

BRAKE CONTROLLER WITH HARNESS

INSTALLATION 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 brake controller with harness kit.

Keep these instructions with your vehicle records for future reference.



- There are several  **WARNING** and  **CAUTION** sections in this booklet concerning safety when installing or removing the Brake Controller. 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 brake controller.
- Do not install the brake controller 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: Brake Controller with Harness

PART NUMBER: C9N1V7782

VEHICLE: CX-90


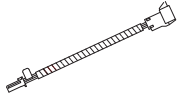





1. PARTS


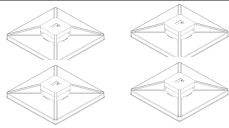


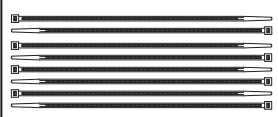
NOTE

- Verify that the kit includes all the following parts and that the parts are not dirty, scratched, or damaged.

Brake Controller with Harness Kit (C9N1V7782)

Part	Part name	Qty	Part	Part name	Qty
	Brake Controller Kit (Boxed)	1		Harness	1
	Parts Bag	1		Installation inspection sheet	1
	Installation instructions	1			

Parts Bag contents

Part	Part name	Qty	Part	Part name	Qty
	Well Nut & Screw	1 Ea.		Zip Tie Mounts	4
	Corrugated Tubing 11.00"	1		Foam tape	3
	Zip Ties	8			

3. BEFORE INSTALLATION

REQUIRED TOOLS

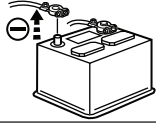
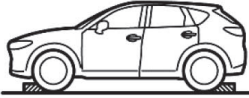
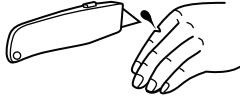
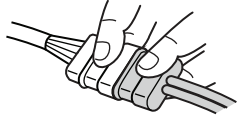
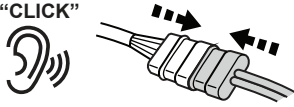
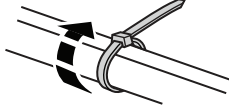

- ☆ Drill
- ☆ 5/16" Drillbit
- ☆ Phillips Screwdriver
- ☆ Wire Cutters/Nippers
- ☆ Centerpunch/Scribe
- ☆ 10mm Socket
- ☆ Socket Wrench
- ☆ Panel Pry tool
- ☆ Scissors
- ☆ Flat Bladed Screwdriver

OTHER PREPARATIONS



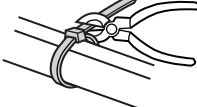
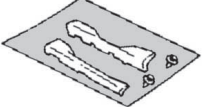



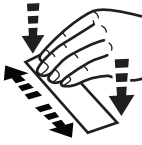
- ☆ Soft clean cloth
- ☆ Mat
- ☆ Protective tape
- ☆ IPA (Isopropyl alcohol)
- ☆ Protective glove

- To perform the installation work safely and maintain functionality and quality, thoroughly read these instructions before performing the procedures and always heed the warnings and precautions.
- In the work procedures, there are descriptions which are only indicated in the figure. Make sure to follow these procedures as well.

⚠ WARNING

When the negative battery is connected during operation, may cause electric shock or other personal injuries. Disconnect the negative cable before/installation.	Before performing any work, park the vehicle on level ground, apply the parking brake securely, and then block the wheels.	Be careful when handling drills and other sharp objects. If not handled properly, it could result in serious injury.	When connecting/disconnecting connectors, grasp the connectors, not the wires. Otherwise a short, and an accident from poor contact or fire may occur.
			
Make sure the connector is securely pressed in until a click sound is heard. Otherwise, a fire or other accident may occur due to an open circuit or poor contact.	Secure the harness with tie wraps (part included) so it doesn't dangle. If not, it may cause a short, accident, or fire.	Do not pull the harness with excessive force. Doing so can cause a breakage or a short-related accident, as well as an electrical short or fire.	
			

⚠ CAUTION

Using improper tools may cause damage and/or broken parts. Use the correct tool for the job.	Wrap protective tape around screwdrivers and fastener removal tools to prevent vehicle damage.	Trim off any excessive length of tie wraps to avoid interfering or damaging other parts.	Place the removed parts and the parts in the kit on a protective sheet to prevent scratches.
			
When the negative battery cable is removed, the initial value or memory for the power windows, clock, i-stop, steering angle sensor reference point will be cleared. Perform re-initialization.	If there is dust, dirt or grease on the adhesion surface, the adhesive power of the tape will be reduced. Clean and degrease the surface of the adhesion area before applying the double-sided adhesive tape. Be sure to wash interior and exterior parts using IPA (isopropyl alcohol).	Accurately determine the position of the double-sided adhesive tape before adhering. If tape is peeled up and re-adhered, the adhesive strength will be weakened.	To assure that the double-sided adhesive tape is secure, press the adhesive surface of the tape to the surface of the part evenly. Be sure to press firmly at the ends of the double-sided adhesive tape where the adhesion surface is curved.
			

ADVICE

Refer to the Workshop Manual for removal and installation of vehicle parts.

