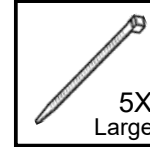
3. Gently move the trunk side trim end away from vehicle body just far enough to access the OE harness & vehicle body located behind the trunk side trim. It is not necessary to remove the trunk side trim from the vehicle.



F ROUTE NEW 4-FLAT MOLD FROM HITCH TO INTERIOR OF VEHICLE **Tools Needed:**



Wire Cutters



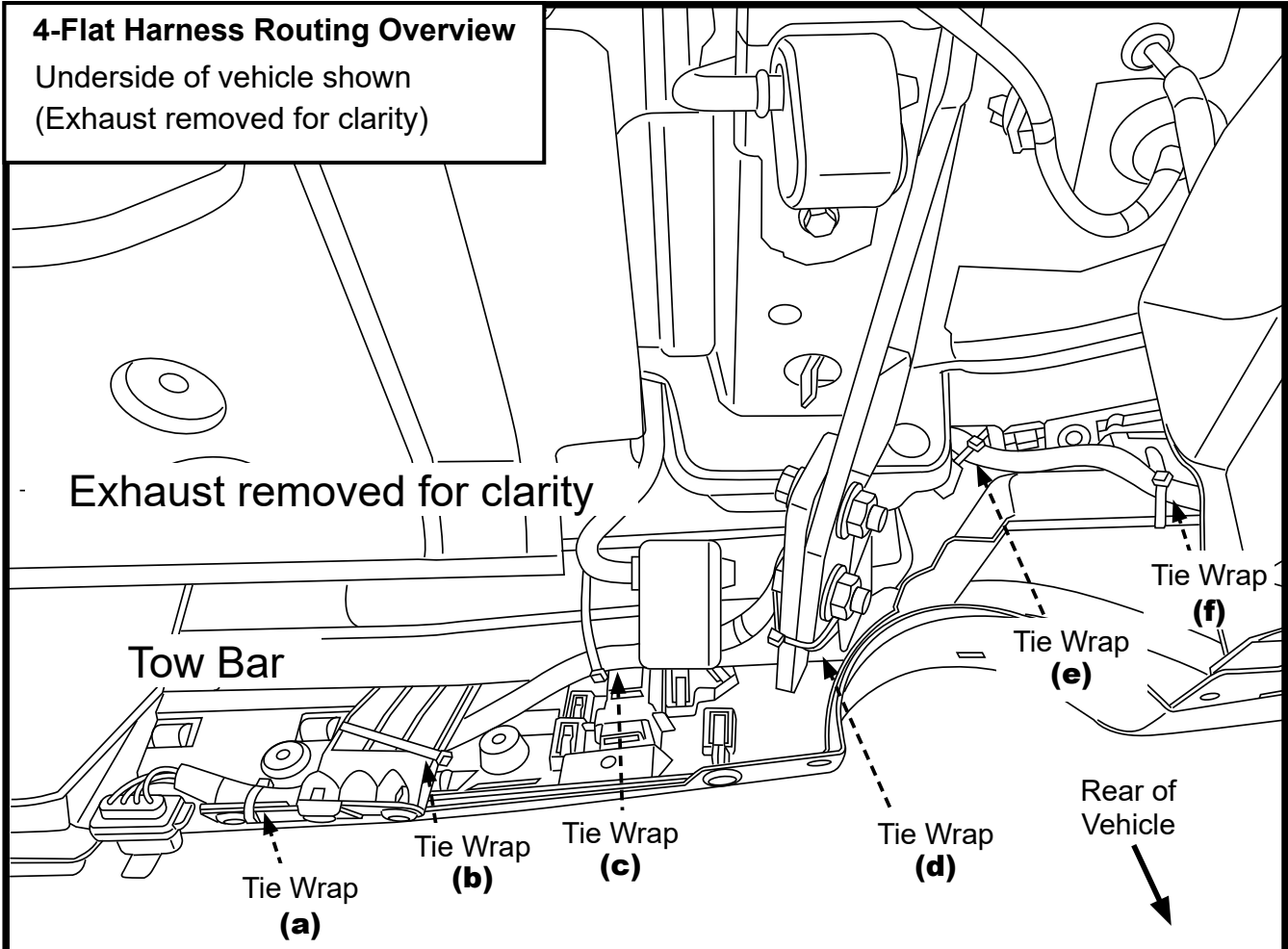
Tie Wraps



Tape Measure

4-Flat Harness Routing Overview

Underside of vehicle shown
(Exhaust removed for clarity)



⚠ INSTALLATION ALERT

Note: Vehicle shown in 4-FLAT Harness Routing Overview image is not equipped with parking sensors. Vehicles equipped with parking sensors will look slightly different in the area where tie wraps (e) and (f) are attached. Please refer to step 5 for details.

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CRITICAL STEP

Due to the extremely high temperatures produced by the exhaust, a minimum clearance of 50mm MUST be maintained between the exhaust and all harness components at ALL TIMES. Failure to do so can result in severe harness damage and loss of trailer functions such as brake lights and/or turn signal lights.

- a) Before fully tightening any tie wraps, confirm you have a minimum clearance of 50mm between harness and exhaust.

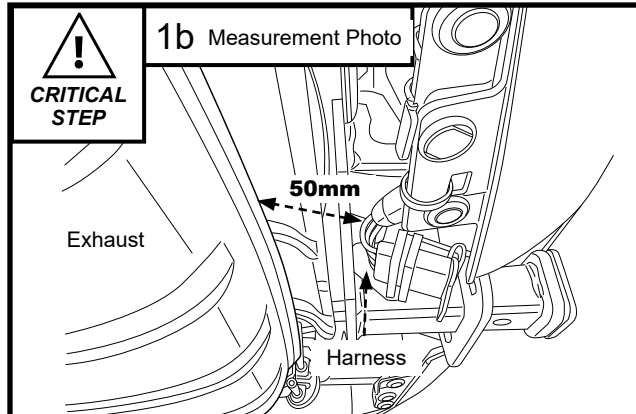
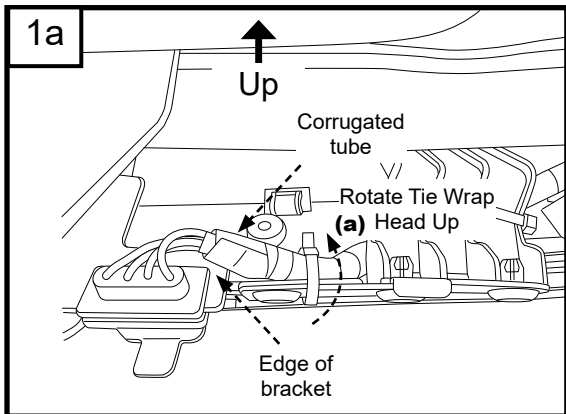


CRITICAL STEP

Critical Step:

See Caution prior to performing step.

1. Secure the 4-flat trailer connector into the hitch bracket as shown. Route the the wire harness towards the cutout located on the bumper fascia mount (a). It's important that the corrugated tube is routed over the edge of the bracket for protection. Use a large tie wrap to loosely secure the wire harness while keeping a **50MM CLEARANCE BETWEEN THE WIRE HARNESS AND ALL EXHAUST SURFACES** as shown in the measurement photo 1b. Once clearance distance has been confirmed, rotate tie wrap head up into the bumper, remove all slack, fully tighten tie wrap, and trim with wire cutters.

