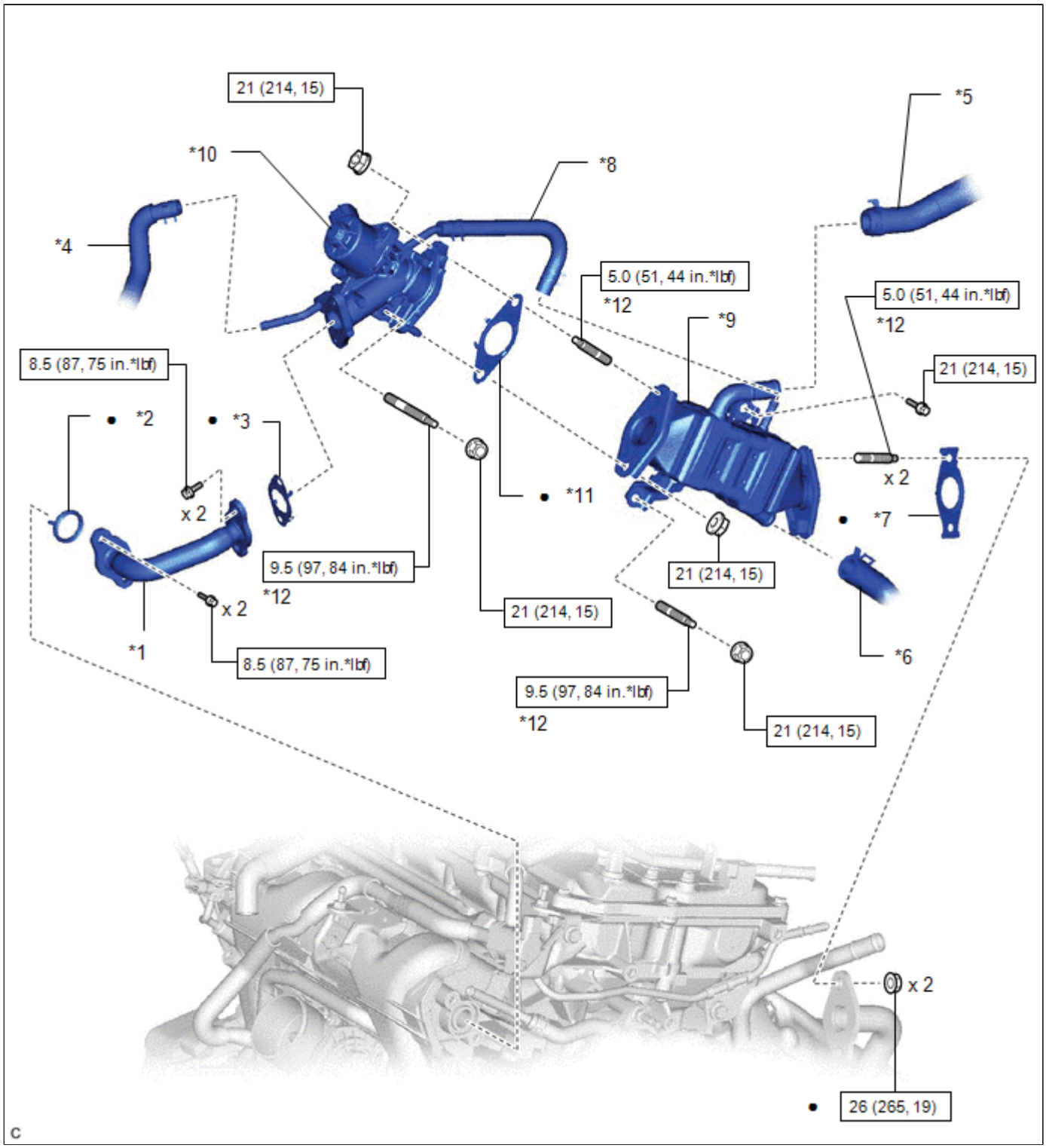
Last Modified: 01-14-2019	6.8:8.0.48	**Doc ID:** RM100000000THEU
Model Year Start: 2016	**Model:** Prius	**Prod Date Range:** [11/2015 -]
Title: 2ZR-FXE (EMISSION CONTROL): EGR COOLER: COMPONENTS; 2016 - 2019 MY Prius [11/2015 -]		