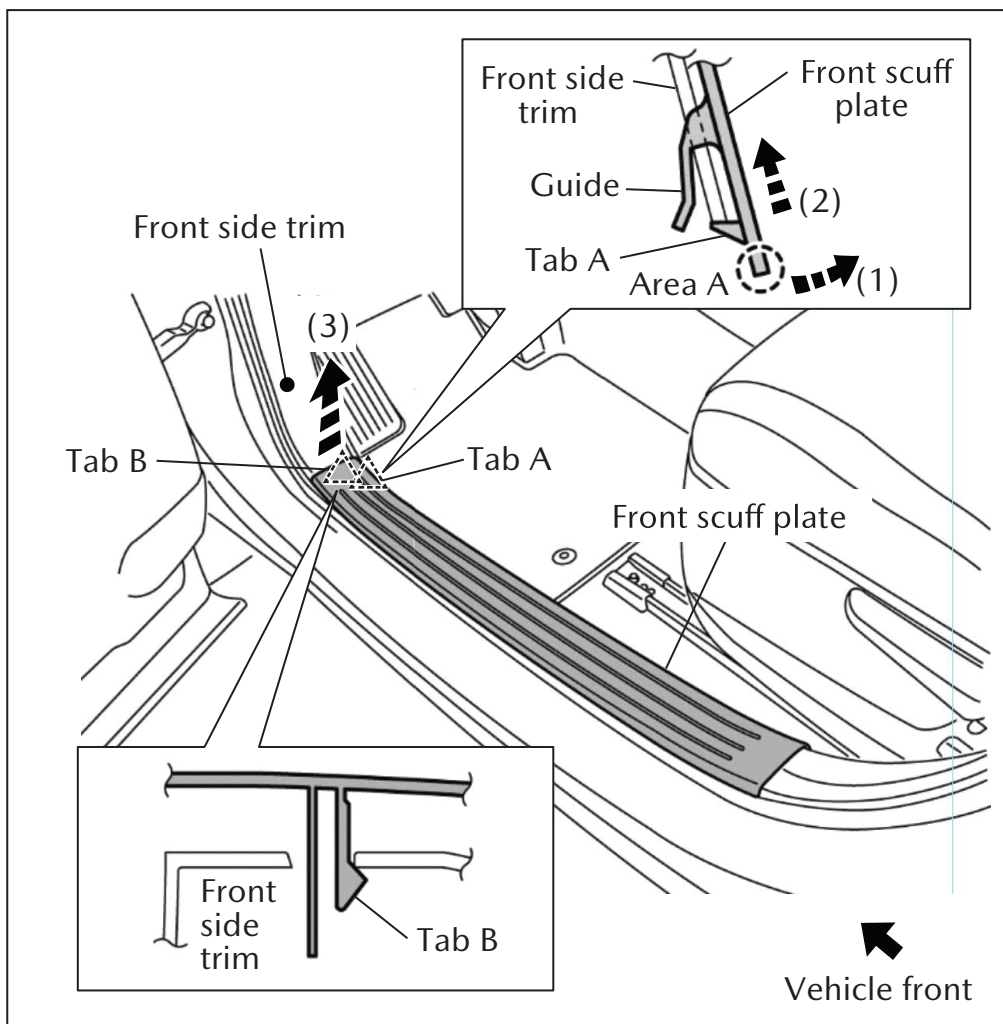


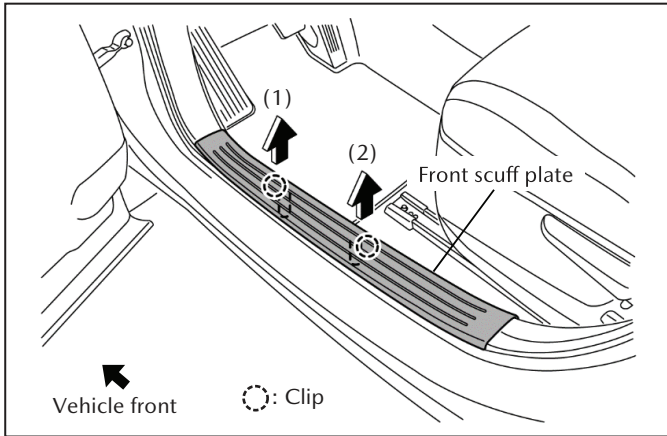
- 1) Read all installation instructions before proceeding with install.
- 2) Be careful not to damage paint or kit components.
- 3) Do not over-tighten bolts, tighten to specified torque.
- 4) Record customer's preset radio stations (If applicable).
- 5) Disconnect negative battery terminal according to workshop manual.
- 6) Wrap protective tape around screwdrivers and fastener removal tools to prevent scratching the vehicle.

4. TRIM REMOVAL

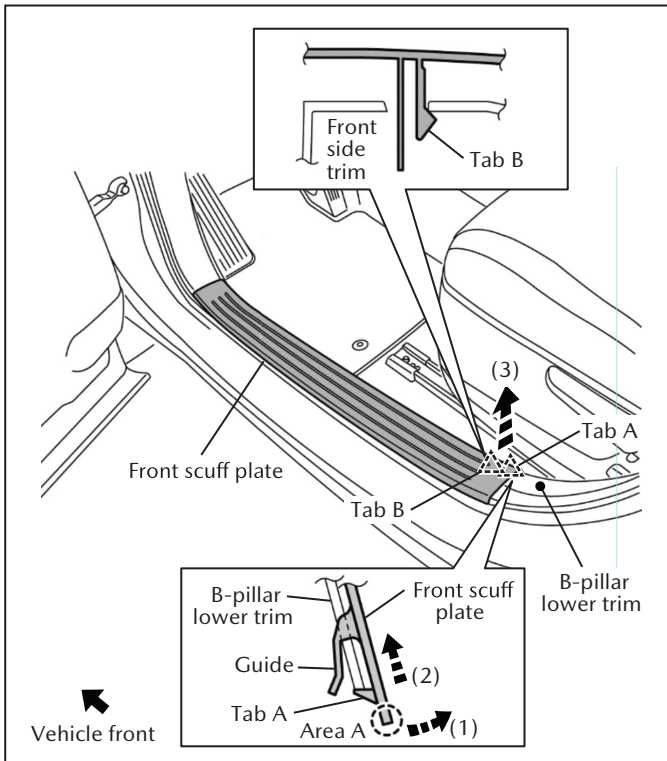
Driver-side front scuff plate removal

1. Carefully pull back the inside bottom edge of scuff plate (area A) shown in the figure, then lift to detach tab A.
2. Pull upward on the front edge of the scuff plate and detach tab B from the front side trim.