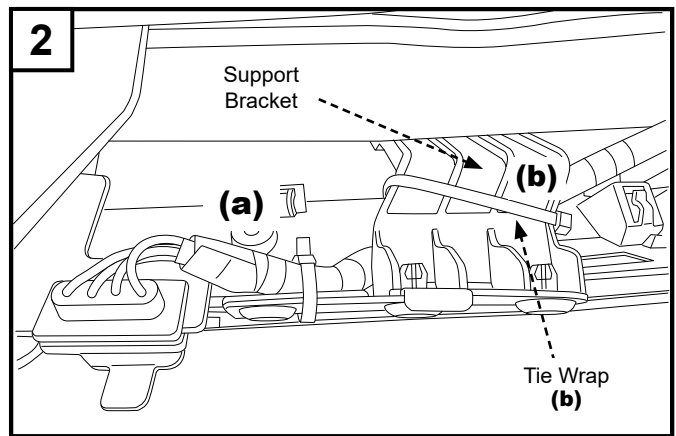


CRITICAL STEP

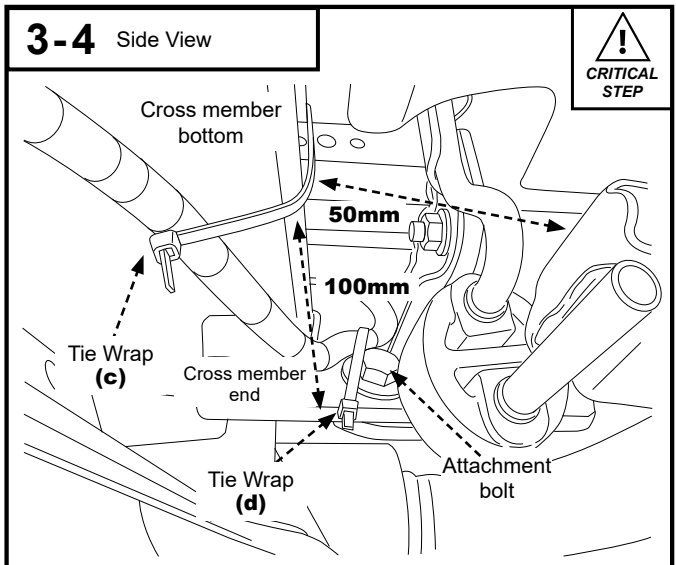
It's important that the corrugated tube is routed over the edge of the bracket for protection. Damage to harness may occur otherwise.

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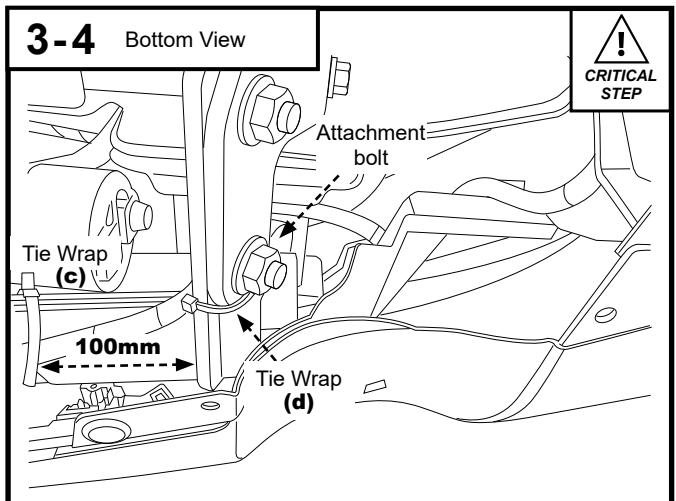
2. Route the harness behind fascia support bracket making sure the harness is routed between the bumper fascia and bracket (b). Use a large tie wrap to secure the harness to the fascia. Tighten the tie wrap and trim the tie wrap tail with wire cutters.



3. Use a large tie wrap to loosely secure the wire harness to the bottom of the cross member of the hitch (c) while keeping a **50MM CLEARANCE BETWEEN THE WIRE HARNESS AND ALL EXHAUST SURFACES**. Tie wrap should be located 100mm from the cross member end. Once distances have been confirmed, remove all slack from the harness before fully securing and trimming the tie wrap tail with wire cutters.



4. Route the harness behind the rear most hitch attachment bolt and use a large tie wrap to loosely secure the harness to the hitch at the hitch split (d) while keeping a **50MM CLEARANCE BETWEEN THE WIRE HARNESS AND ALL EXHAUST SURFACES**. Once the clearance has been confirmed, remove all slack from the harness before fully securing and trimming the tie wrap tail with wire cutters.



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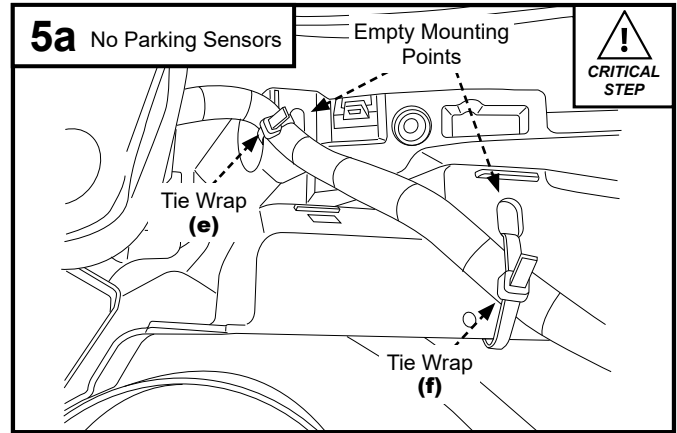
! INSTALLATION ALERT

NOTE: It is not needed to perform both steps 5a and 5b. Perform only one based on the following:

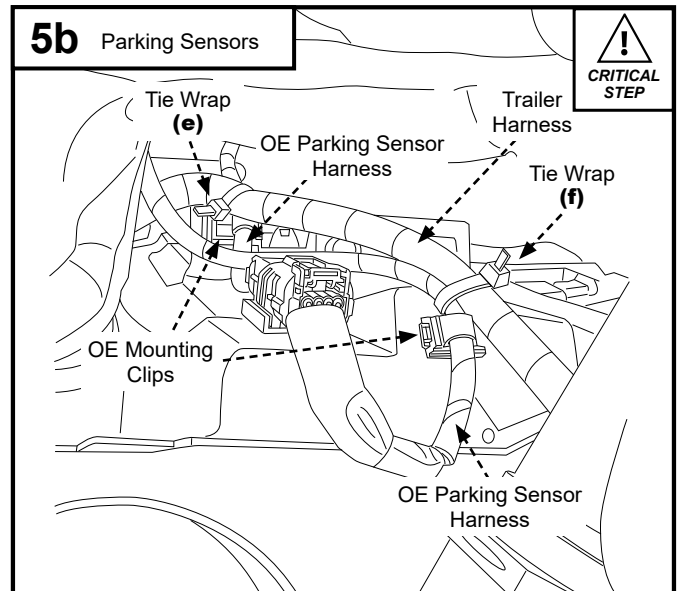
- Follow step 5a for vehicles **not equipped** with rear parking sensors.
- Follow step 5b for vehicles **equipped** with rear parking sensors.