COMPONENTS

ILLUSTRATION



*1	EGR PIPE ASSEMBLY	*2	INLET EGR GASKET

*3	EGR PIPE GASKET	*4	WATER BY-PASS HOSE
*5	INLET HEATER WATER HOSE A	*6	NO. 4 WATER BY-PASS HOSE
*7	EGR COOLER GASKET	*8	NO. 6 WATER BY-PASS HOSE
*9	EGR PIPE WITH COOLER SUB-ASSEMBLY	*10	EGR VALVE ASSEMBLY
*11	EGR VALVE GASKET	*12	STUD BOLT
	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part

Last Modified: 01-14-2019	6.8:8.0.48	**Doc ID:** RM100000000THET
Model Year Start: 2016	**Model:** Prius	**Prod Date Range:** [11/2015 -]
Title: 2ZR-FXE (EMISSION CONTROL): EGR COOLER: INSTALLATION; 2016 - 2019 MY Prius [11/2015 -]		

INSTALLATION

PROCEDURE

1. INSTALL EGR PIPE WITH COOLER SUB-ASSEMBLY

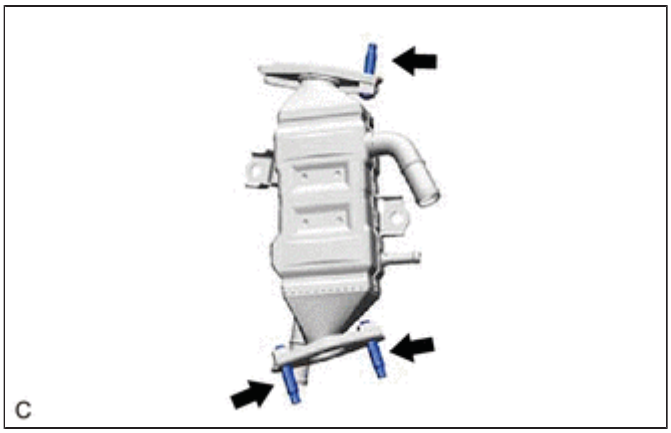
(a) Using an E8 "TORX" socket wrench, install the 3 stud bolts to the EGR pipe with cooler sub-assembly.

HINT:

If a stud bolt is deformed or the threads are damaged, replace it.

Torque:

5.0 N·m {51 kgf·cm, 44 in·lbf}



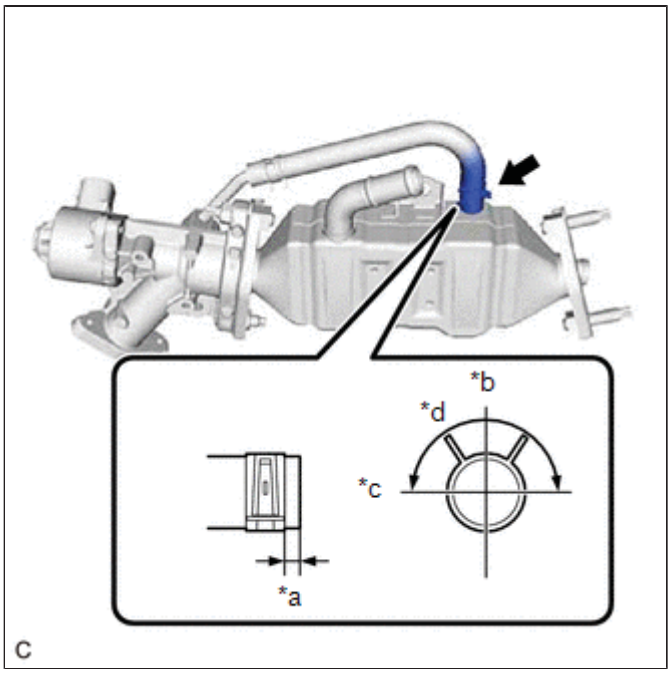
(b) Install a new EGR valve gasket to the EGR valve assembly.

(c) Install the EGR pipe with cooler sub-assembly to the EGR valve assembly with the 2 nuts.