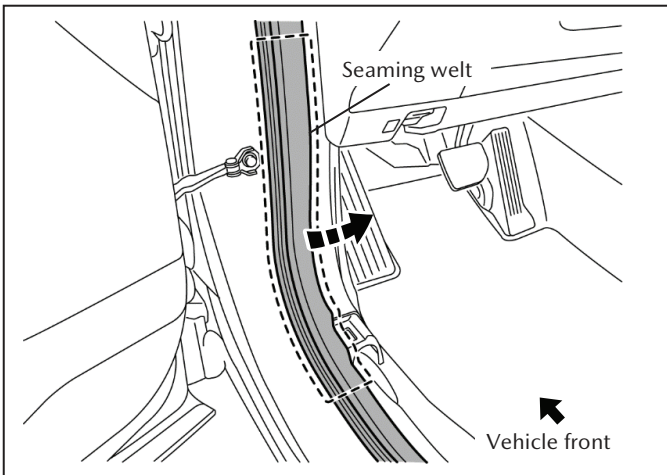


3. Carefully lift the scuff plate to detach the clips at locations (1) and (2).



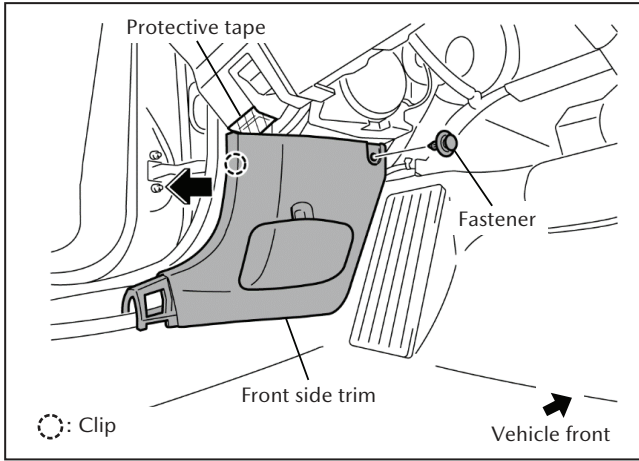
4. Carefully pull back the inside bottom edge of scuff plate (area A) shown in the figure, then lift to detach tab A.

5. Pull upward on the rear edge of the scuff plate and detach tab B from the B-pillar lower trim.

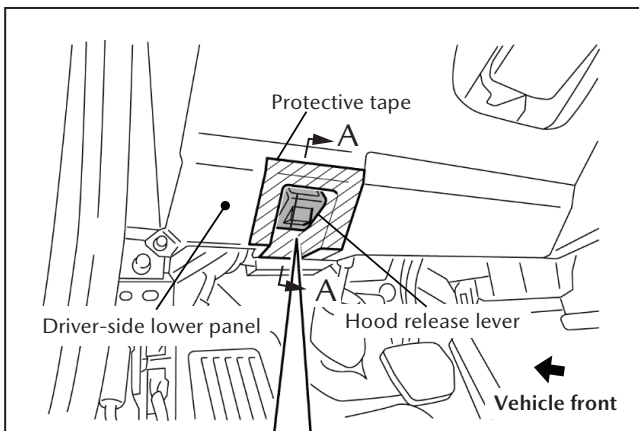


Driver-side front side trim removal

1. Partially peel back the seaming welt.



2. Affix protective tape to the panel as shown.
3. Remove the fastener at the upper front corner.
4. Carefully pull back on the front side trim to detach the clip from the body panel.

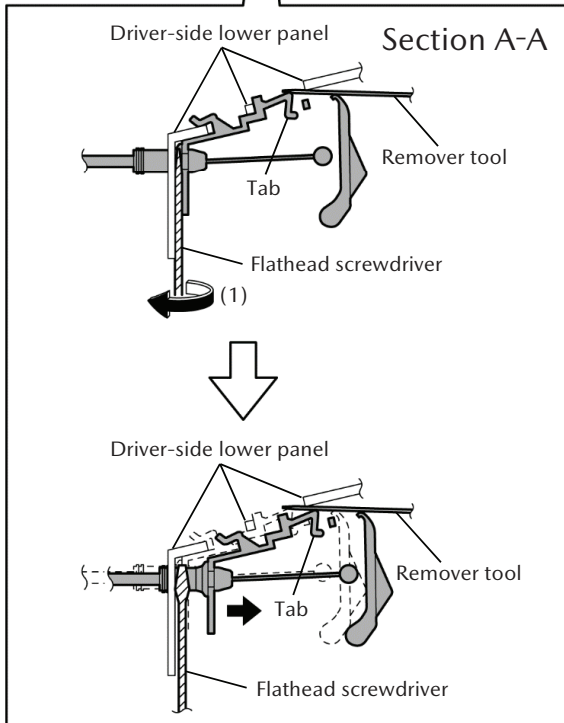


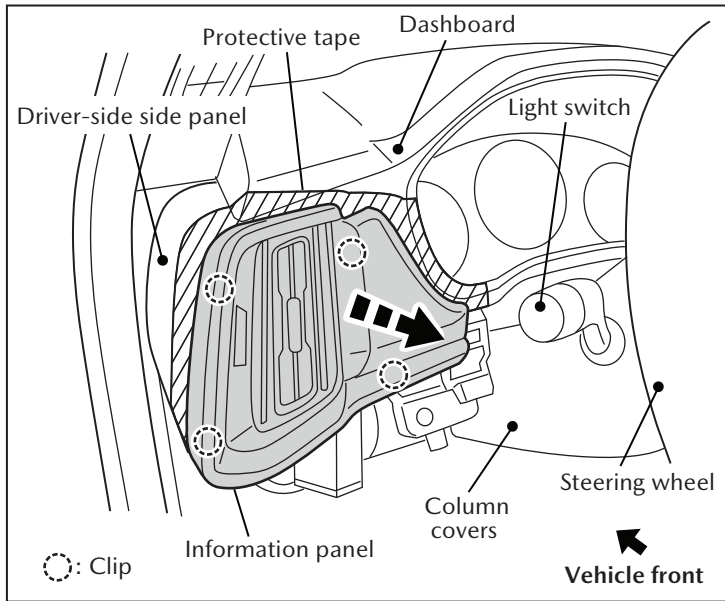
Hood release lever removal

1. Affix protective tape around the Hood release lever as shown.
2. While pulling the hood release lever, insert a remover tool into the position shown in the figure.
3. Insert a tape-wrapped flathead screwdriver into the position shown in the figure and rotate it in the direction of arrow (1) to detach the hood release lever from the driver-side lower panel.

CAUTION

- Be careful not to damage the hood release lever with the flathead screwdriver.



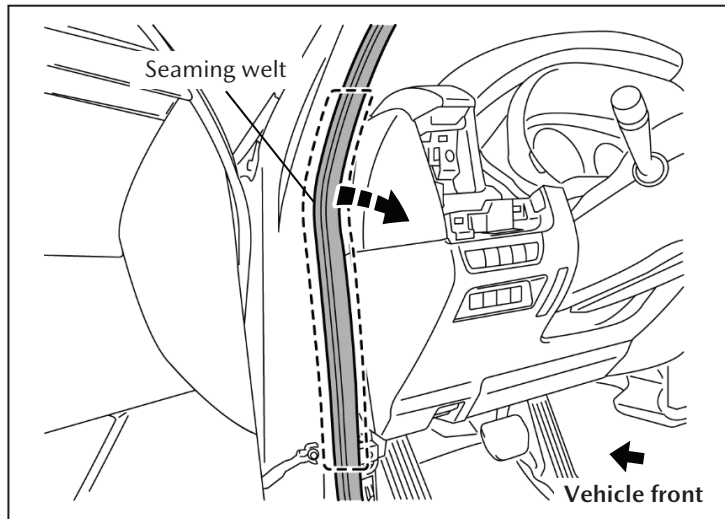


Information panel removal

1. Affix protective tape around the panel as shown.
2. Carefully pry the information panel out from the dashboard to detach the clips from the dashboard, driver-side side panel and driver-side lower panel.