5a. Use two large tie wraps to loosely secure the wire harness to the inside of the bumper at empty mounting points (e) and (f) while keeping a **50MM CLEARANCE BETWEEN THE WIRE HARNESS AND ALL EXHAUST SURFACES**. Once distances have been confirmed, remove all slack from the harness before fully securing and trimming the tie wrap tails with wire cutters.



5b. Use two large tie wraps to loosely secure the trailer wire harness to the rear parking sensor harness at points (e) and (f) while keeping a **50MM CLEARANCE BETWEEN THE WIRE HARNESS AND ALL EXHAUST SURFACES**. Tie wraps should be located **above** the OE mounting clips for the rear parking sensor harness as shown in image. Once distances have been confirmed, remove all slack from the harness before fully securing and trimming the tie wrap tail with wire cutters.

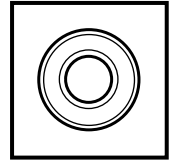


After tie wraps have been fully tightened, reconfirm that all harness components have a minimum clearance of 50mm to the exhaust by using a scale to measure and confirm.

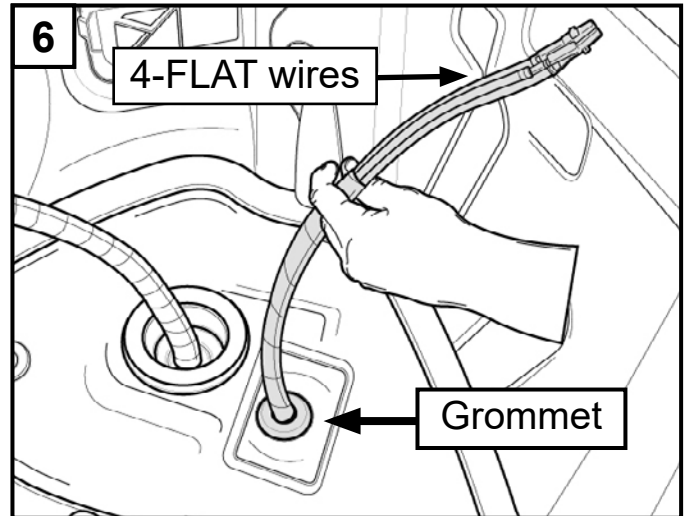
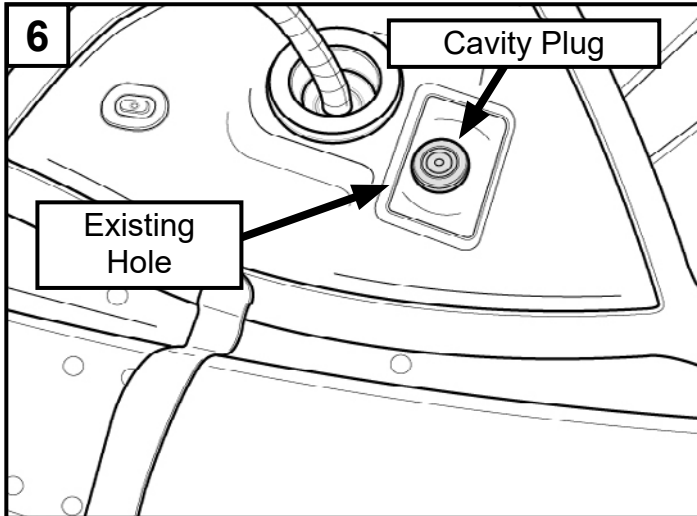
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6. Locate and remove the existing cavity plug from the vehicle floor.
Insert newly supplied grommet into existing cavity. Carefully route the 4 terminated harness wires from underneath the vehicle into the interior through the newly installed grommet.

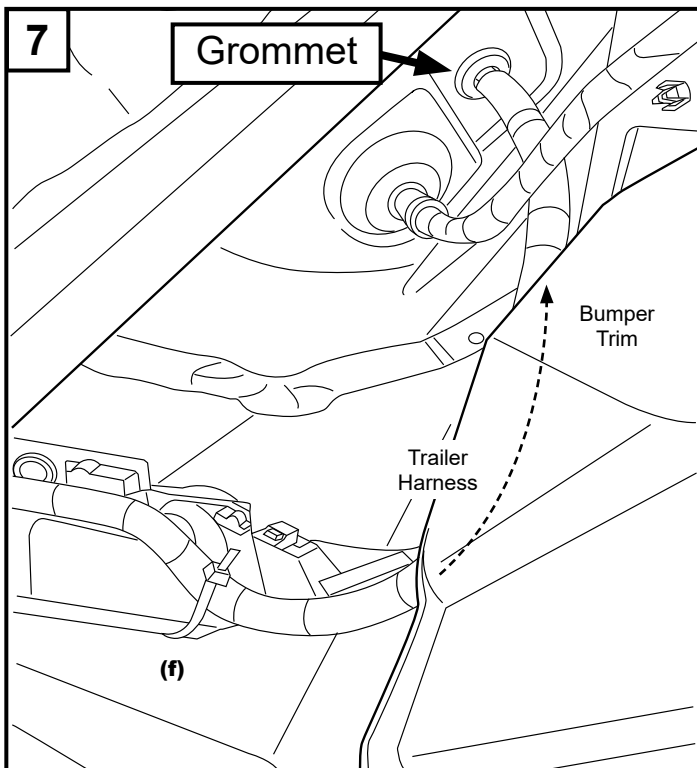
Tools Needed:



Grommet

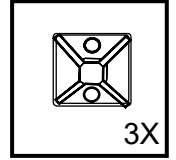


7. Once the trailer harness has been routed through the grommet into the vehicle, confirm that the corrugated tube makes contact with the grommet underneath the vehicle and that the harness is located safely behind the bumper trim as shown in image.

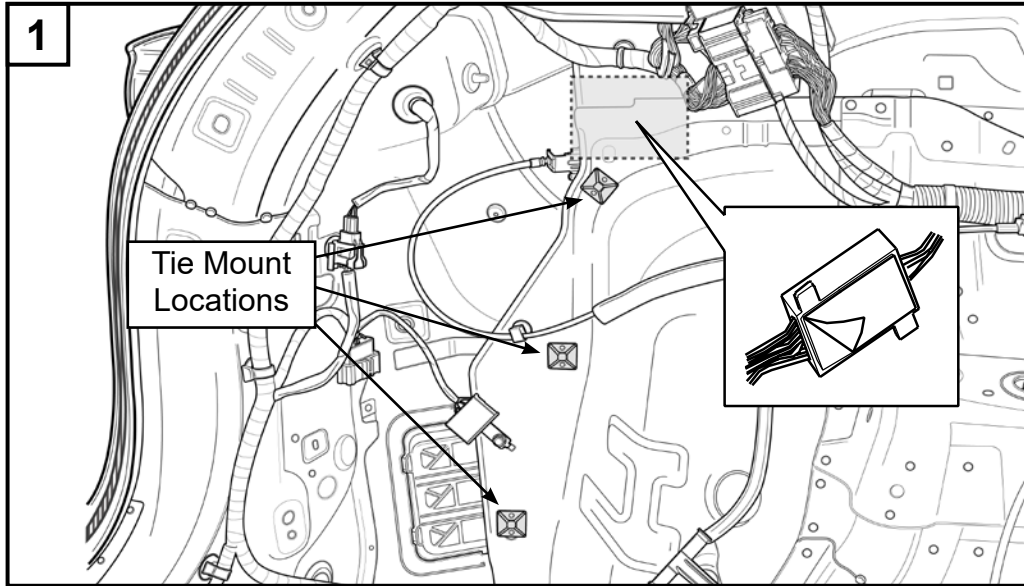


G**MOUNT MAIN HARNESS & CONNECT 4-FLAT HARNESS TO MODULE****Tools Needed:**

1. Clean the indicated wire tie mount and module mounting areas behind the driver's side trim panel with an alcohol wipe. Remove adhesive backing on module and tie mounts. Mount wire harness module and three tie mounts to specified locations.