Torque:

21 N·m {214 kgf·cm, 15 ft·lbf}

(d) Connect the No. 6 water by-pass hose to the EGR pipe with cooler sub-assembly and slide the clip to secure it.



*a	7 to 11 mm (0.276 to 0.433 in.)

*b	LH
*c	Front of the vehicle
*d	180°

(e) Install a new EGR cooler gasket to the EGR pipe with cooler sub-assembly.

(f) Set the EGR pipe with cooler sub-assembly with the EGR valve assembly to the engine assembly.

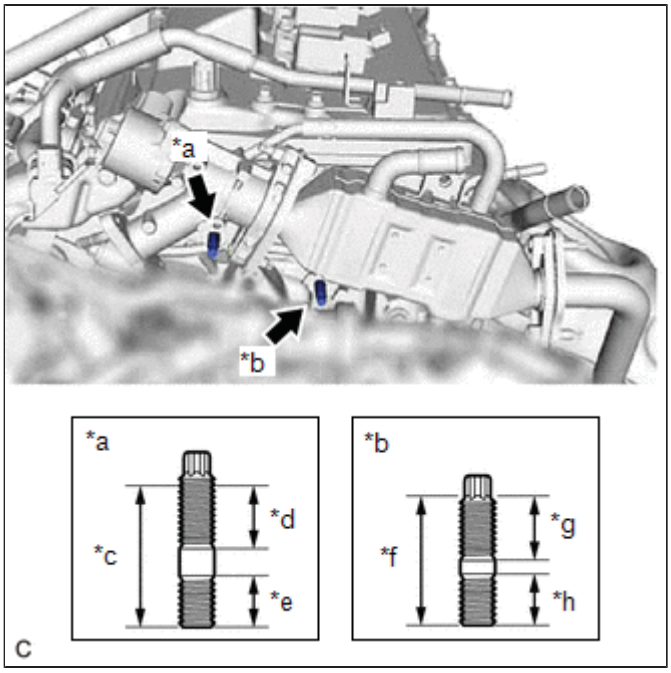
(g) Using an E8 "TORX" socket wrench, install the stud bolt (A) and stud bolt (B) to the cylinder head sub-assembly and camshaft housing sub-assembly.

HINT:

If a stud bolt is deformed or the threads are damaged, replace it.

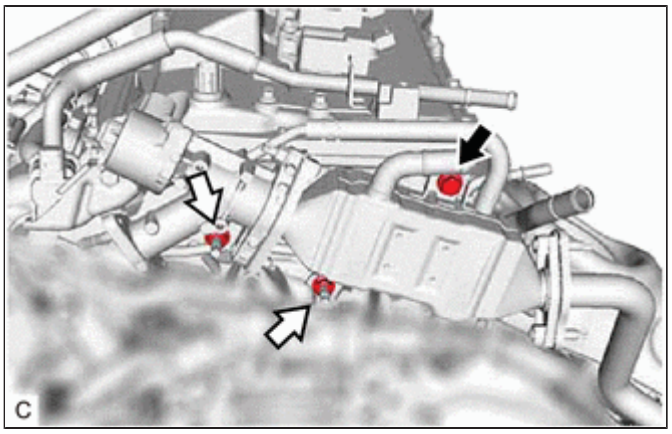
Torque:

9.5 N·m {97 kgf·cm, 84 in·lbf}



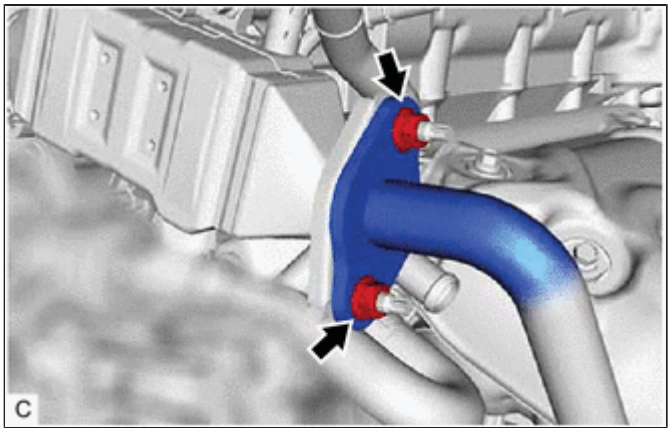
*a	Stud Bolt (A)
*b	Stud Bolt (B)
*c	48 mm (1.890 in.)
*d	26 mm (1.024 in.)
*e	13 mm (0.512 in.)
*f	29 mm (1.142 in.)
*g	14 mm (0.551 in.)
*h	13 mm (0.512 in.)

