Part Number: PT413-48201-02 / PT83P-48200

Kit Contents

Item #	Quantity Reqd.	Description
1	1	Kick Sensor Bracket (PT413-48201-02)
2	1	ECU Screw (90167-A0020)
		Electronics (PT83P-48200)

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1		
2		
3		

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1	2	Retainer clips (75392-35220)

Conflicts

Do not install on grades other than Limited/Platinum.

Recommended Tools

Personal & Vehicle Protection	**Notes**
Tape	
Blanket	
Special Tools	**Notes**
Installation Tools	**Notes**
Panel safe tool	
Screwdriver	
Wrench	
Torque Wrench	
Special Chemicals	**Notes**
VDC approved cleaner	

General Applicability

1x Bracket (PT413-48201-02) and 1x Sensor (PT83P-48200) are used when vehicle is Limited/Platinum and when installing a tow hitch on a vehicle that did not previously have it (basically replacing the non-hitch-compatible sensor with a hitch-compatible sensor).

For reference, 1x Bracket (PT413-48201-02) and 1x Sensor (PT83P-48201) are used when replacing a hitch-compatible sensor that came from the factory as a service part (starting with 2021 model year).

Recommended Sequence of Application

Item #	Accessory
1	Tow Hitch
2	Kick Sensor Bracket/electronics
3	

*Mandatory

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Reqd.	Description
1		
2		
3		

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.

SAFETY TORQUE: This mark indicates that torque is related to safety.

REGULATORY MARK: This mark indicates the component is related to regulatory compliance

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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.

HV MODEL

REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURES ARE NOT PERFORMED
Disconnect cable from negative auxiliary battery terminal	Idle the engine for approximately 5 to 60 minutes or drive the vehicle until stop and start control is permitted	Stop and Start System
	Perform steering sensor zero point calibration	Lane Control System
		Parking Support Brake System*1
		Pre-collision System
		Lighting System (EXT) (w/ AFS)
	Memorize steering angle neutral point	Parking Assist Monitor System
		Panoramic View Monitor System
	Initialize back door lock	Power Door Lock Control System
	Reset back door close position	Power Back Door System
Rear bumper assembly*	• Measurement of ultrasonic sensor detection angle • Ultrasonic sensor detection angle registration	Parking Support Brake System

Fig. 2-1

GAS MODEL

REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURES ARE NOT PERFORMED
Disconnect cable from negative auxiliary battery terminal	Perform steering sensor zero point calibration	Lane Control System
		Parking Support Brake System*1
		Pre-collision System
		Lighting System (EXT) (w/ AFS)
	Memorize steering angle neutral point	Parking Assist Monitor System
		Panoramic View Monitor System
	Initialize back door lock	Power Door Lock Control System
	Reset back door close position	Power Back Door System
Rear bumper assembly*	• Measurement of ultrasonic sensor detection angle • Ultrasonic sensor detection angle registration	Parking Support Brake System

Fig. 2-2

1. Preparation for Installation

(a) The engine components and coolant may be hot.

(b) Check the kit for contents and any damage.

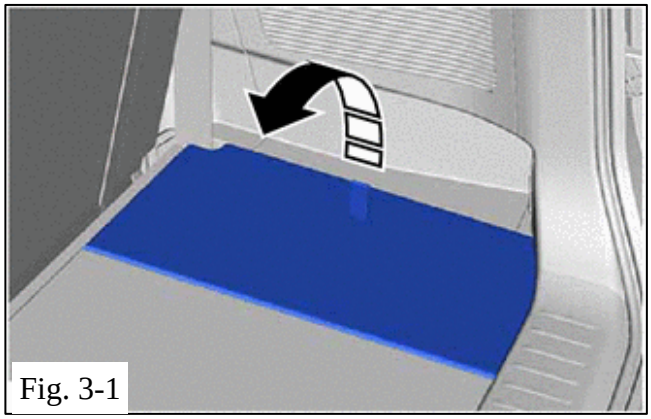
(c) Protect the fender.

2. Precaution (w/ kick Sensor)

(a) After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) auxiliary battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) auxiliary battery terminal notices before proceeding with disconnecting battery (Fig. 2-1 and 2-2).

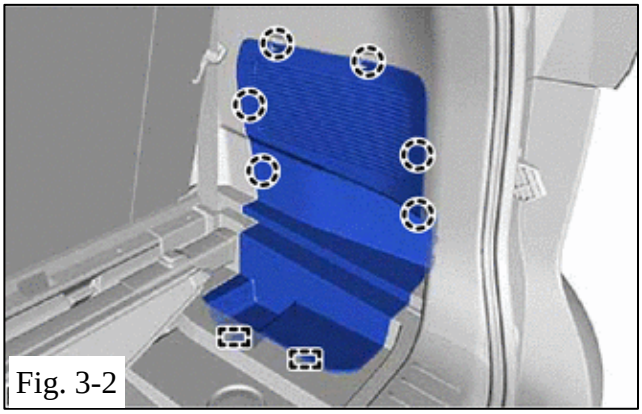
(b) Operator Safety Warning (if applicable.)