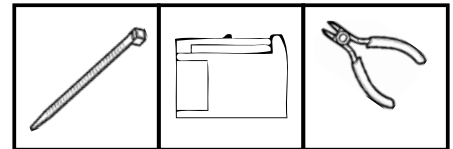


Tie Mounts



2. Insert the provided female connector to the four terminated wires. Firmly push terminal lock into the locked position.

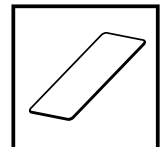
Attach the 4-Flat harness connector to the module connector. The wires should match color to color at the connectors. (reference illustration).



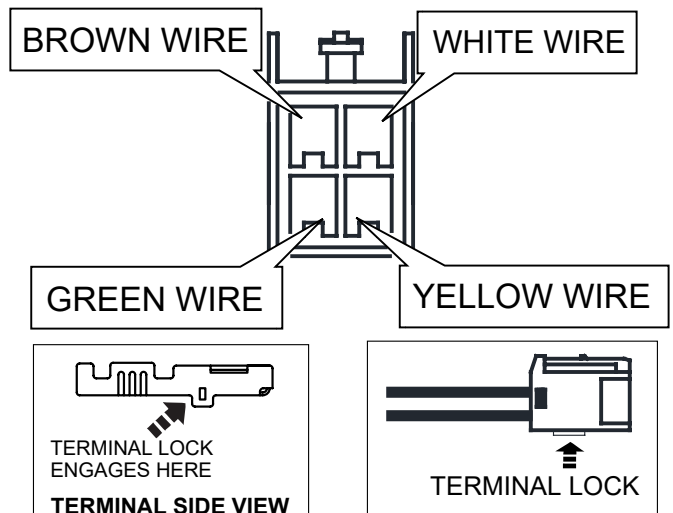
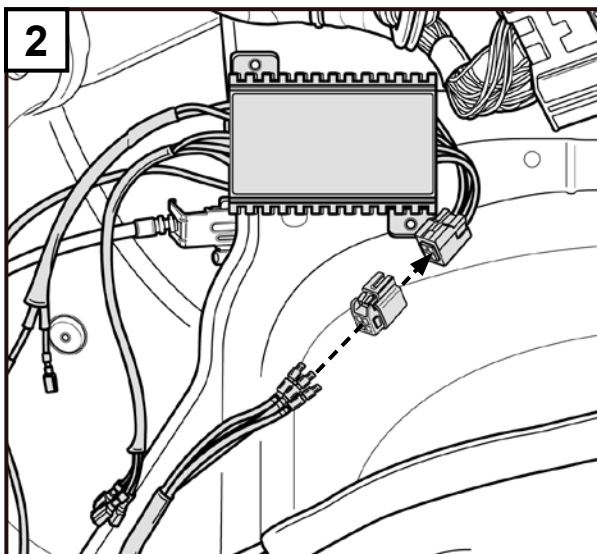
Tie Wrap

Female Connector

Wire Cutters

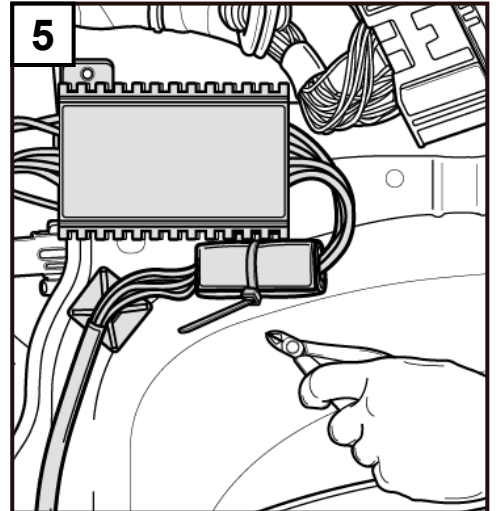
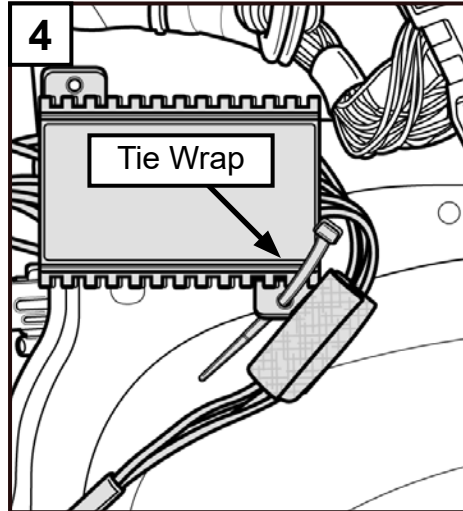
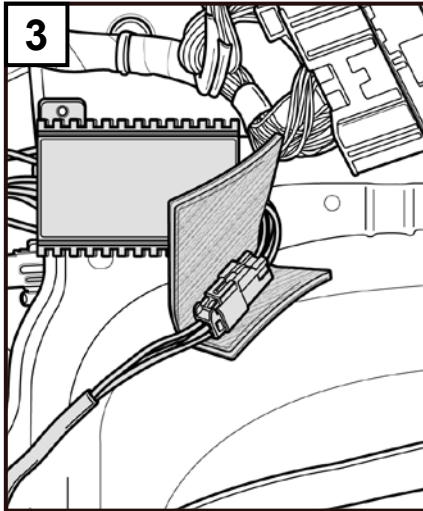


Foam Tape



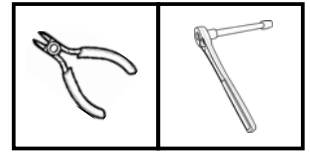
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3. Use one piece of foam tape to protect connectors and to prevent rattle.
4. Use a tie wrap to secure connectors wrapped in foam tape to the main harness's mounting component as shown.
5. Cut excess tie wrap used in prior step with wire cutters.