(h) Temporarily install the EGR pipe with cooler sub-assembly with the EGR valve assembly to the cylinder head sub-assembly and camshaft housing sub-assembly with the bolt and 2 nuts.



➡	Bolt
⇨	Nut

(i) Temporarily install the EGR pipe with cooler sub-assembly to the exhaust manifold (TWC: Front Catalyst) with 2 new nuts.



(j) Tighten the bolt and 2 nuts.

Torque:

21 N·m {214 kgf·cm, 15 ft·lbf}

(k) Tighten the 2 nuts.

Torque:

26 N·m {265 kgf·cm, 19 ft·lbf}

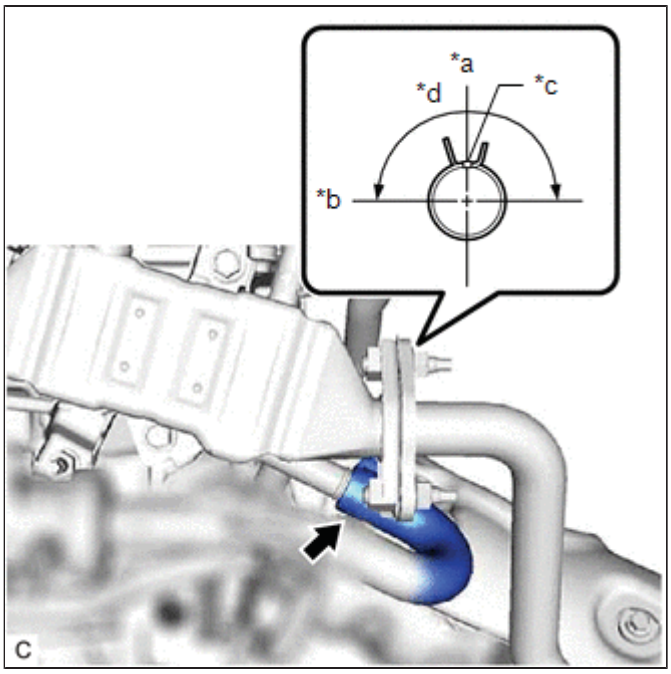
(l) Connect the EGR valve assembly connector.

2. CONNECT NO. 4 WATER BY-PASS HOSE

(a) Connect the No. 4 water by-pass hose to the EGR pipe with cooler sub-assembly and slide the clip to secure it.

HINT:

Engage the clip within the area shown in the illustration.



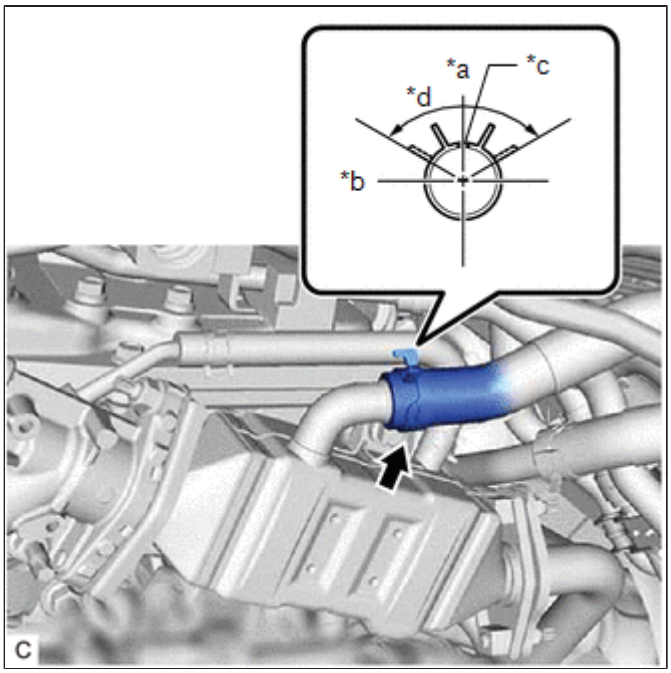
*a	Up
*b	LH
*c	Paint Mark
*d	180°

3. CONNECT INLET HEATER WATER HOSE A

(a) Connect the inlet heater water hose A to the EGR pipe with cooler sub-assembly and slide the clip to secure it.