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Fig. 3-1

3. (HV only) Access battery

(a) Turn back the deck board (Fig. 3-1).


Fig. 3-2

(b) Disengage the 6 claws and 2 guides to remove the battery service hole cover (Fig 3-2).

4. Disconnect battery cable

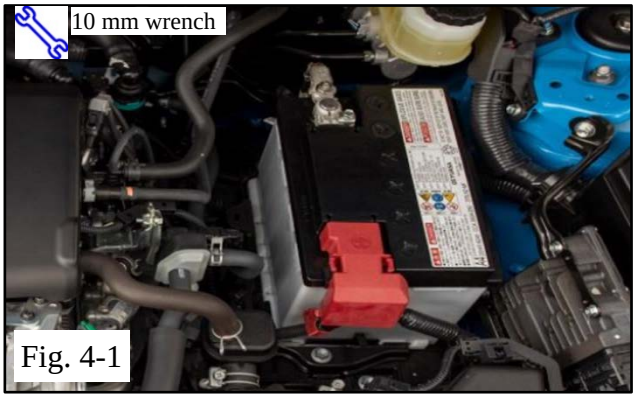


Fig. 4-1

(a) Disconnect cable from negative auxiliary battery terminal (Fig. 4-1).

5. Remove Rear Mud Guard (If equipped, LH Shown)

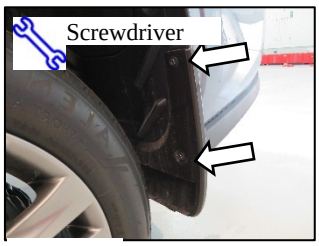


Fig. 5-1

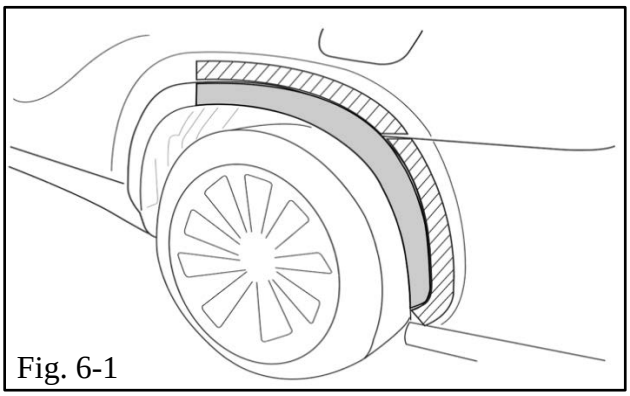

Fig. 5-2

(a) From inside the wheel well, remove the (2) screws (Fig. 5-1).

(b) From under the bumper, remover the (2) screws (Fig. 5-2).

(c) Remove the mud guard.

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Fig. 6-1

(d) Repeat Step 5 on opposite side.

6. Remove Quarter Panel Molding

(a) Apply protective tape around the quarter panel wheel opening as shown in the illustration (Fig. 6-1).

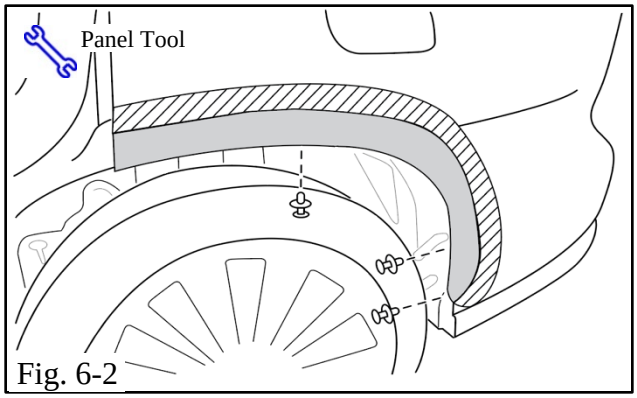


Fig. 6-2

(b) Using clip removal tool, remove three (3) clips (Fig. 6-2).

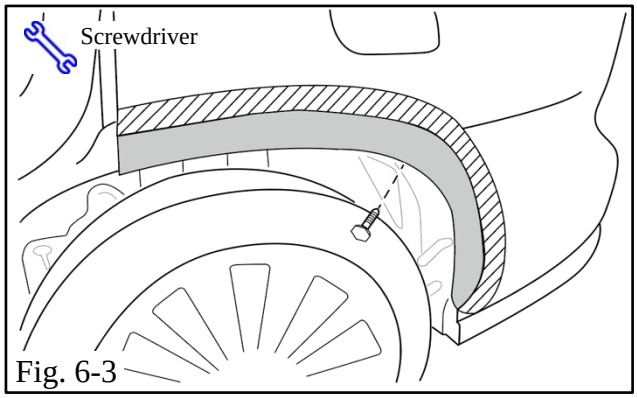


Fig. 6-3

(c) Remove one (1) screw (Fig. 6-3).