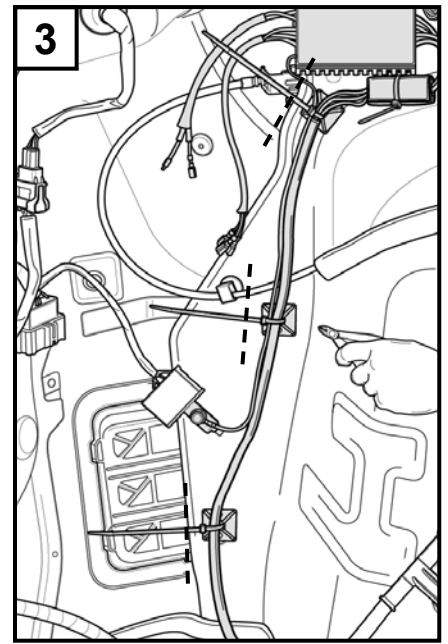
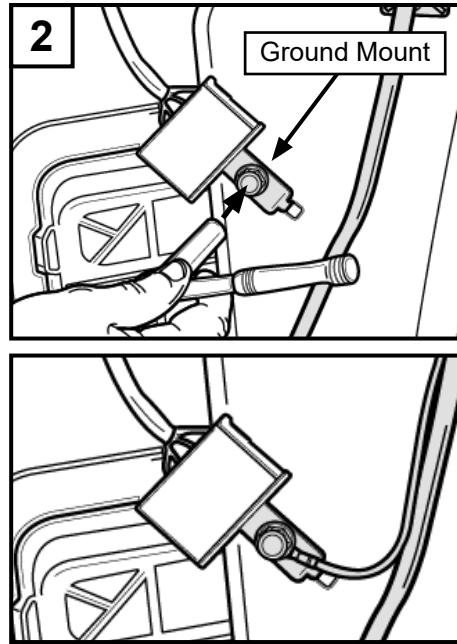
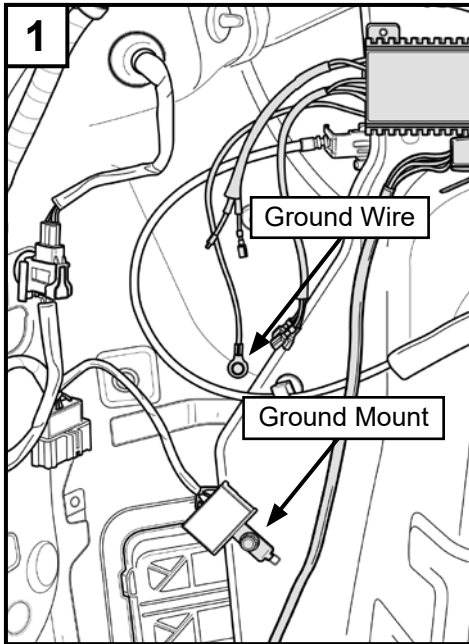
H MOUNT GROUND WIRE

Tools Needed:



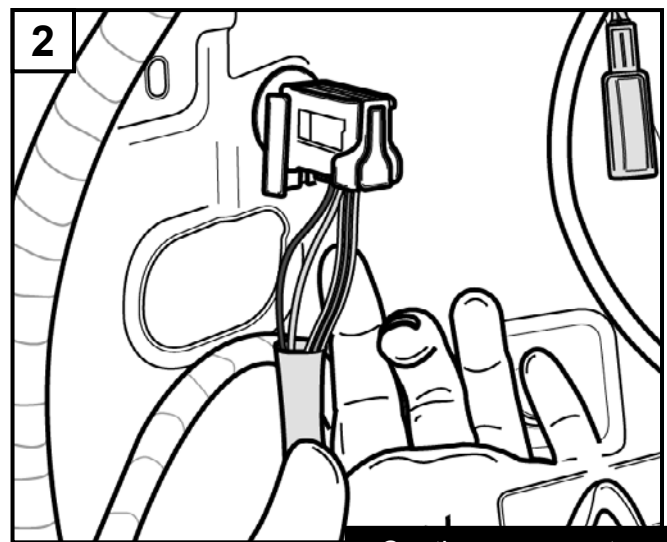
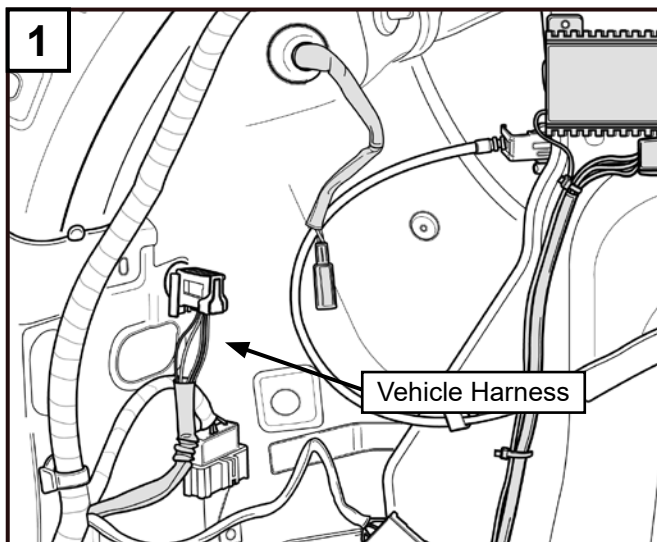
Wire Cutters 10mm Socket Wrench

1. Locate ground mount and ground wire connection.
2. Remove the existing ground mount bolt using a 10mm socket wrench. Route the black ground wire from the main harness module to the bolt location and tighten. **(Torque bolt to 7 N m)**
3. Gently pull up on 4-Flat harness until corrugated portion on harness makes contact with grommet on external portion of vehicle. While making sure corrugated tube is in contact with grommet, use three tie wraps to secure 4-Flat harness and ground wire to the three tie mount locations. Once secure, cut excess tie wraps.



I ACCESS VEHICLE HARNESS & CONNECT WIRE TAPS TO VEHICLE HARNESS

1. Locate vehicle harness.
2. Expose vehicle harness wires by pulling back rubber casing sleeve.

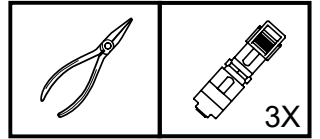


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3. Connect wire taps to vehicle harness on driver side. Locate and identify the tail light (PINK), left turn signal (SKY BLUE), and stop wire (RED), behind the driver's side light. Attach a red T-tap to each of the indicated wires.

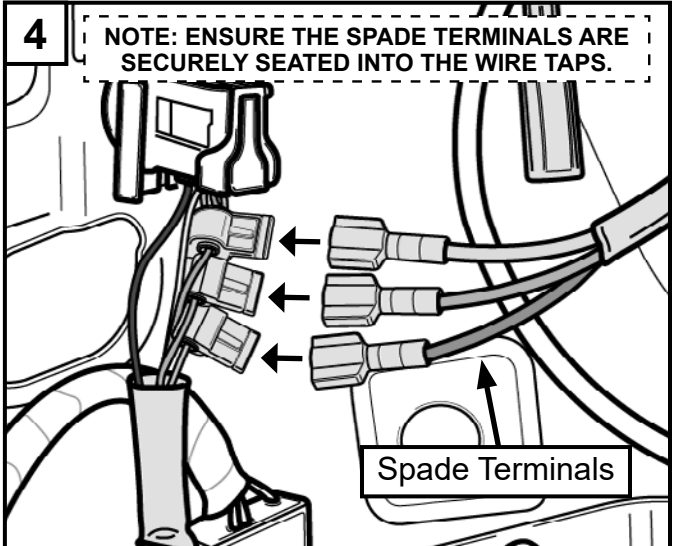
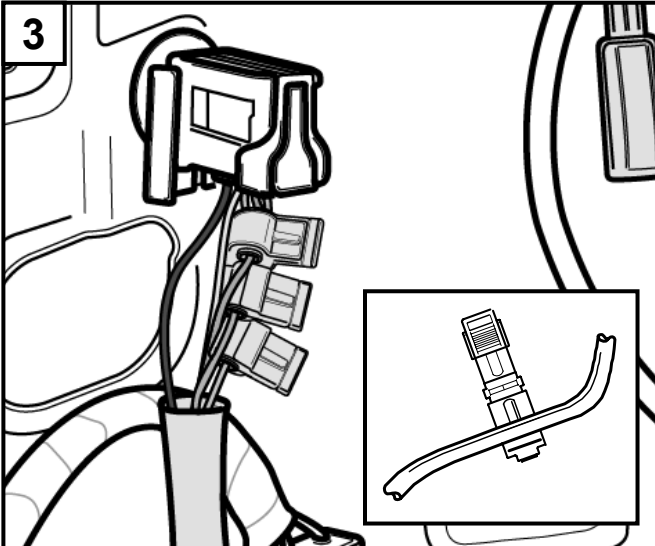
- (a) place wire into the center jaw of the wire T-Tap splice.
- (b) fold wire tap around wire.
- (c) Squeeze tightly together with pliers, making a secure connection.

