

MIL ON DTC P0A45

Service Category Vehicle Interior

Section Meter/Gauge/Display

Market USA

Toyota Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2016 - 2018	RAV4 HV	

Introduction

Some 2016 – 2018 model year RAV4 Hybrid vehicles may exhibit a hybrid system warning message/MIL ON condition with Diagnostic Trouble Code (DTC) P0A45 (Drive Motor “B” Position Sensor Circuit) present. Follow the Repair Procedure in this bulletin to address this condition.

Production Change Information

This bulletin applies to vehicles produced **BEFORE** the Production Change Effective VIN shown below.

MODEL	PRODUCTION CHANGE EFFECTIVE VIN
RAV4 HV	JTMDJREV#JD224536

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
EL1902	R & R Frame Wire	1.2	82164-42120	8A	73

APPLICABLE WARRANTY

- This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

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Parts Information

PART NUMBER		PART NAME	QTY
PREVIOUS	NEW		
	82164-42120	Wire, Frame	1

Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream ADVi*	ADE	TSADVUNIT	1
Techstream 2.0		TS2UNIT	
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 14.10.028 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

Repair Procedure

Diagnosis

1. Connect Techstream to the vehicle and perform a Health Check.
Is DTC P0A45 present?
 - **YES** — Continue to step 2.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
2. Follow the Repair Manual steps within the Procedure section, but STOP before replacing the inverter with converter assembly.
Instead, replace the frame wire harness, then continue to the Harness Removal section in this Service Bulletin.
Refer to TIS, applicable model and model year Repair Manual:
 - 2016 – 2018 RAV4 HV:
[Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Hybrid Control System: P0A45-669-P0A47-670; Drive Motor “B” Position Sensor Circuit”](#)

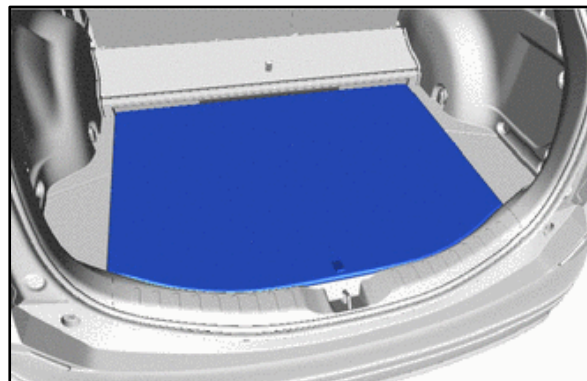
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Repair Procedure (continued)

Harness Removal

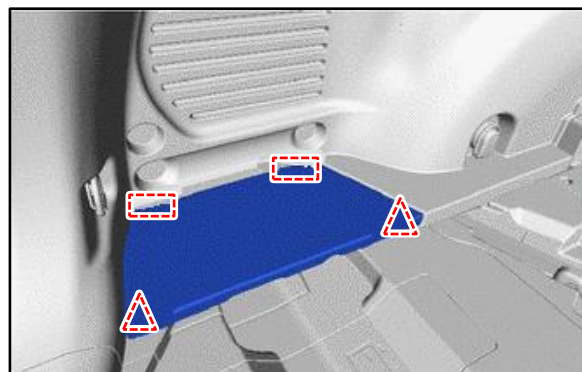
1. Remove the deck board assembly.

Figure 1.



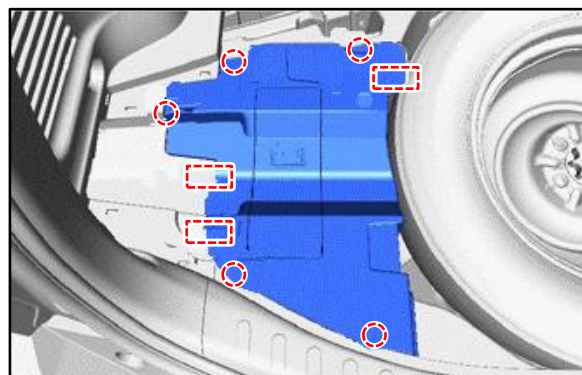
2. Detach the two clips and two guides to remove the rear No. 3 floor board.