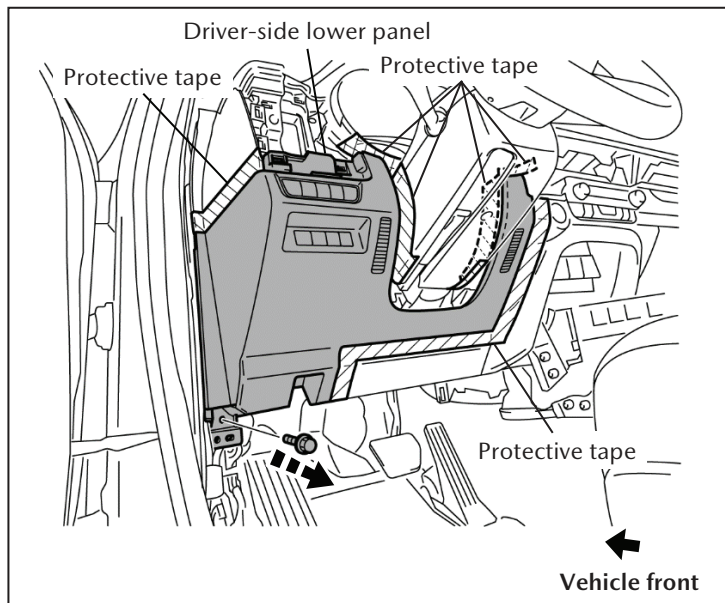
⚠ CAUTION

- Cover the steering column, steering wheel and light switch with a cloth to avoid damage when detaching.



Driver-side lower panel removal

1. Partially peel back the seaming welt.

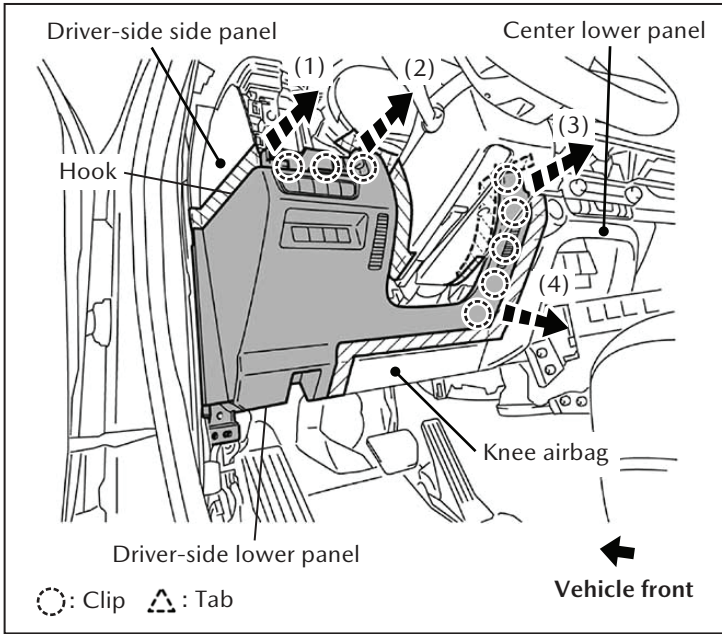


2. Affix protective tape around the panel as shown.
3. Remove the bolt from the bottom left corner of the panel.

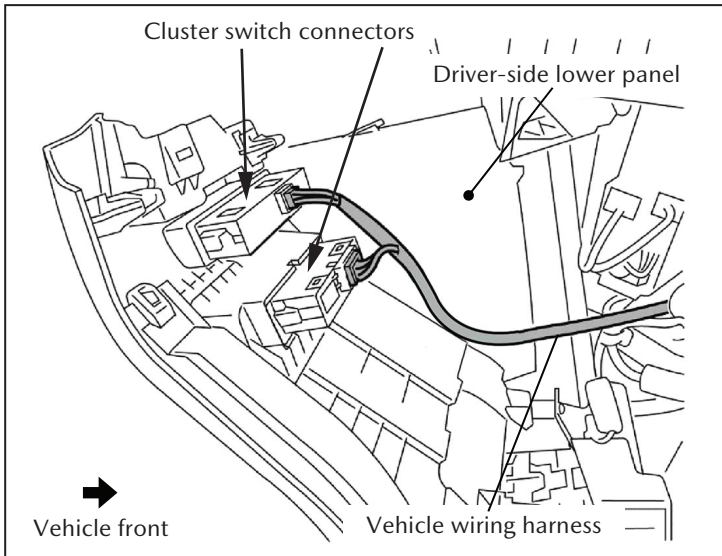
Bolt Tightening torque :

2.0-6.0 N·m

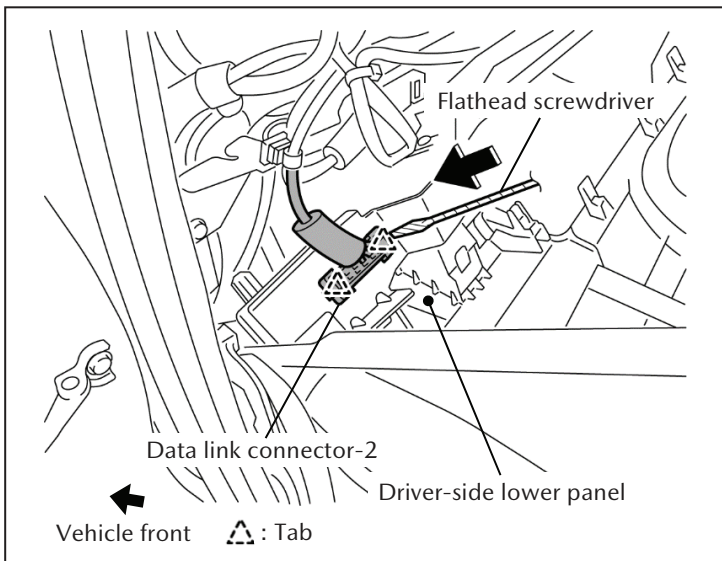
{21-61 kgf·cm, 18-53 in·lbf}



4. Carefully remove the driver-side lower panel in the order of the arrows (1), (2), (3) and (4) shown in the diagram to disengage the clips, tab, hook and guide from the dashboard, driver-side side panel, knee airbag and center lower panel.