HINT:

Engage the clip within the area shown in the illustration.



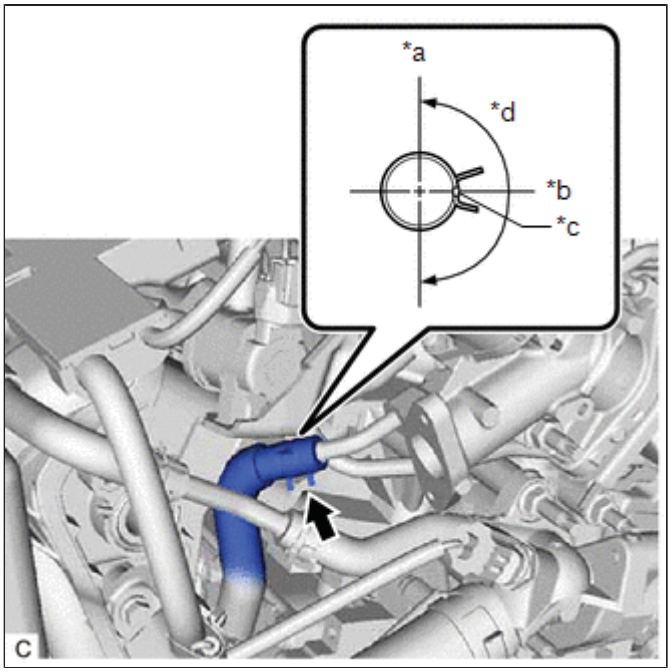
*a	Up
*b	LH
*c	Paint Mark
*d	120°

4. CONNECT WATER BY-PASS HOSE

(a) Connect the water by-pass hose to the EGR valve assembly and slide the clip to secure it.

HINT:

Engage the clip within the area shown in the illustration.



*a	Up
*b	LH
*c	Paint Mark
*d	180°

5. INSTALL EGR PIPE ASSEMBLY

Click here INFO

6. INSTALL INVERTER WITH CONVERTER ASSEMBLY

Click here INFO

7. ADD ENGINE COOLANT (for Engine)

Click here INFO INFO

8. INSPECT FOR COOLANT LEAK (for Engine)

Click here INFO INFO

9. INSPECT FOR EXHAUST GAS LEAK

Click here INFO INFO

Last Modified: 01-14-2019	6.8:8.0.48	**Doc ID:** RM100000000THEV
Model Year Start: 2016	**Model:** Prius	**Prod Date Range:** [11/2015 - 12/2018]
Title: 2ZR-FXE (EMISSION CONTROL): EGR COOLER: REMOVAL; 2016 - 2018 MY Prius [11/2015 - 12/2018]		

REMOVAL

CAUTION / NOTICE / HINT

The necessary procedures (adjustment, calibration, initialization or registration) that must be performed after parts are removed and installed, or replaced during EGR pipe with cooler sub-assembly removal/installation are shown below.

Necessary Procedures After Parts Removed / Installed / Replaced

REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	LINK
Auxiliary battery terminal is disconnected/reconnected	Memorize steering angle neutral point	Lane departure alert system (w/ Steering Control System)	INFO
		Pre-collision system	
		Intelligent clearance sonar system*1	
		Simple advanced parking guidance system*1	
	Initialize back door lock	Power door lock control system	INFO
Replacement of inverter with converter assembly	Resolver learning	• DTCs are stored • Slight vibration at a vehicle speed of 5 km/h (3 mph) or less • Shock or vibration during acceleration	INFO for Nickel Metal Hydride Battery INFO for Lithium-ion Battery
Replacement of ECM	Perform Vehicle Identification Number (VIN) registration	MIL comes on	INFO
• Replacement of EGR valve assembly • Gas leak from exhaust system is repaired	Inspection After Repair	• Poor idle, etc. • Engine start function, etc.	INFO

*1: When performing learning using the Techstream.