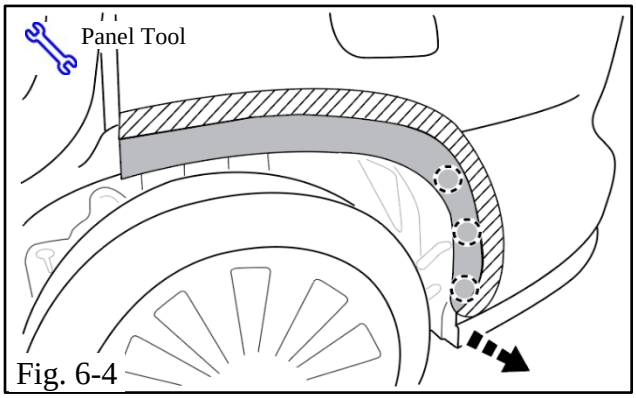
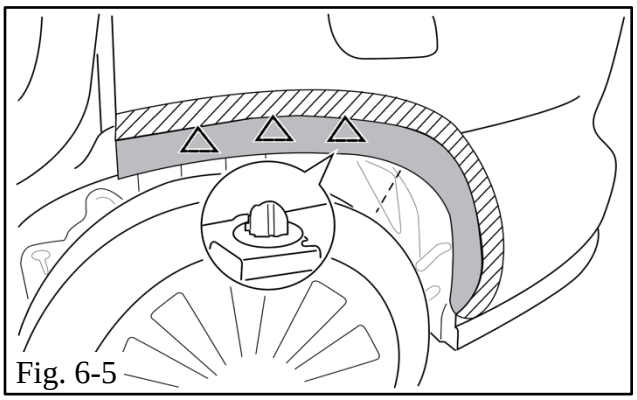


Fig. 6-4

(d) While pulling the rear bumper assembly, carefully insert a finger between the rear bumper side seal and rear bumper assembly and disengage the three (3) claws shown.(Fig. 6-4).


Fig. 6-5

(e) Disengage the three (3) clips to disconnect the quarter panel wheel opening molding (Fig. 6-5).

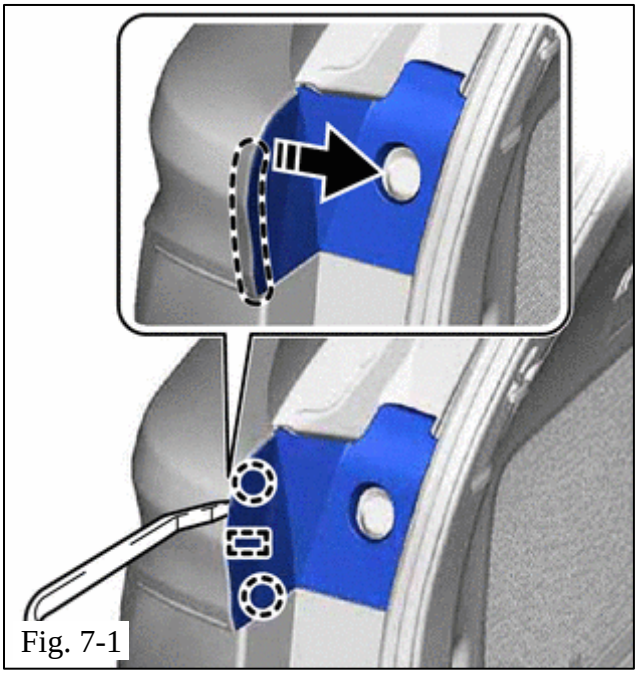
(1) Caution: Do not apply excessive force when pulling back the rear bumper side seal.

(2) To avoid damaging the claws, do not forcibly pull the quarter opening molding.

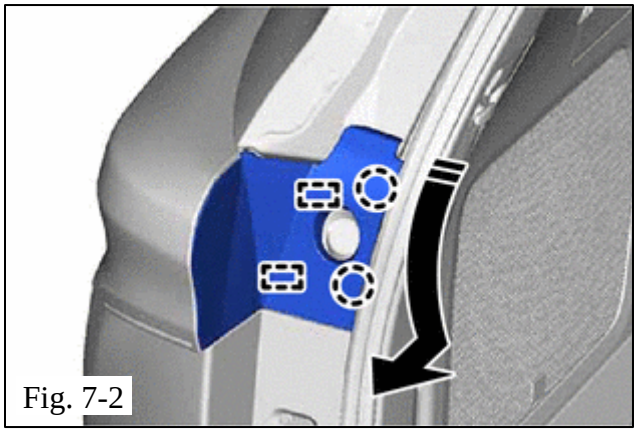
(f) Remove the three (3) clips from the quarter panel wheel opening molding.

Repeat Step 6 on opposite side of vehicle.

7. Remove Combination Light Cover (RH Shown)


Fig. 7-1

(a) Lift the lower rear corner of the cover (1) and pull slightly inward to clear the lamp. (Fig. 7-1).


Fig. 7-2

(b) Pull straight back on the cover (2) to remove (Fig. 7-2).