5. Disconnect the cluster switch connectors.
6. Remove the driver-side lower panel.
7. Remove cluster switches from driver side lower panel.



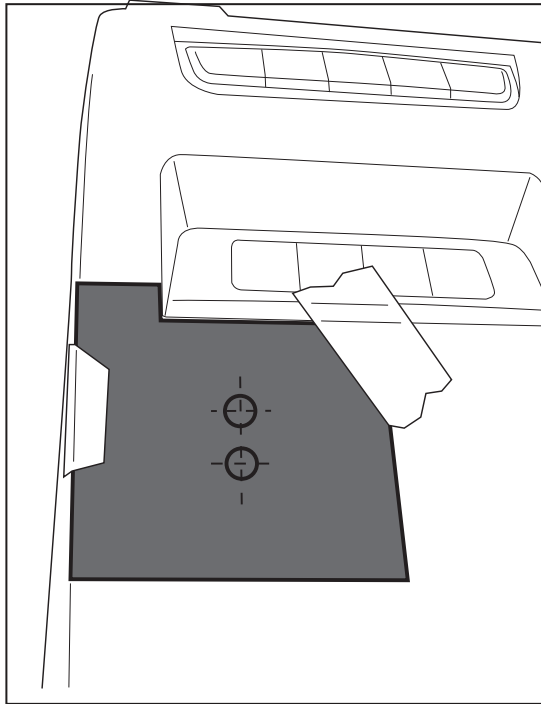
8. Insert a tape-wrapped flathead screwdriver in the direction shown in the figure and detach the tabs for Data link connector-2 from the driver-side lower panel bracket.

NOTE

- The figure shows the disconnection of the tabs on the right. Follow the same procedure for the left side.

9. Disconnect the Data link connector-2, and then remove the driver-side lower panel from the vehicle.

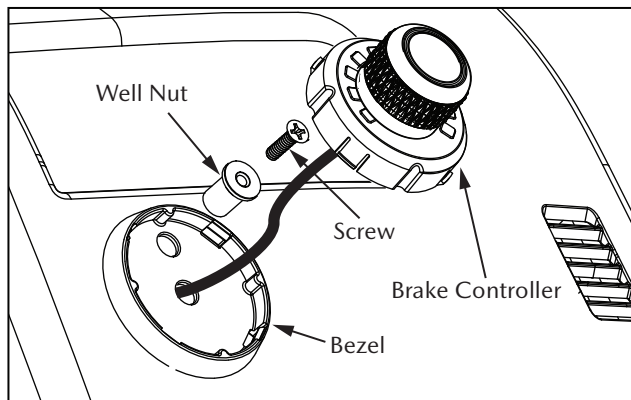
5. BRAKE CONTROLLER INSTALLATION



1. Place drivers side lower panel on work table and apply drill location template as shown.

2. Using centerpunch or scribe mark the hole locations and remove the drill location template.

3. Drill through panel using 5/16" drillbit.

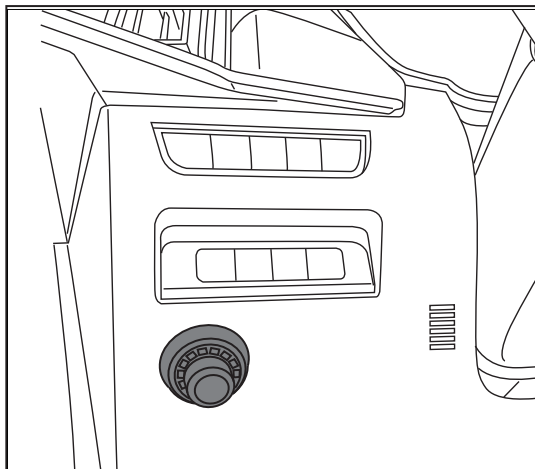


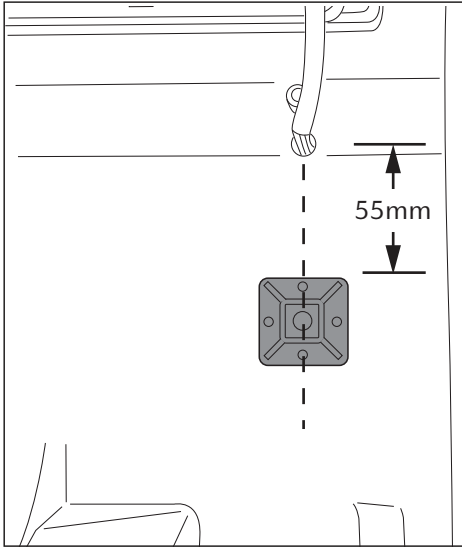
4. Position baseplate as shown and insert well nut through baseplate into drivers side lower panel.

5. Using provided screw and hold the back of well nut to prevent it from turning. Attach baseplate to drivers lower panel using phillips screwdriver and turn until tight.

6. Thread brake controller wire through baseplate then through drivers side lower panel.

7. Thread brake controller wire through hole and snap brake controller into baseplate. Take care to align brake controller as show below.





8. Turn drivers lower panel over, clean area shown with alcohol and let dry. Peel and stick zip tie mount as shown making sure to center below lower hole approx 55mm.

9. Insert pins into provided connector as detailed below.

WIRING THE PLUG CONNECTOR TO THE LED DISPLAY KNOB

Figure 1

1. No wire	5. Blue
2. White	6. Black
3. Green	7. Red
4. Brown	8. No wire

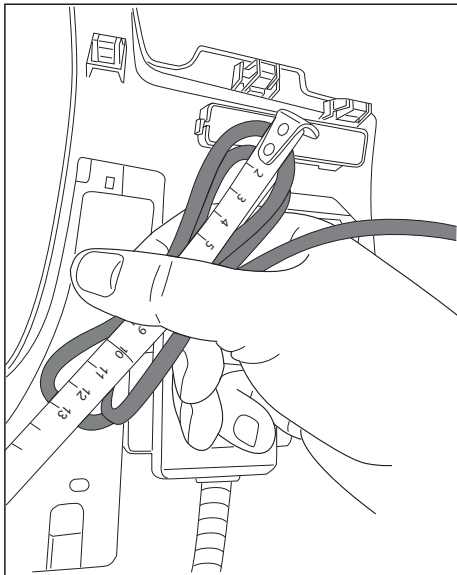
4.1 Refer to the plug connector image (Fig 1) for the below wire locations.
 Note: Keep positions 1 and 8 empty.