Figure 2.



3. Detach the five claws and three guides and remove the deck trim side cover base.

Figure 3.



4. Disconnect the negative (–) battery terminal.

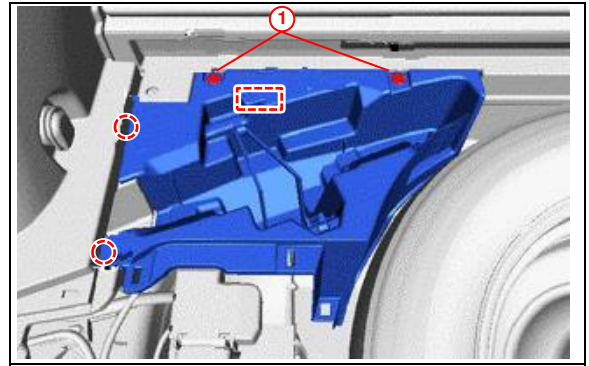
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Repair Procedure (continued)

Harness Removal (continued)

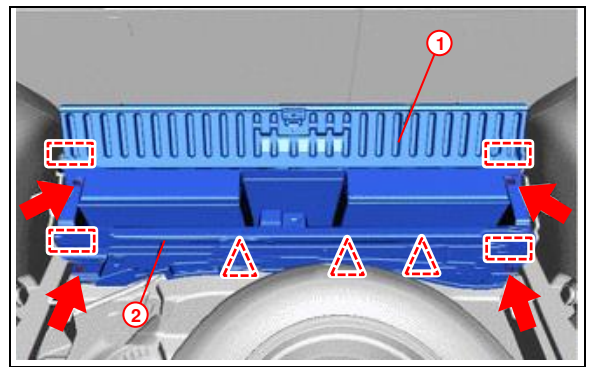
5. Remove the deck floor box.
 - A. Using a clip remover, remove the two clips.
 - B. Detach the two claws and guide and remove the deck floor box on left-hand side.
6. Remove the rear No. 1 floor mat support side plate.
 - A. Open the rear No. 1 floor board.
 - B. Remove the four screws.
 - C. Detach the three clips and four guides and remove the rear No. 1 floor mat support side plate together with the rear No. 1 floor board.
7. Detach the three claws and four clips and remove the rear deck trim cover.

Figure 4.



1	Clip
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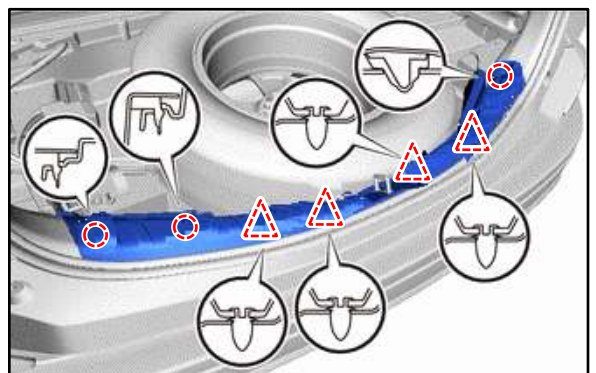
Figure 5.



1	Rear No. 1 Floor Board
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2	Rear No. 1 Floor Mat Support Side Plate
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Figure 6.



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Repair Procedure (continued)

Harness Removal (continued)

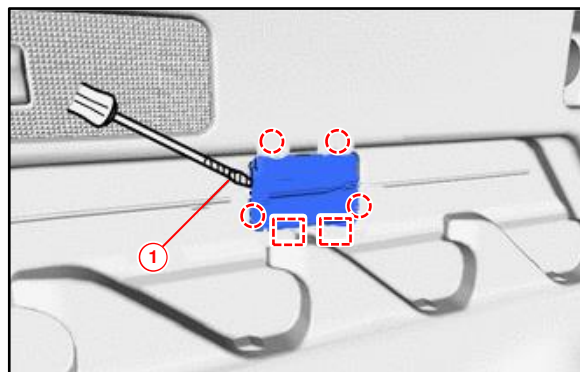
8. Remove the deck trim side panel assembly left-hand side.