Click here INFO

PROCEDURE

1. REMOVE INVERTER WITH CONVERTER ASSEMBLY

Click here INFO

2. DRAIN ENGINE COOLANT (for Engine)

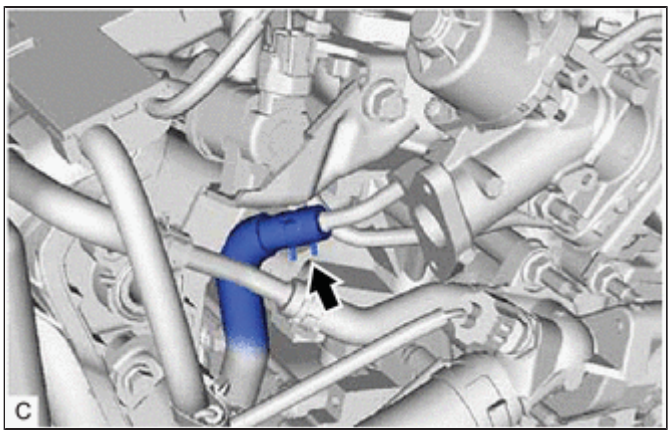
Click here INFO INFO

3. REMOVE EGR PIPE ASSEMBLY

Click here INFO

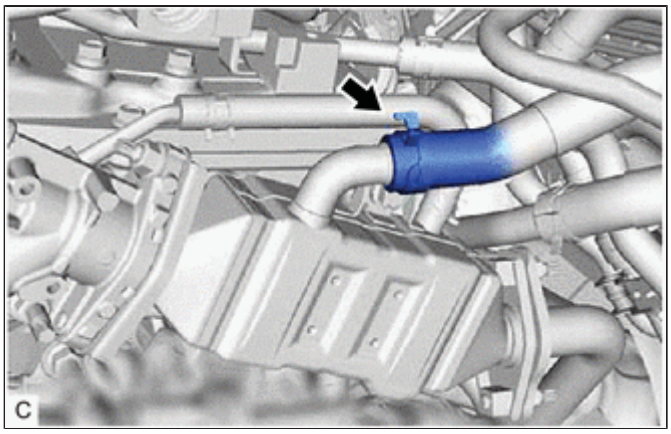
4. DISCONNECT WATER BY-PASS HOSE

(a) Slide the clip and disconnect the water by-pass hose from the EGR valve assembly.



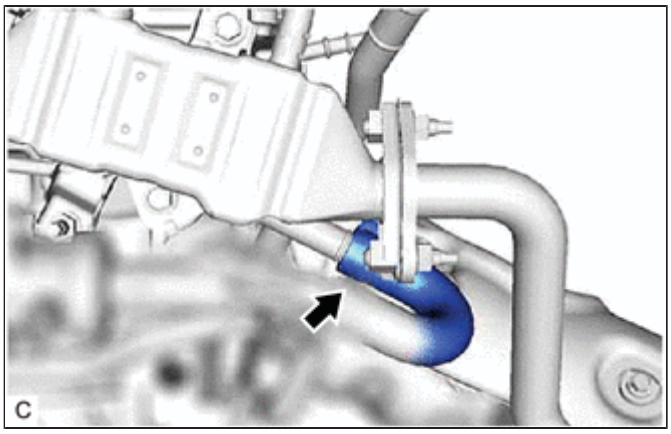
5. DISCONNECT INLET HEATER WATER HOSE A

(a) Slide the clip and disconnect the inlet heater water hose A from the EGR pipe with cooler sub-assembly.