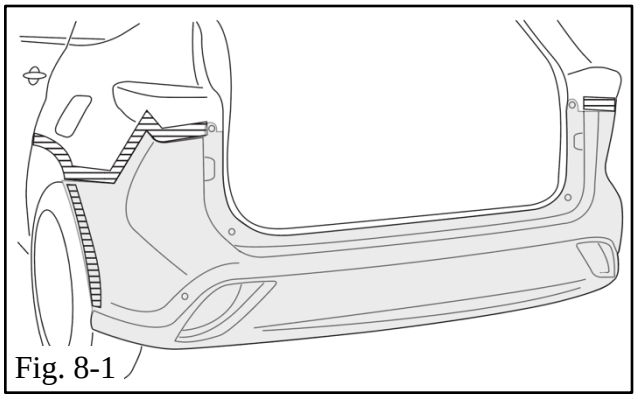
Repeat this step for the opposite side of the vehicle.

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8. Remove Rear Bumper Assembly

(a) Prepare a safe surface area to place rear bumper by using a protective blanket and placing out of the way of any foot traffic.

(b) Apply protective tape around both sides of the rear bumper assembly as shown in the illustration (Fig. 8-1).


Fig. 8-1

(c) From under the rear the vehicle, on the RH side, remove the five (5) clips with white arrows and two (2) screws (6 if there are no mudguards) circled with black arrow (Fig. 8-2).

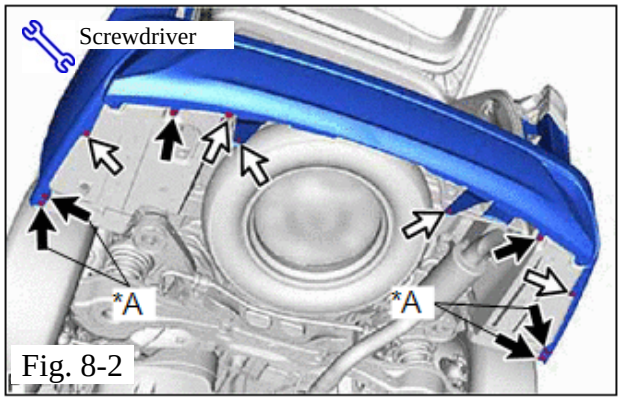


Fig. 8-2

*A	w/o Mudguard
➡	Screw
⇨	Clip

(d) Remove the two (2) screws at the top of the rear bumper assembly (Fig. 8-3)

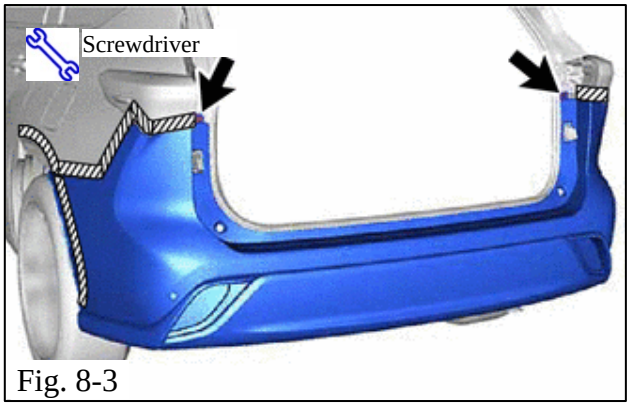


Fig. 8-3

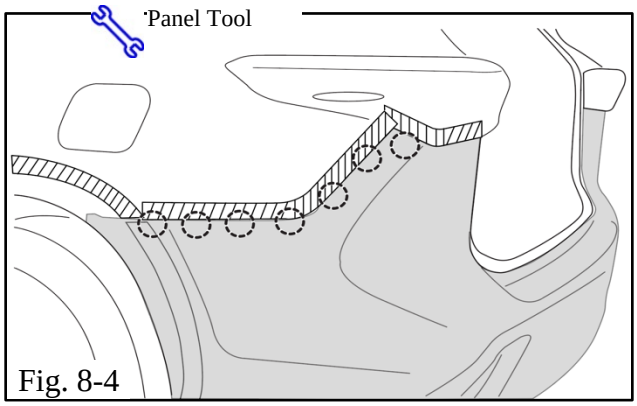
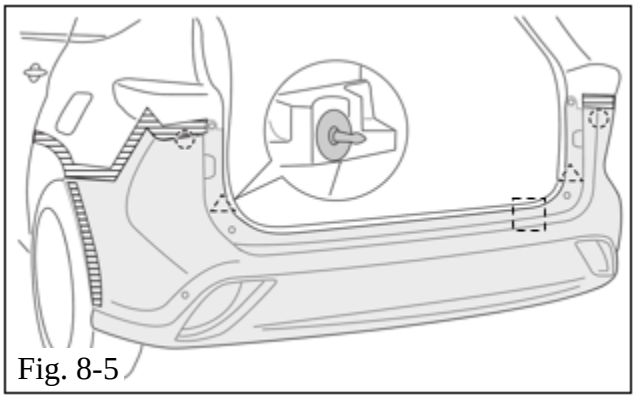


Fig. 8-4

(e) Disengage the eight (8) claws (Fig. 8-4).