Tools Needed:



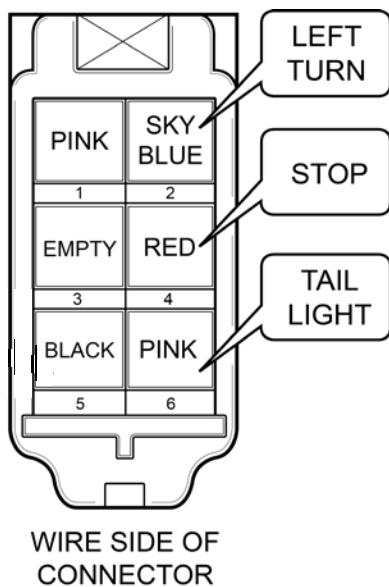
Needle nose pliers Red T-Taps

4. Connect main harness spade terminals to wire taps (Use chart for reference).

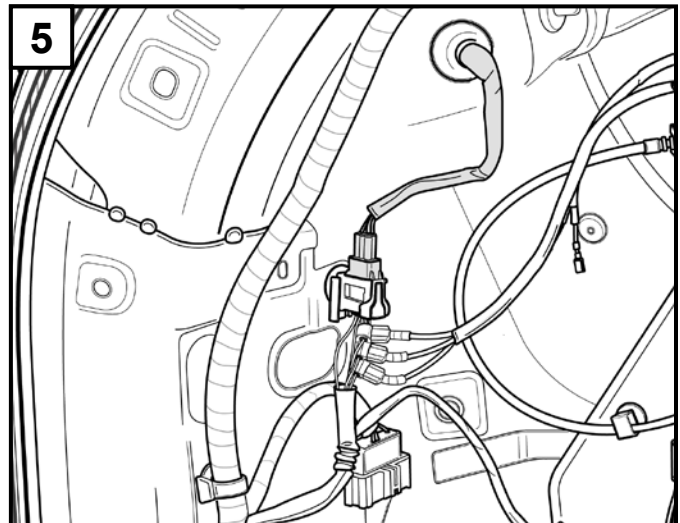


VEHICLE HARNESS WIRE COLOR		CIRCUIT
PINK	(4-WAY CONNECTOR)	TAIL LIGHT
RED	(4-WAY CONNECTOR)	STOP
SKY BLUE	(3-WAY CONNECTOR)	LEFT TURN

VEHICLE HARNESS WIRE COLOR		ACCESSORY WIRE HARNESS COLORS
PINK	(4-WAY CONNECTOR)	BROWN
RED	(4-WAY CONNECTOR)	BLUE/BLACK
BLUE	(3-WAY CONNECTOR)	YELLOW

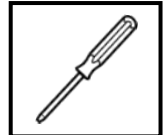


5. Plug the wire harness connection back in.



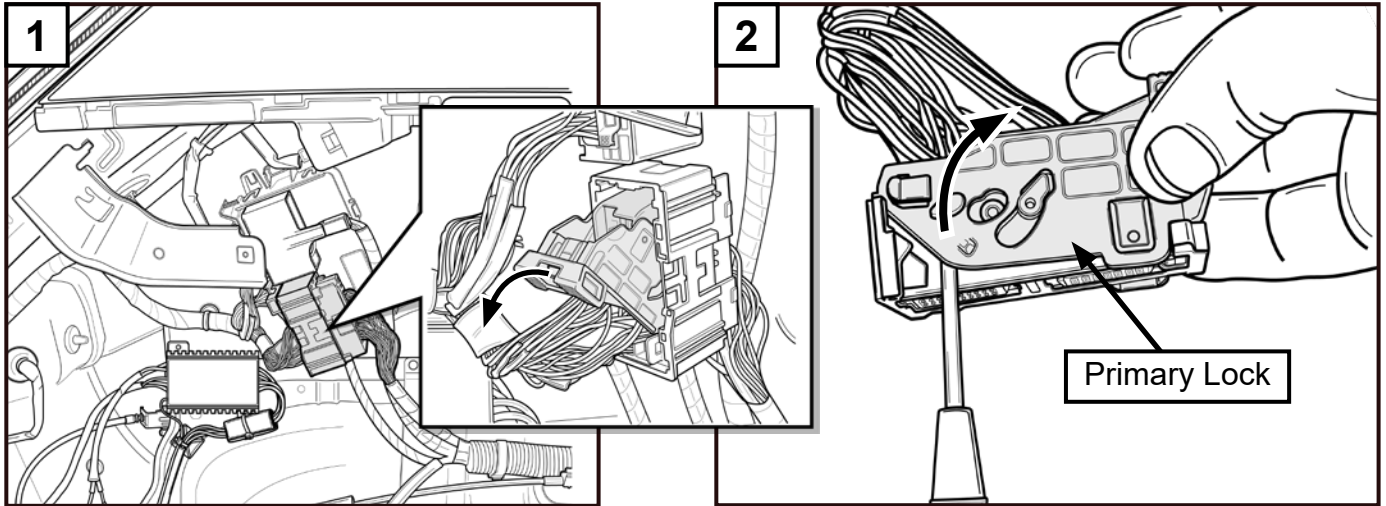
J REMOVE PRIMARY LOCK ON REAR JUNCTION CONNECTOR

Tools Needed:



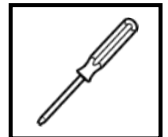
Small Flathead
Screwdriver

1. Disconnect the rear junction connector by pushing down on the black primary lock and tilting back to release. **Once connector is free, lock must be returned to its closed position before removing.**
2. Remove black primary lock by using a small flathead screwdriver to pry and carefully lift the lock on both mating sides.