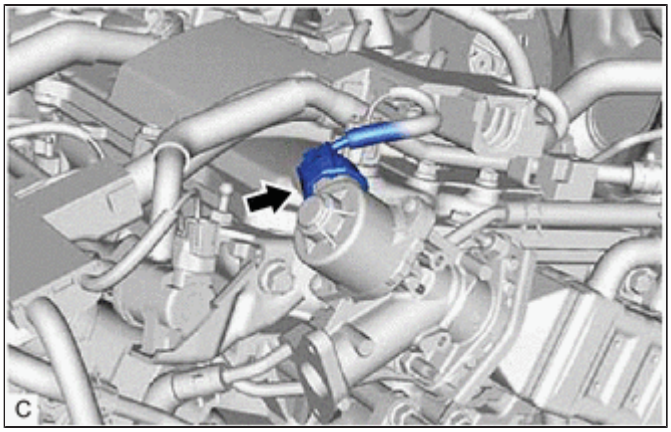
6. DISCONNECT NO. 4 WATER BY-PASS HOSE

(a) Slide the clip and disconnect the No. 4 water by-pass hose from the EGR pipe with cooler sub-assembly.

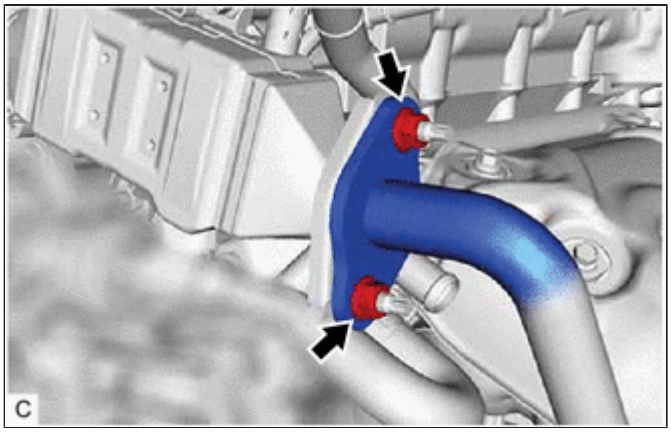


7. REMOVE EGR PIPE WITH COOLER SUB-ASSEMBLY

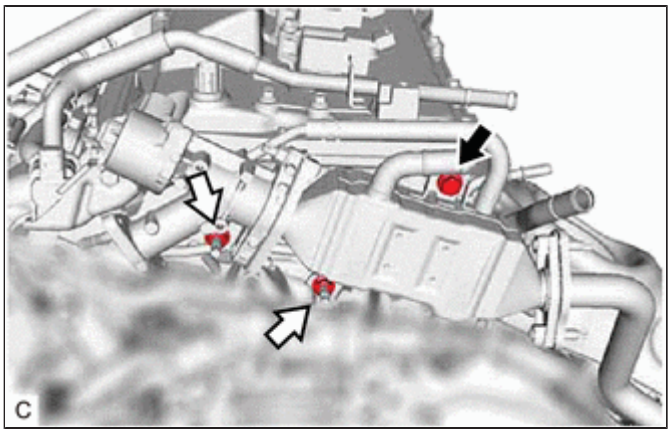
(a) Disconnect the EGR valve assembly connector.



(b) Remove the 2 nuts and disconnect the EGR pipe with cooler sub-assembly from the exhaust manifold (TWC: Front Catalyst).



(c) Remove the bolt and 2 nuts and disconnect the EGR pipe with cooler sub-assembly with the EGR valve assembly from the cylinder head sub-assembly and camshaft housing sub-assembly.