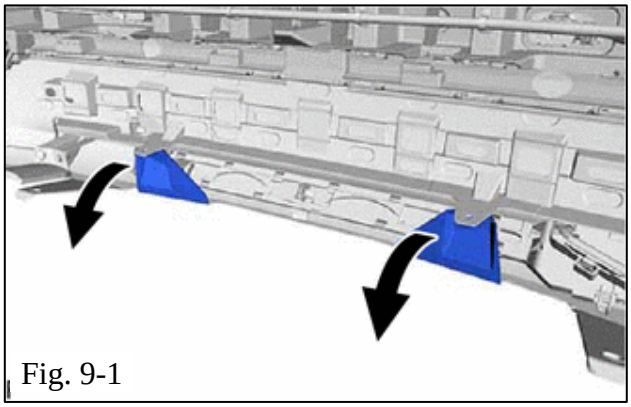
Repeat on opposite side.


Fig. 8-5

(f) Disengage the two (2) claws and two (2) clips to remove the rear bumper asssembly indicated by circles and triangles (Fig. 8-5)

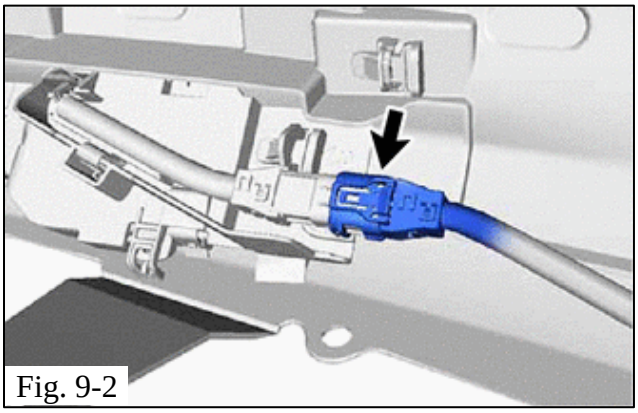
(g) Pull the bumper back to expose the rear bumper wire harness connector indicated by the square and disconnect it.

(h) Remove rear bumper assembly and place on blanket.

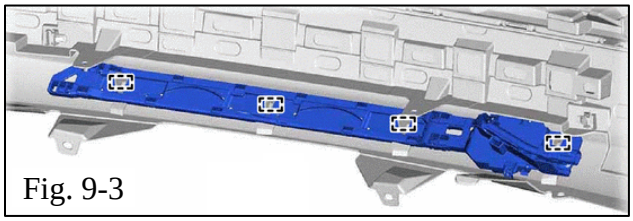

Fig. 9-1

9. Remove Existing Rear Bumper Extension

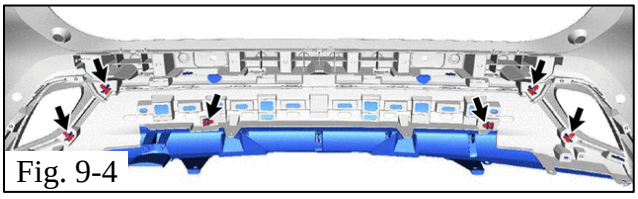
(a) Remove the two clips securing the rear bumper extension to the bumper assembly (Fig. 9-1).


Fig. 9-2

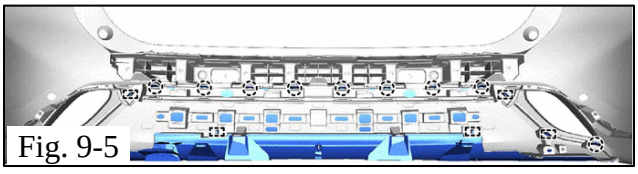
(b) Disconnect the existing kick sensor connector (Fig. 9-2).


Fig. 9-3

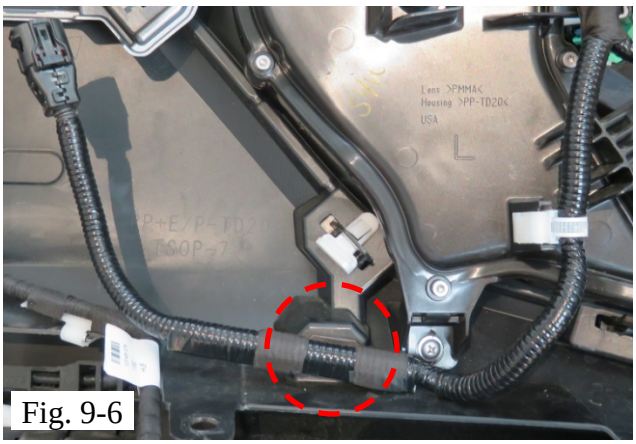
(c) Remove any TWO (2) of the existing clips shown as squares securing the kick sensor to the extension and set aside. These clips will be re-used (Fig 9-3).


Fig. 9-4

(d) Remove the six (6) clips securing the rear bumper extension to the bumper assembly (Fig 9-4).


Fig. 9-5

(e) Disengage the ten (10) claws, six (6) guides, and remove rear bumper extension. This rear bumper extension + existing kick sensor can be discarded (Fig 9-5).