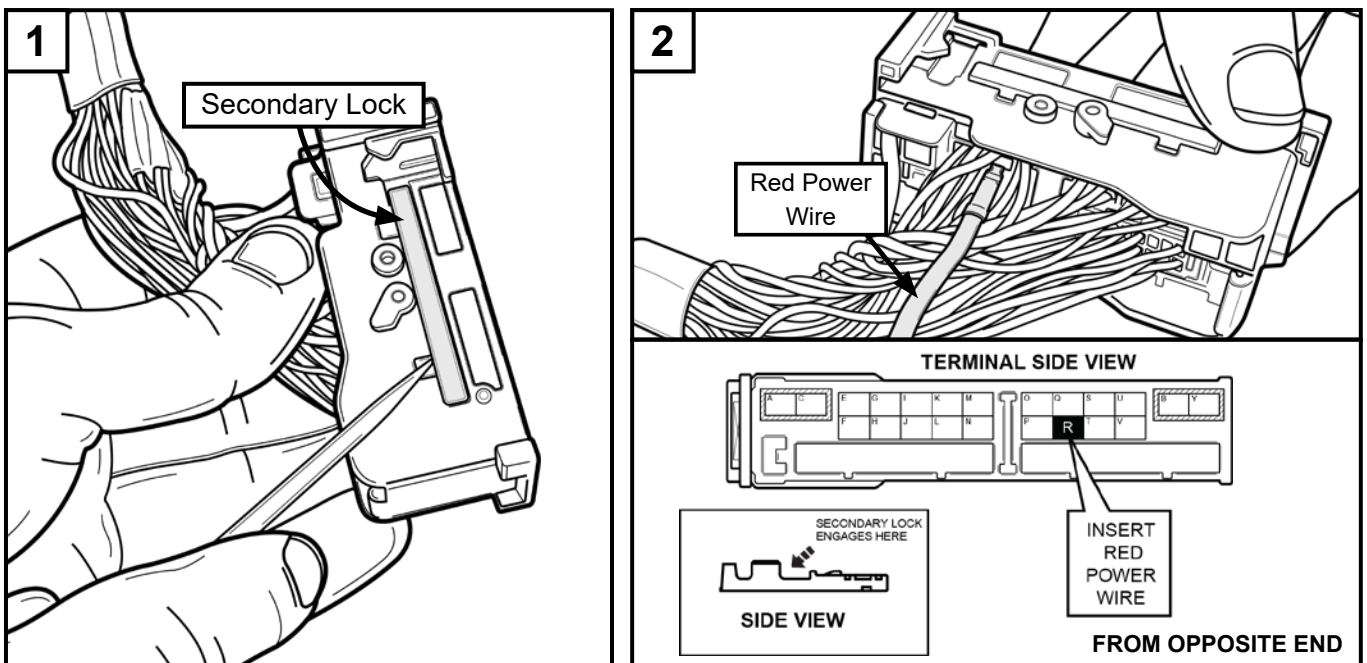
K DISENGAGE SECONDARY LOCK & INSERT RED POWER WIRE

Tools Needed:



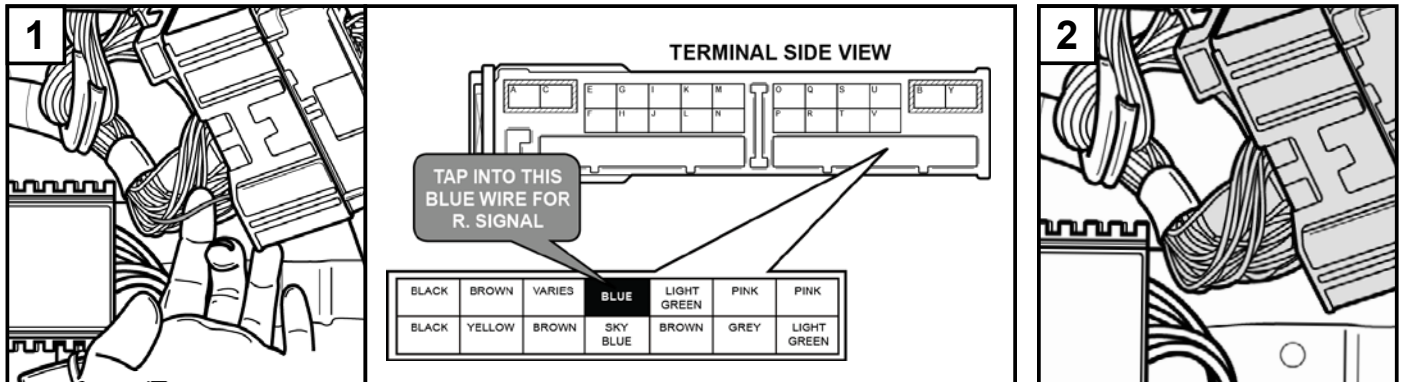
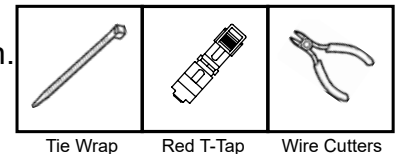
Small Flathead
Screwdriver

1. Disengage secondary lock on rear junction connector by carefully using a small flathead screwdriver or terminal removal pick tool.
2. Route the red power wire to the rear junction connector. Locate proper cavity to be populated (see illustration). Once terminal is properly engaged in connector, squeeze secondary lock into place.

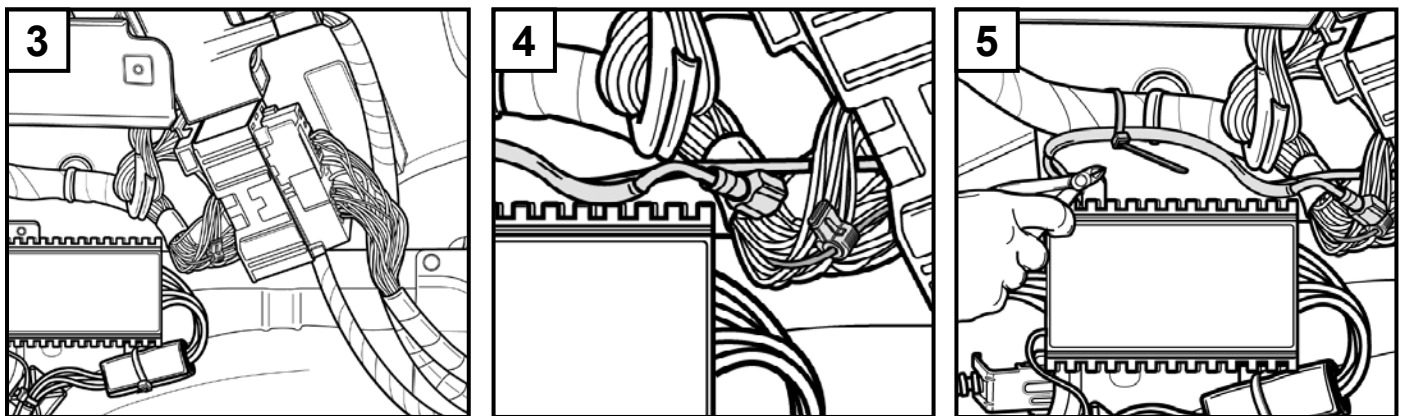


L**REASSEMBLE REAR JUNCTION CONNECTOR & REMAINING T-TAP WIRE****Tools Needed:**

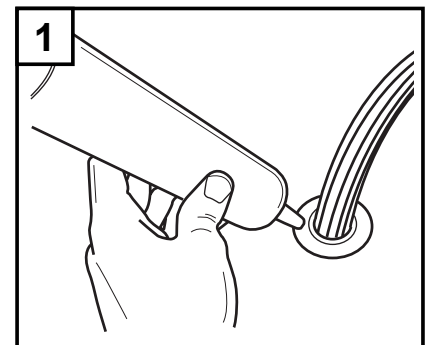
1. Locate **BLUE** wire on rear junction connector for T-Tap connection.
2. Use a T-Tap on **BLUE** wire of the rear junction connector.