4.2 While holding the plug connector with the fold metal crimp facing downward, insert the terminals into the connector with the fold metal crimp facing down (Fig 2). As each terminal is fully inserted the terminal will "click" into place and the terminal will not pull out. When all six terminals are inserted into the plug connector and fully seated, close and latch the locking mechanism (Fig 3 and Fig 4)

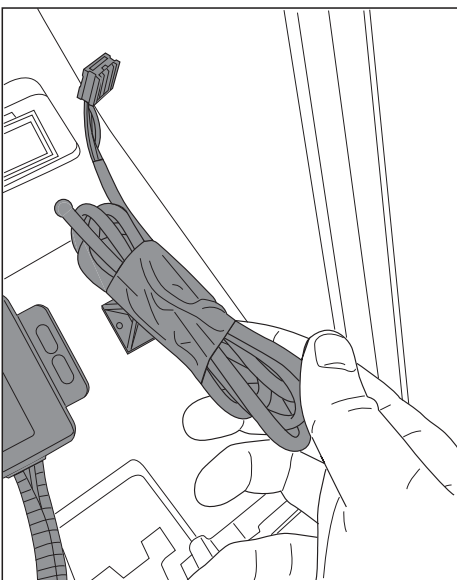
Figure 2

Figure 3

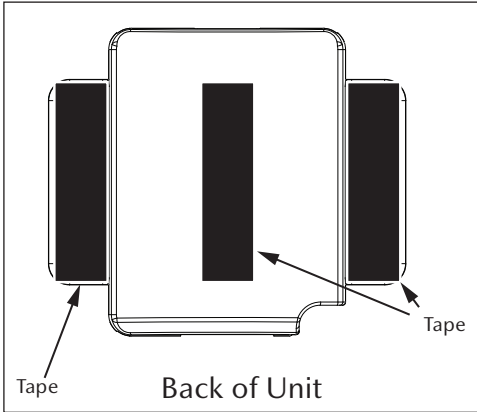
Figure 4



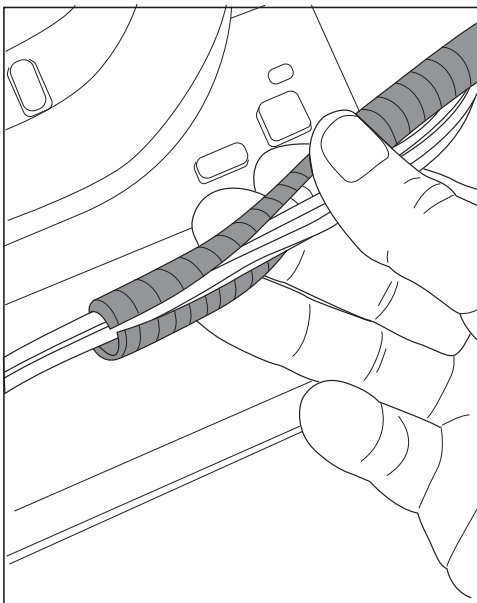
10. Bundle wire in loops approx 130mm in length.



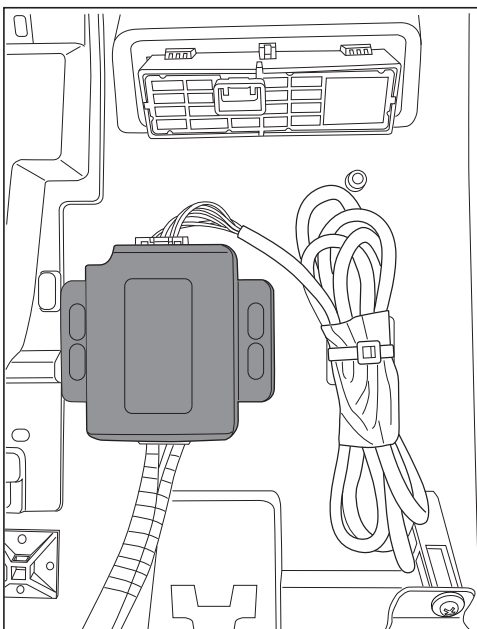
11. Secure bundled wire with foam tape then secure to zip tie mount using zip tie. Tighten zip tie securely and cut off excess.



12. Locate the 2"x2" (55mmx 55mm) square piece of foam tape located in the kit. Cut into 3 equally pieces approx 3/4" (18mm) in width. Apply to receiver module as shown.

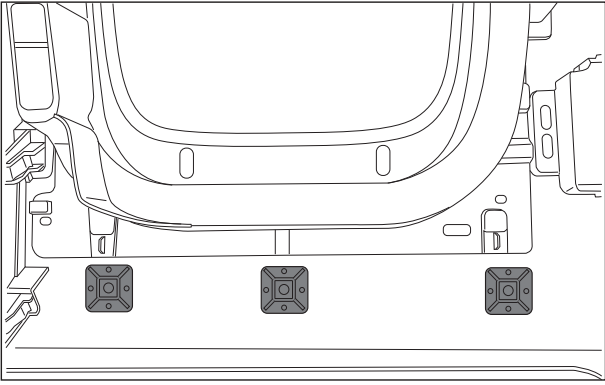


13. Install corrugated tubing onto receiver module wire harness.



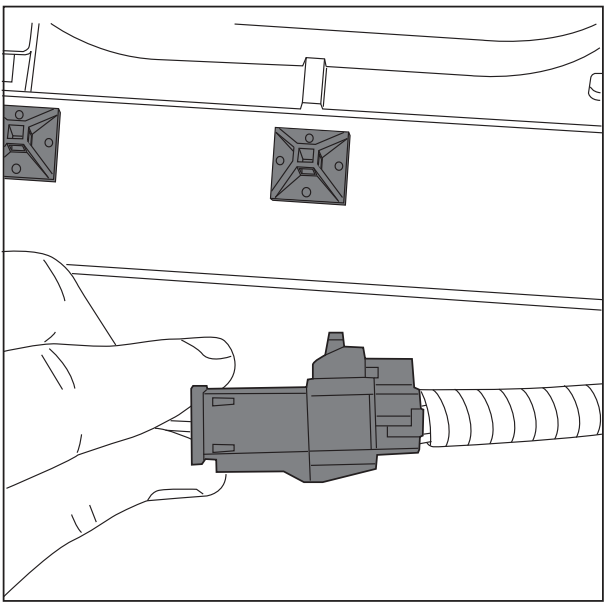
14. Peel liner from double back tape and attach receiver module to drivers side lower panel in position shown. Press firmly to ensure tape sticks well.