Fig. 9-6

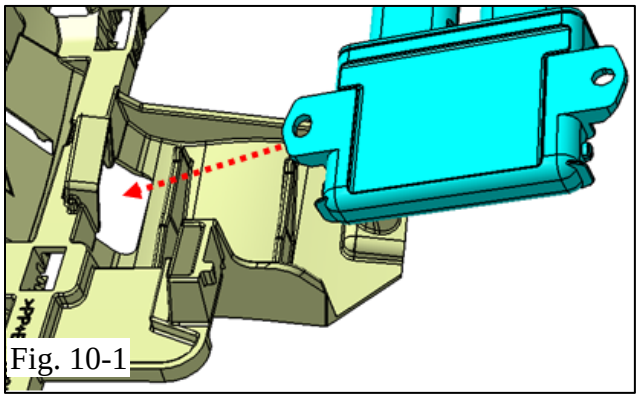
(f) While the rear bumper extension is off and the existing kick sensor is disconnected, unclip the wire harness clamp from the rear bumper assembly (Fig 9-6).

STOP Stop: At this point, the Tow Hitch installation instructions can be followed for installation of that part. Continue with remaining instructions after tow hitch has been installed.

10. Assemble New Kick Sensor Assembly

(a) Install new kick sensor ECU onto new bracket (Fig. 10-1).

(1) Slide ECU tab into slot on bracket.


Fig. 10-1

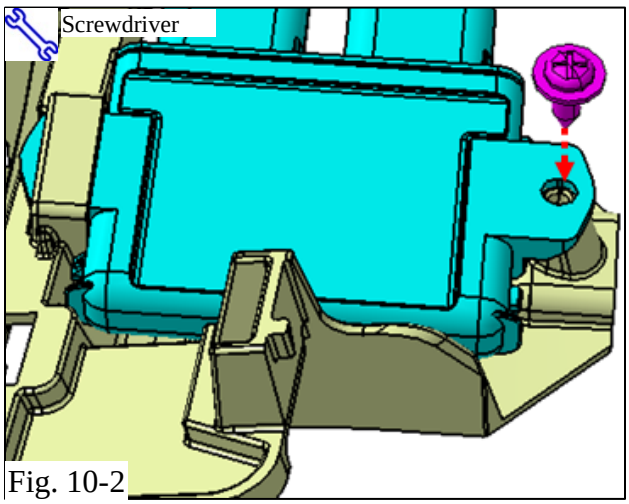


Fig. 10-2

(2) Install screw securing ECU. This screw is included with the bracket box (Fig 10-2).

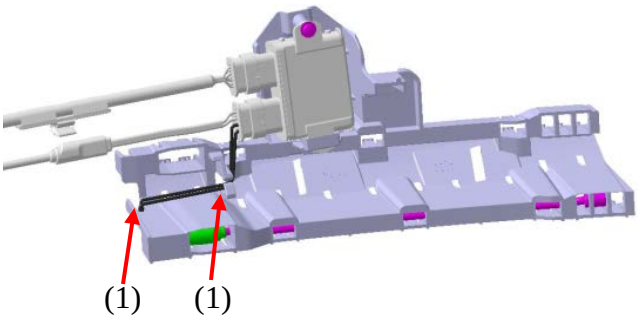


Fig. 10-3

(b) Route and install the lower antenna (marked with black taping) into the bracket.

(1) Route the antenna harness into the clip and channel as shown (Fig 10-3).

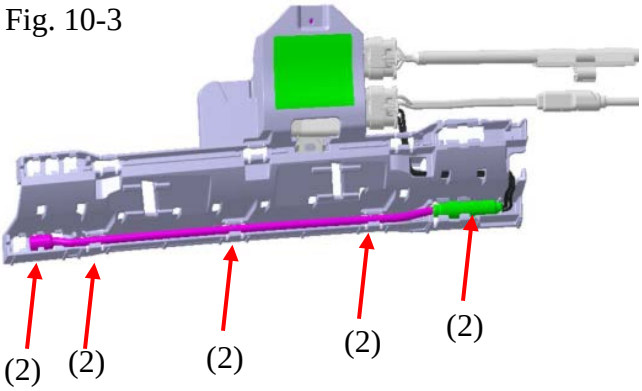


Fig. 10-4

(2) Turn the bracket over and wrap the remaining antenna wire into the bracket channel (Fig 10-4).

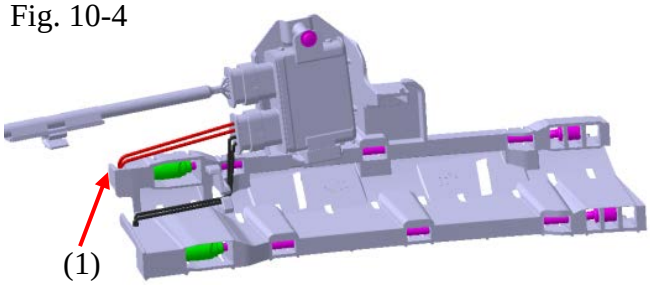


Fig. 10-5

(c) Route and install the upper antenna (marked with red taping) into the bracket.