Figure 7.



- A. Remove the deck trim service hole cover.
Using a screwdriver, detach the four claws and two guides and disconnect the deck trim service hole cover.

Figure 8.



1	Protective Tape
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Repair Procedure (continued)

Harness Removal (continued)

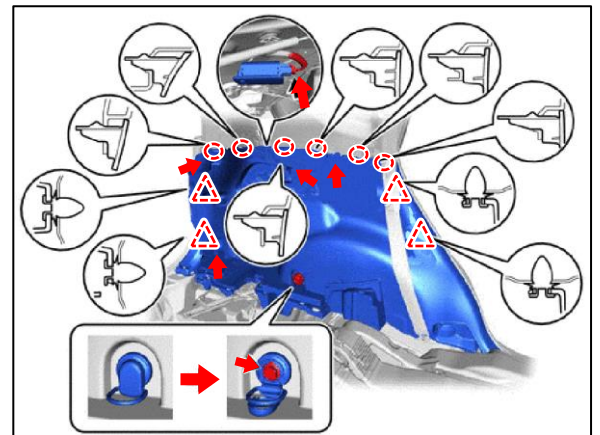
- B. Remove the light assembly.
 - (1) Detach the light assembly from the trim panel.
 - (2) Remove the connector.

Figure 9.



- C. Remove the screw and two bolts.
- D. Open the tether anchor set bracket cover.
- E. Remove the bolt and tether anchor set bracket.
- F. Remove the bolt and luggage hold belt striker assembly.
- G. Detach the six claws and four clips.

Figure 10.



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Repair Procedure (continued)

Harness Removal (continued)

9. Pull back the panel and locate the frame wire harness connector.

Figure 11.

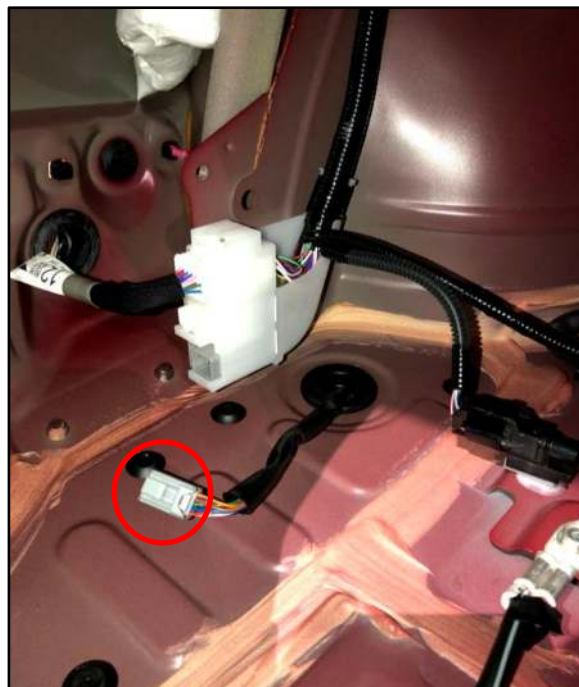


Figure 12.



10. Remove the frame wire harness connector.

Figure 13.



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Repair Procedure (continued)

Harness Removal (continued)

11. Push the frame wire harness grommet through the body hole.

Figure 14.



12. Remove the plastic nut and two clips to remove the underbody rear left-hand cover.

Figure 15.