15. Plug wire connector from LED display knob into receiver module.

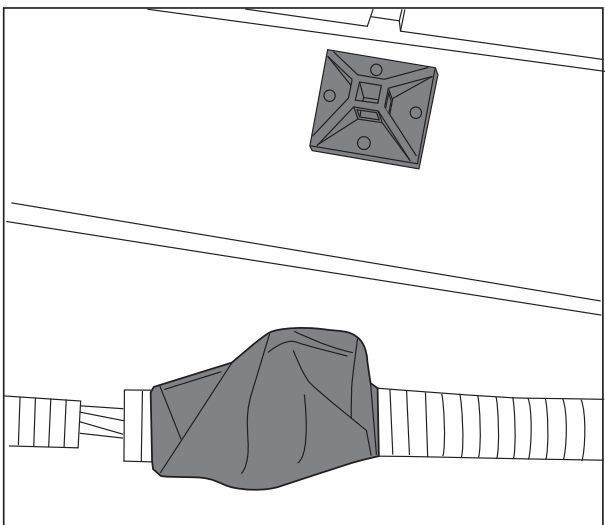


16. Clean area shown with alcohol and let dry.

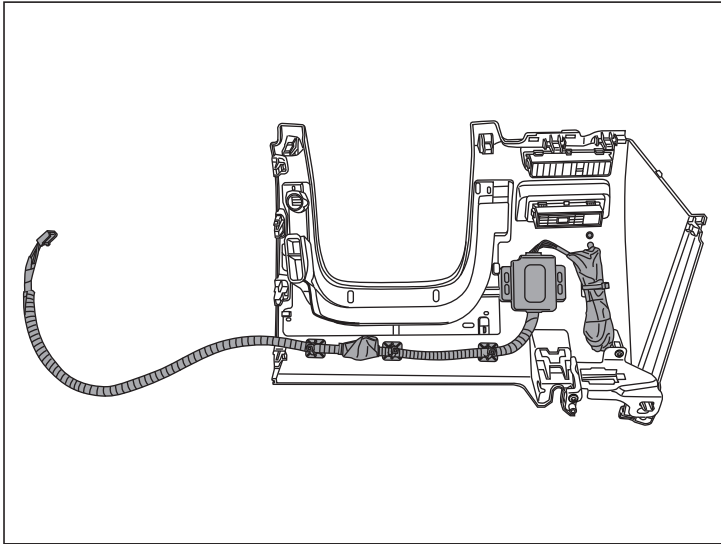
17. Peel liner from zip tie mounts and attach to drivers side lower panel as shown. Press firmly to ensure adhesion of the mounts to the plastic



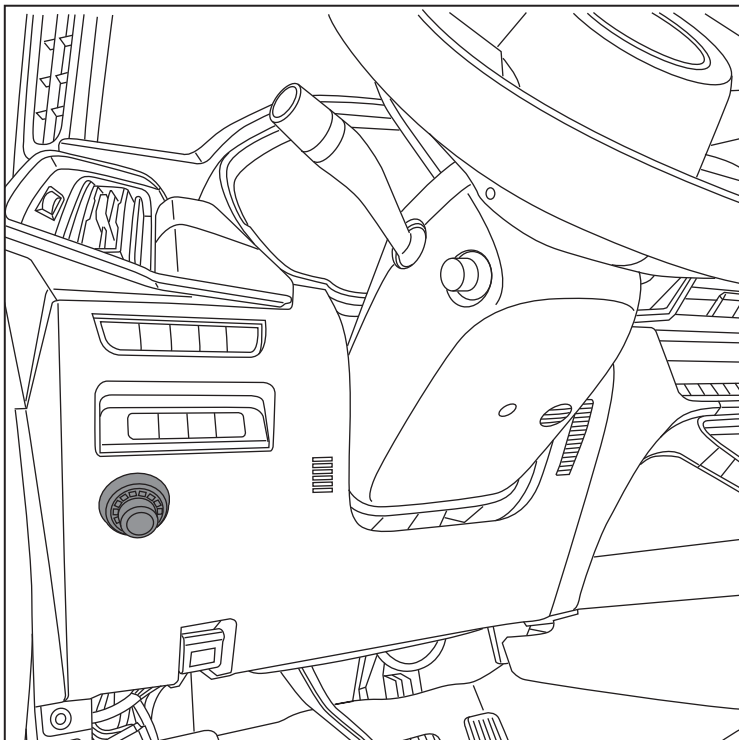
18. Attach harness connector to receiver module connector. Push firmly to lock connectors together. Pull to make sure they are properly connected.



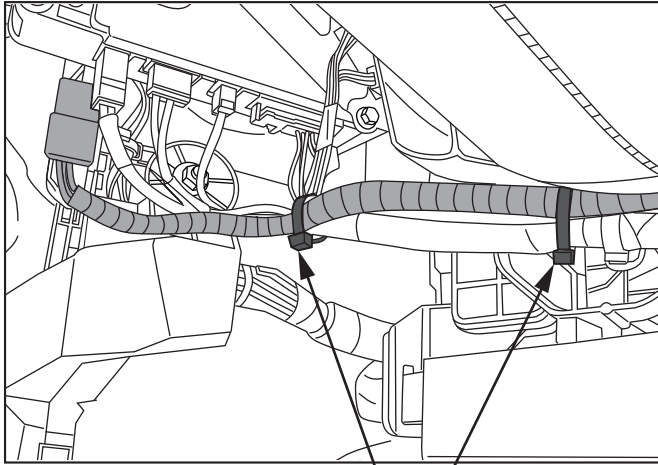
19. Wrap joined connectors with foam tape.