(1) Route the antenna harness into the channel as shown (Fig 10-5).

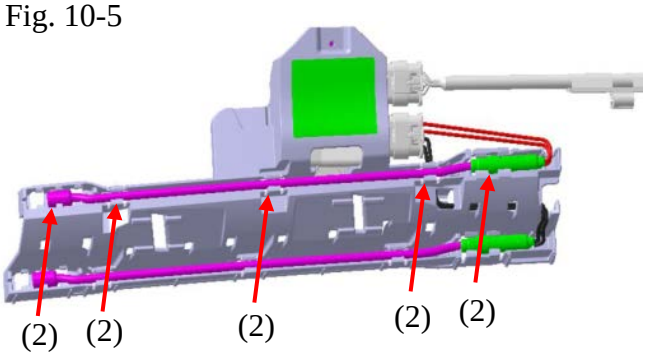
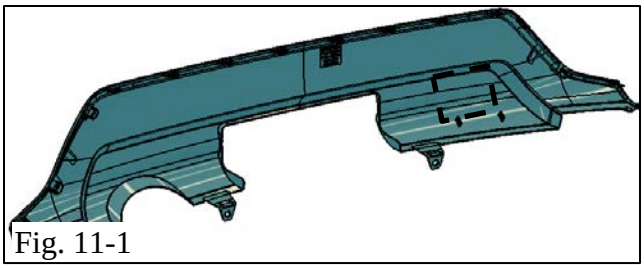


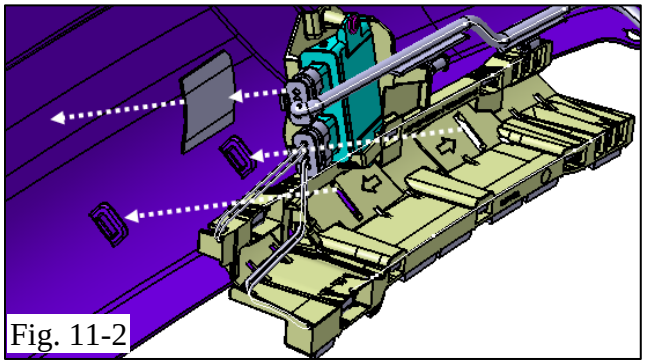
Fig. 10-6

(2) Turn the bracket over and wrap the remaining antenna wire into the bracket channel (Fig 10-6).


Fig. 11-1

11. Install new Kick Sensor Assembly onto new rear bumper extension.

(a) Using approved cleaner, clean the area indicated by dashed box where adhesive tape will adhere. (Fig. 11-1).

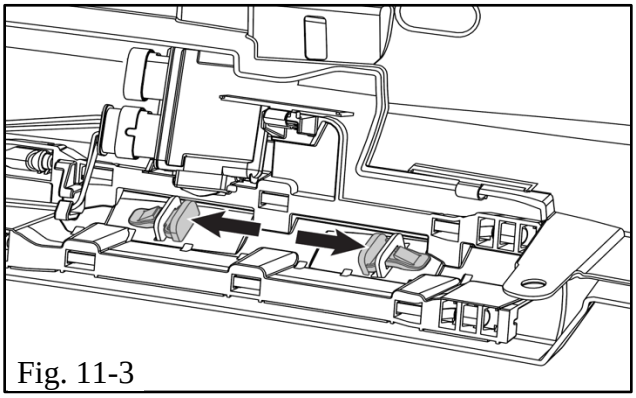

Fig. 11-2

(b) Installation temperature should be between 60-90F

(c) Remove liner from bracket tape, use caution to not touch adhesive (Fig. 11-2).

(d) Position bracket over the (2) tabs.

(e) Press bracket firmly into place on bumper, using the tabs as guides (Fig 11-2)


Fig. 11-3

(f) Reinstall clips saved from Step 9-c into bracket tabs (Fig. 11-3).

12. Reinstall Assembled Rear Bumper Extension to Rear Bumper Assembly.

(a) Reverse order of Step 9-e and 9-d to reassemble a complete rear bumper.