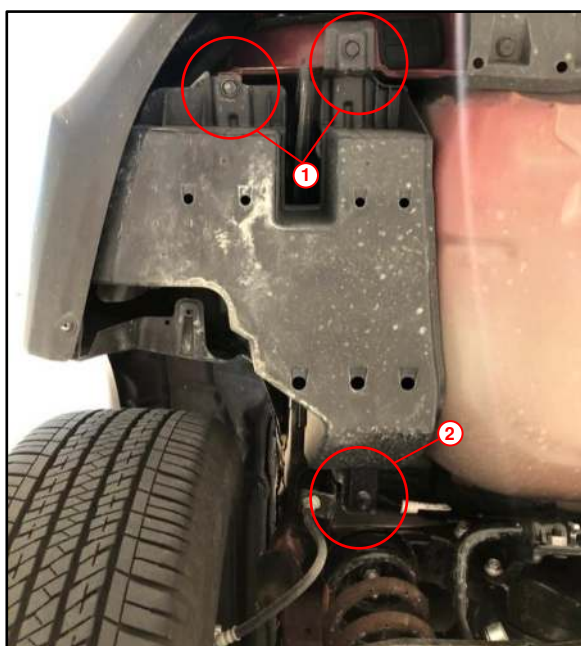


Figure 16.



1	Clip
2	Plastic Nut

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Repair Procedure (continued)

Harness Removal (continued)

13. Remove the black clip closest to the grommet.

Figure 17.



14. Remove the white clip.

Figure 18.



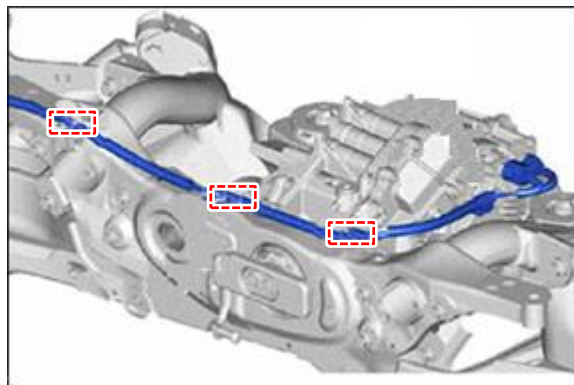
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Repair Procedure (continued)

Harness Removal (continued)

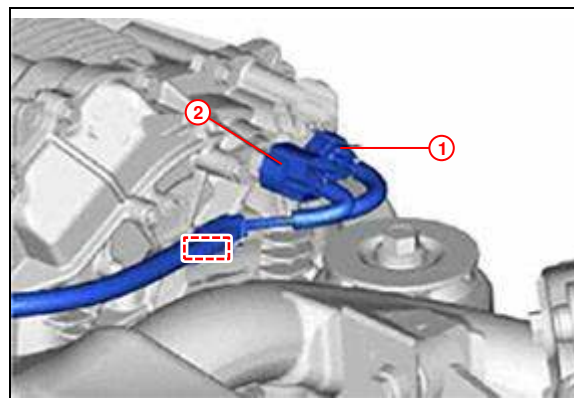
15. Remove the three black clips from the rear suspension member.

Figure 19.



16. Remove the two connectors from the rear traction motor and unclip the clamp from the rear traction motor bracket to remove the wire harness.

Figure 20.



1	Temperature Sensor Connector
2	Resolver Sensor Connector

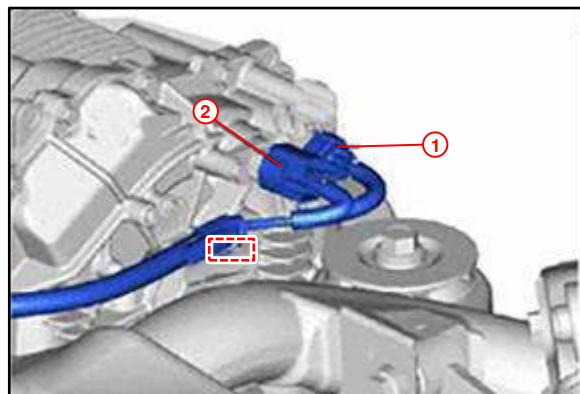
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Repair Procedure (continued)