3. Confirm the secondary lock has re-engaged and place the black primary lock back on the connector. Make sure primary lock is disengaged and in the down position before inserting back into junction connector. Reassemble and insert the rear junction connector back in place. Primary lock should auto lock in place.
4. Snap in remaining green main harness wire to T-Tap connection.
5. Tie wrap green main harness wire onto cable above main harness and cut excess tie wrap.

**M****FINISHING STEPS**

1. Seal the replacement grommet with silicon to prevent any possible water intrusion.
2. Reinstall all trim, tie downs and interior panels in reverse order of removal, ensuring all fasteners are properly installed.
3. Clean vehicle.
4. Vacuum and clean any debris caused by installation.
5. Place installation instructions in the glove box of vehicle.
6. Connect negative (-) battery terminal.



TROUBLESHOOTING GUIDE

PART NUMBER:
KSC2V7780
KSS2V7780

TRAILER HITCH WIRING KIT

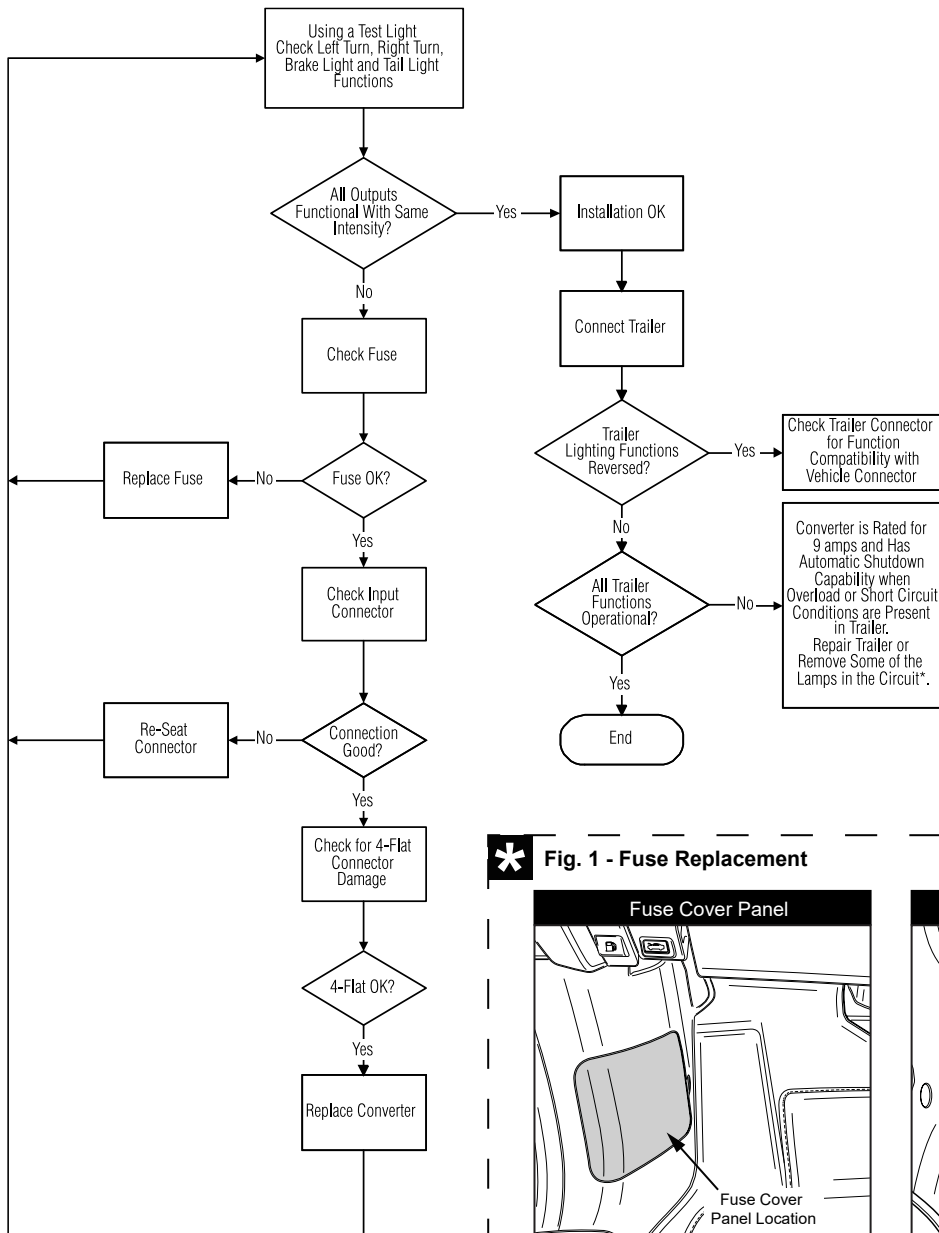
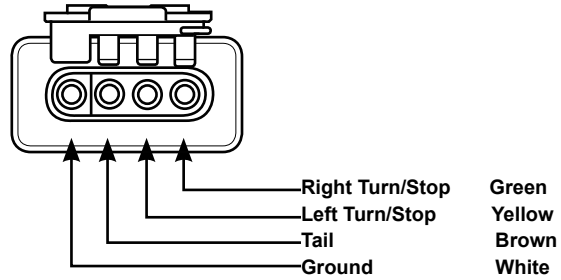
APPLICABLE MODELS:
2022> CX-5

TOOLS REQUIRED

TEST LIGHT

METHOD

1. Attach the test light ground connection to the male pin of the harness's 4-flat connector.
2. Probe each of the female pins individually to confirm correct circuit operation.



*** Fig. 1 - Fuse Replacement**

Fuse Cover Panel

Fuse Cover Panel Location

Fuse Relay Box

Fuse Location

Remove fuse relay box cover panel from underneath the dashboard on the driver side of the vehicle.

15 amp fuse will be located in cavity labeled ESCL of the fuse relay box.


INSTALLATION INSPECTION

PART NUMBER:
KSC2V7780
KSS2V7780

TRAILER HITCH WIRING KIT

APPLICABLE MODELS:
2022> CX-5

Inspect the installed / reinstalled parts for the following items:

	Inspection Parts	Inspection Items •			Operation Check
		Clearance/Fit	Scratches/Dirt/ Harness Interference	Installation/ Tightening/ Engagement	
 CRITICAL STEP	<u>50MM CLEARANCE BETWEEN THE WIRE HARNESS AND ALL EXHAUST SURFACES</u>	•	•	•	
	Tow Harness Functions				•
	Tow Harness	•	•	•	
	Tow Harness Module Ground Screw			•	
	Driver's Side Left Rear Interior Trim Panel	•	•	•	
	Passenger Side Right Rear Interior Trim Panel	•	•	•	
	Rear Threshold Plate	•	•	•	
	Rear Foam Inserts	•	•	•	
	Rear Floor Covering	•	•	•	
	Vehicle Negative Power Cable			•	
	4-FLAT Harness	•		•	

Notes:

1. Verify signal functionality at the trailer harness plug using test procedure on page 16.
2. Ensure tow harness module ground bolt is torqued to 7.0 N•m.

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 2 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



Due to the extreme high temperatures produced by the exhaust, a minimum clearance of 50mm must be maintained between exhaust and harness. Failure to do so will result in severe damage to harness and loss of trailer functions, such as brake lights and turn signal lights.

Date					
Vehicle					
VIN					
Approved		Checked		Person in Charge	