20. Attach completed harness to zip tie mounts as shown. Pull tight and clip excess zip ties.

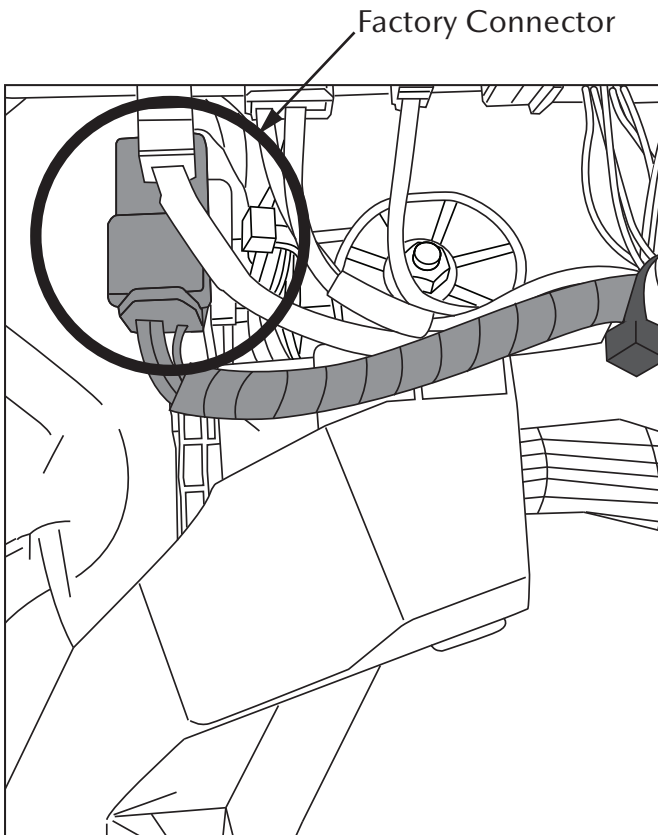


21. Reassemble the drivers side trim panels by reversing step 4.



Zip Ties (2 Plcs)

22. Locate the the vehicle harness running along the underside of the dashboard in the drivers footwell. Secure brake controller harness to vehicle wire harness as shown using 2 zip ties. Pull tight and clip off excess.
(Do not block the footwell lighting if so equipped)



Factory Connector

23. Locate the vehicles white 4 pin connector under the dashboard and above the gas pedal. Attach brake controller harness to vehicle connector. Make sure the connector is seated properly.
(Image shows harness connected to vehicle connector)

24. Once installation is complete, reconnect negative battery terminal per workshop manual.

Date:				
VIN:				
Approved		Checked		Person in Charge

INSTALLATION INSPECTION SHEET	Brake Controller w/Harness
	C9N1V7782

Perform the following inspections

⚠ IMPORTANT INSPECTION ITEMS

- These inspections and check are important for safety and legal compliance.

⚠ WARNING

- Check that there is no one directly in front of or behind the vehicle and that no one is near the engine compartment before starting the vehicle's engine. Sudden vehicle movements may result in serious injury.
- Do not start the engine in indoor places with poor ventilation such as garages. Exhaust gases may build up and cause poisoning or suffocation.
- Be sure to park the vehicle on a level surface and block the wheels before carrying out any operation checks.

1. Inspection items after installation

- Verify the fitment between the vehicle part and the installed part, and inspect for damage or dirt.

Check

- When connecting connectors, make sure connectors are properly connected and firmly locked together. (Push the connectors in again to make sure.)

Check

2. Vehicle parts reinstallation

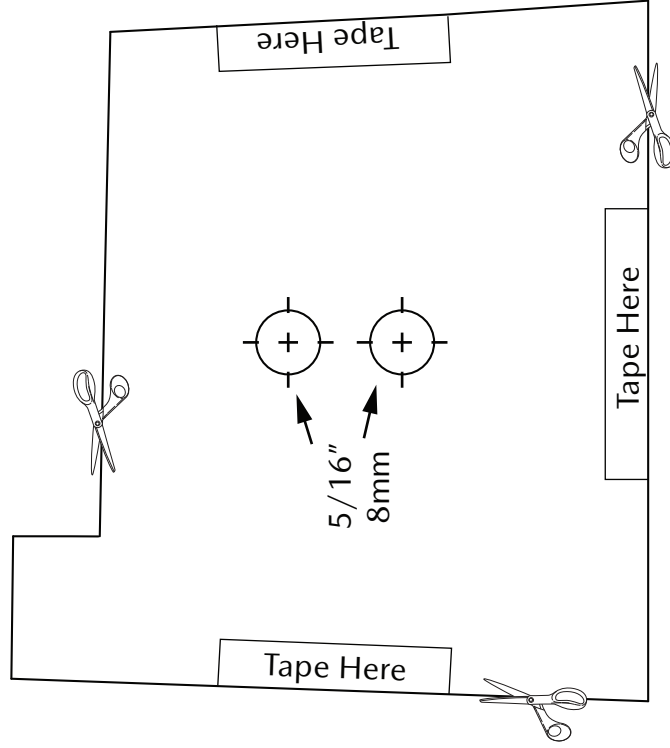
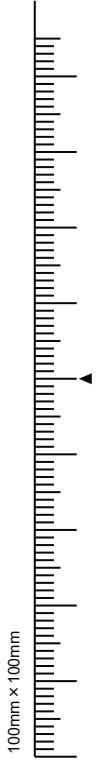
Inspect the installed/reinstalled parts for the following items:

INSPECTION PARTS	INSPECTION ITEMS			
	Clearance and fit	Scratches, dirt, and harness interference	Installation, tightening and engagement	Operation check
Cable ties are tight and clipped	●	●	●	--
Connectors are fully seated	--	--	●	●
No slack in harness	●	●	●	--
Negative battery terminal is connected	--	--	●	●

- The term of validity for this sheet: 3 years

CN91V7782

**BRAKE CONTROLLER WITH HARNESS
ECONTROLADOR DE FRENO CON ARNÉS
CONTRÔLEUR DE FREIN AVEC FAISCEAU**



**CX-90 BRAKE CONTROLLER WITH HARNESS DRILL TEMPLATE
CONTROLADOR DE FRENO CX-90 CON PLANTILLA DE TALADRO DE ARNÉS
CONTRÔLEUR DE FREIN CX-90 AVEC GABARIT DE PERÇAGE DE HARNAIS**