Harness Installation

1. Install the two connectors on the rear traction motor and clip the clamp onto the rear traction motor bracket.

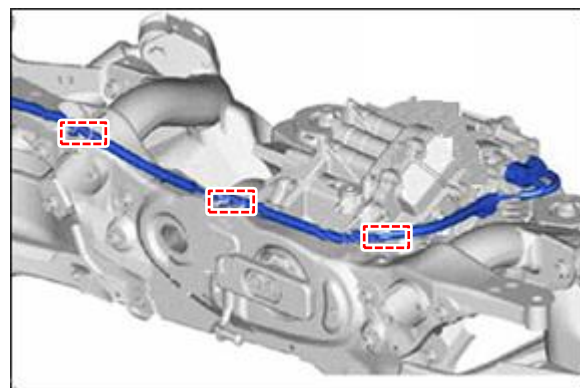
Figure 21.



1	Temperature Sensor Connector
2	Resolver Sensor Connector

2. Route the harness along the rear suspension member and engage the three black clips.

Figure 22.



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Repair Procedure (continued)

Harness Installation (continued)

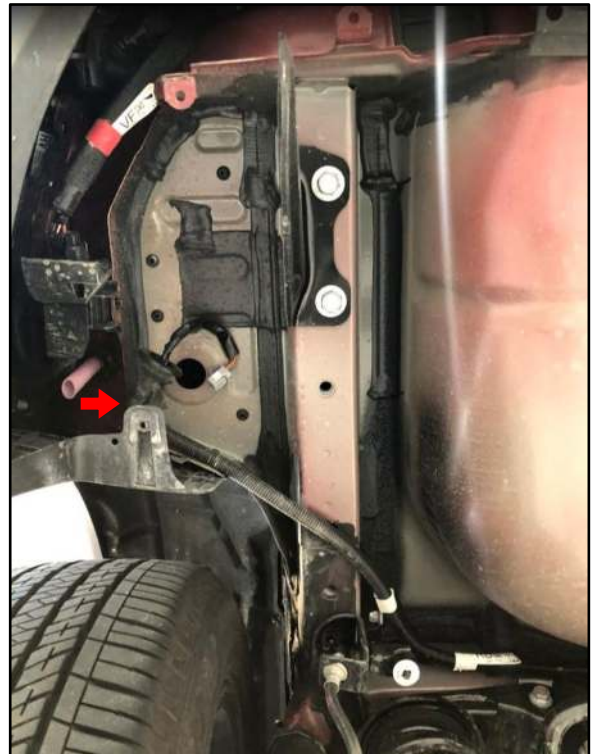
3. Engage the white clip.

Figure 23.



4. Engage the black clip.

Figure 24.



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Repair Procedure (continued)

Harness Installation (continued)

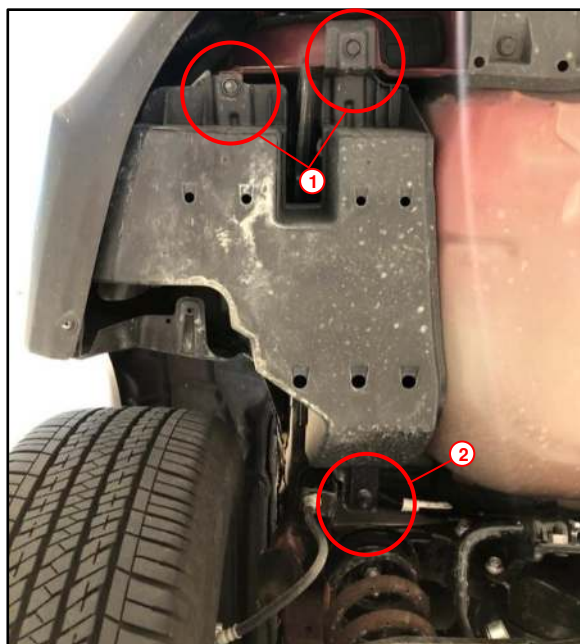
5. Push the harness connector and grommet through the body hole.