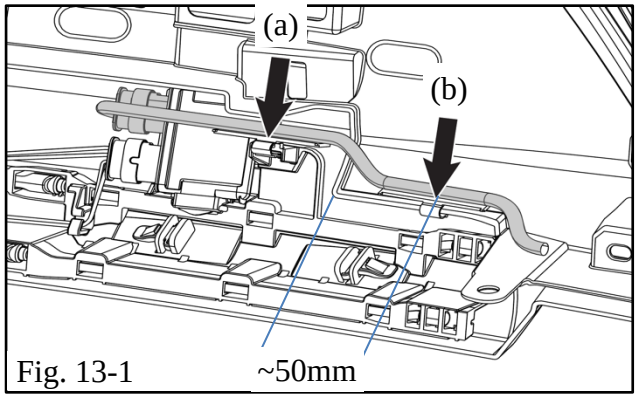
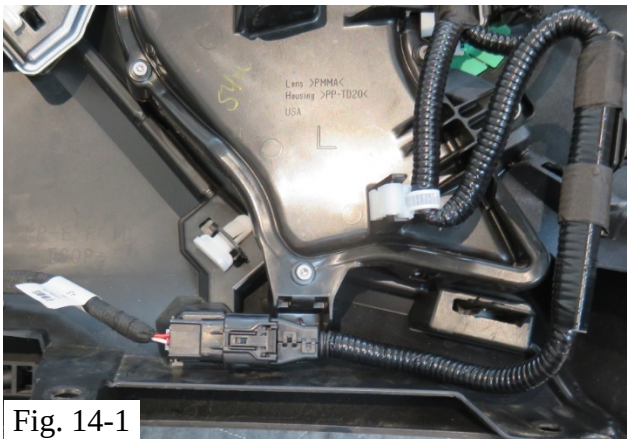


Fig. 13-1

13. Secure Kick Sensor Wire Harness

(a) Attach the first wire harness clamp to the clip tower on the kick sensor bracket (Fig 13-1).

(b) Attach the second wire harness clamp to the lower rear bumper cover approximately 50mm from the inner edge (Fig 13-2).


Fig. 14-1

14. Attach Kick Sensor Harness to Vehicle Harness

(a) Attach the new kick sensor connector to the existing vehicle wiring harness and clip connector pair into the empty hole created in Step 9-f. There will be extra wire length on the vehicle harness. This extra length should be bundled as shown (Fig 14-1).


Fig. 14-2

(b) Secure the extra vehicle harness length with a wire tie (Fig 14-2).

15. Reinstall Removed Parts

(a) Reinstall rear bumper assembly, reverse procedures in step 8.

(b) Reinstall combination light cover, reverse procedures in step 7.

(c) Reinstall quarter panel molding, reverse procedures in step 6.

(d) Reinstall rear mud guard (if equipped), reverse procedures in step 5.

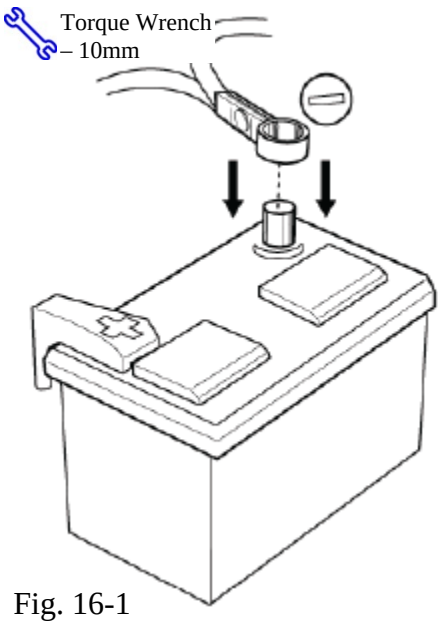


Fig. 16-1

16. Reconnect Battery

(a) If the power for the multiplex network door ECU is disconnected and reconnected, the back door will need to be unlocked before it can be operated.

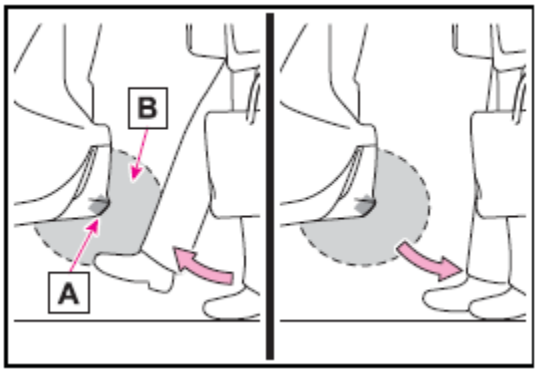
(b) Torque: Tighten the 10mm nut to 48inlbf (5.4 Nm) (Fig 16-1).

17. Initialize the Back Door System

(a) If the back door is open when the cable is disconnected and reconnected to the negative (-) battery terminal, fully close the back door by hand to initialize the multiplex network door ECU.

(b) If the power back door system does not operate and/or the back door does not open, disconnect the cable from the negative (-) battery terminal. Wait 10 seconds, reconnect the cable and perform initialization of the power back door system again.

Checklist - these points **MUST** be checked to ensure a quality installation.

Check:	Look For:
☐ Verify parts:	Removed items have been discarded & replaced items are in place
Function Checks	
☐ Reset the door close position	If the back door is open when the cable is disconnected and reconnected to the negative (-) battery terminal, fully close the back door by hand to initialize the multiplex network door ECU.
☐ Verify function of back door using kick motion. When the kick sensor detects that your foot is pulled back, a buzzer will sound and the back door will automatically fully open/close.	Perform normal kick to open door Perform normal kick to close door 
Vehicle Appearance Check	
☐ After accessory installation and removal of protective cover(s), perform a visual inspection.	Ensure no damage (including scuffs and scratches) was caused during the installation process. (For PPO installations, refer to TMNA Accessory Quality Shipping Standard.)

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