Figure 25.



6. Install the plastic nut and two clips to install the underbody rear left-hand cover.

Figure 26.



1	Clip
2	Plastic Nut

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Repair Procedure (continued)

Harness Installation (continued)

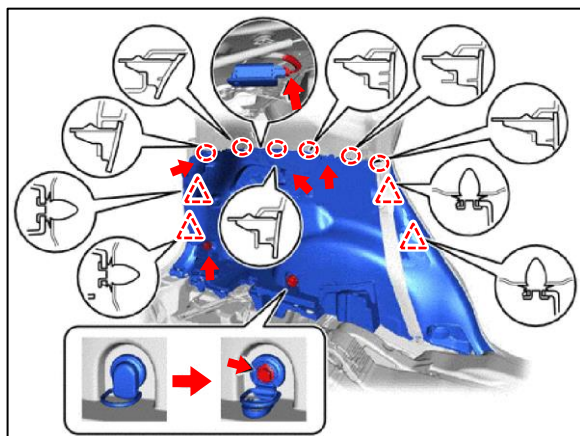
7. Connect the frame wire harness connector.

Figure 27.



8. Install the deck trim side panel assembly left-hand side.
 - A. Engage the six claws and four clips.
 - B. Install the bolt and luggage hold belt striker assembly.
 - C. Install the bolt and tether anchor set bracket.
 - D. Install the screw and two bolts.
 - E. Close the tether anchor set bracket cover.

Figure 28.



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Repair Procedure (continued)

Harness Installation (continued)

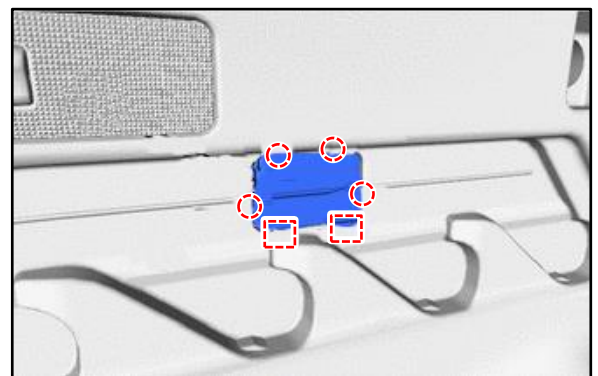
- F. Connect and install the light assembly.

Figure 29.



- G. Install the deck trim service hole cover by attaching the four claws and two guides.

Figure 30.



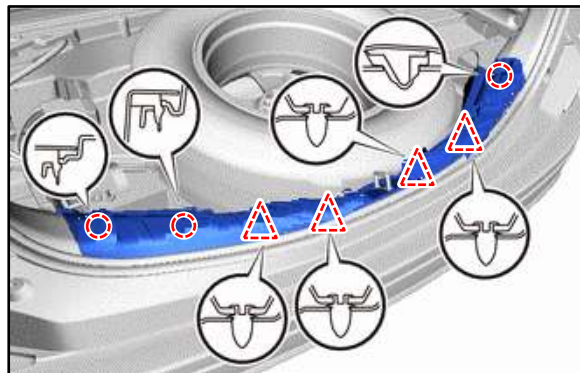
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Repair Procedure (continued)

Harness Installation (continued)

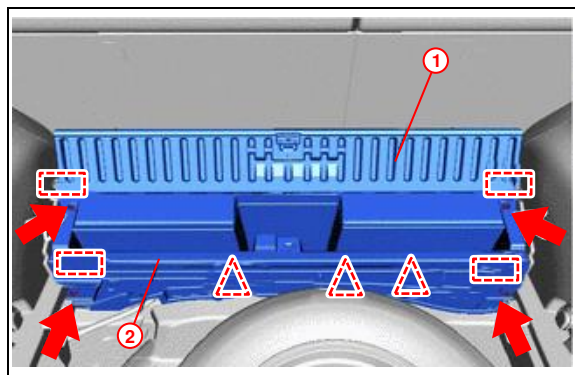
9. Engage the three claws and four clips and install the rear deck trim cover.

Figure 31.



10. Install the rear No. 1 floor mat support side plate.
 - A. Engage the three clips and four guides to install the rear No. 1 floor mat support side plate together with the rear No. 1 floor board.
 - B. Install the four screws.
 - C. Close the rear No. 1 floor board.

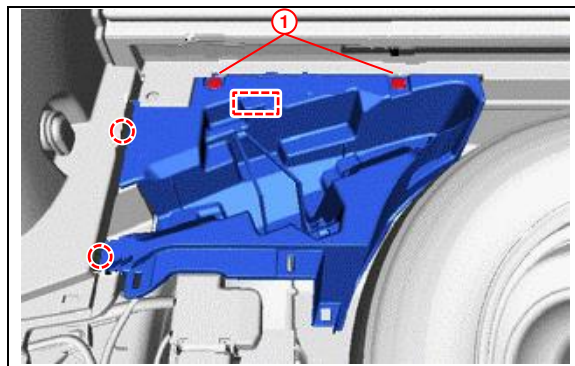
Figure 32.



1	Rear No. 1 Floor Board
2	Rear No. 1 Floor Mat Support Side Plate

11. Engage the two clips, two claws, and guide to install the deck floor box left-hand side.

Figure 33.



1	Clip
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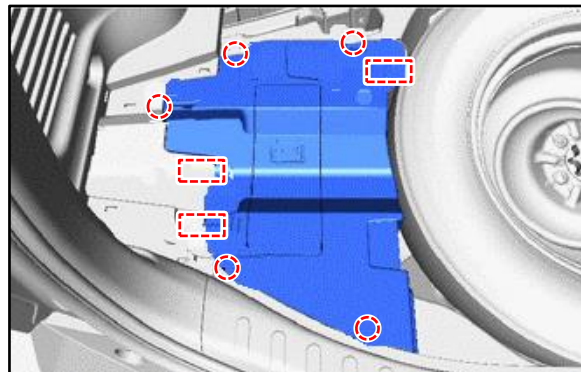
Repair Procedure (continued)

Harness Installation (continued)

12. Connect the negative (–) battery terminal.
Torque: 5.4 N*m (55 kgf*cm, 48 in*lbf / ft*lbf)

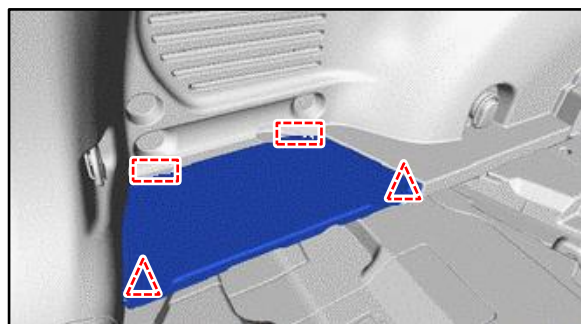
13. Engage the five claws and three guides to install the deck trim side base.

Figure 34.



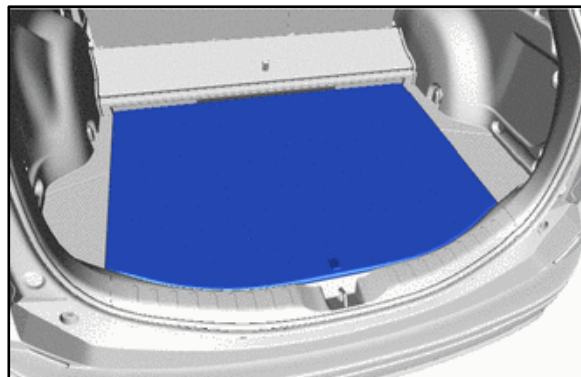
14. Engage the two clips and two guides to install the rear No. 3 floor board.

Figure 35.



15. Install the deck board assembly.

Figure 36.



16. Connect Techstream and clear the DTCs.