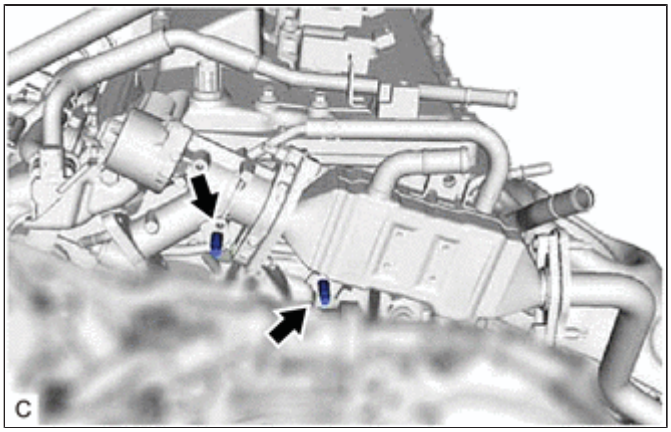


➡	Bolt
⇨	Nut

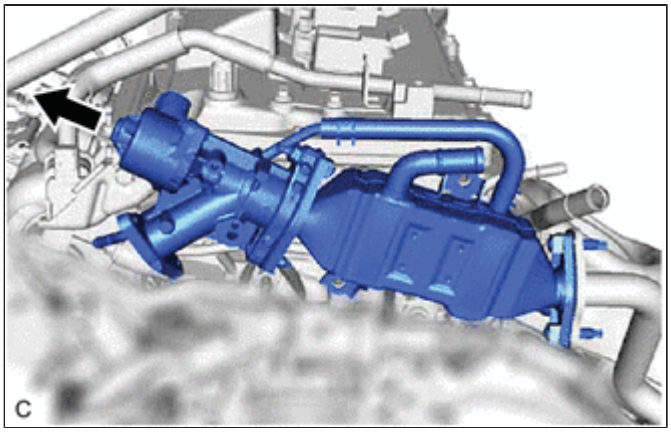
(d) Using an E8 "TORX" socket wrench, remove the 2 stud bolts from the cylinder head sub-assembly and camshaft housing sub-assembly.

HINT:

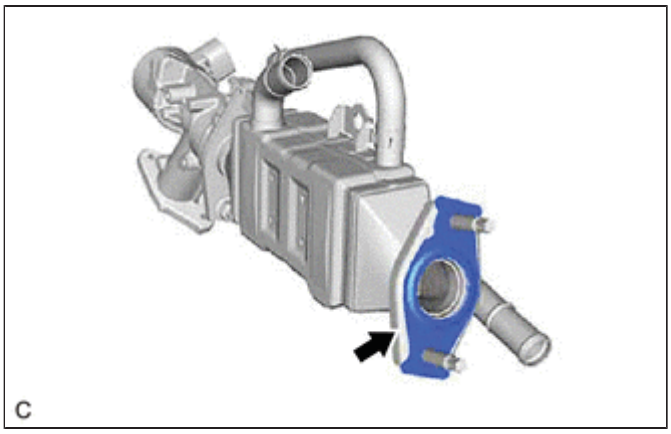
If a stud bolt is deformed or the threads are damaged, replace it.



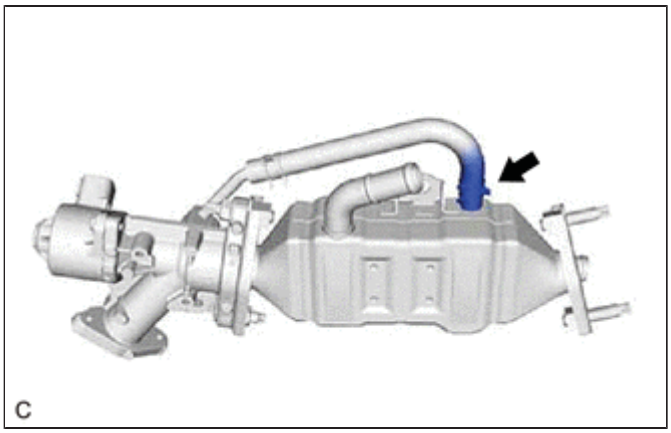
(e) Remove the EGR pipe with cooler sub-assembly with the EGR valve assembly.



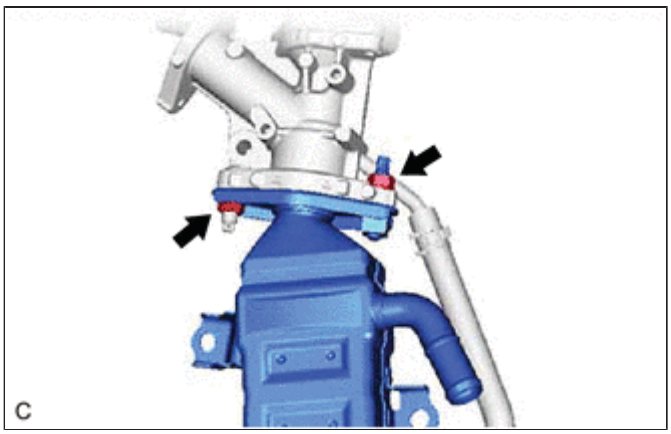
(f) Remove the EGR cooler gasket from the EGR pipe with cooler sub-assembly.



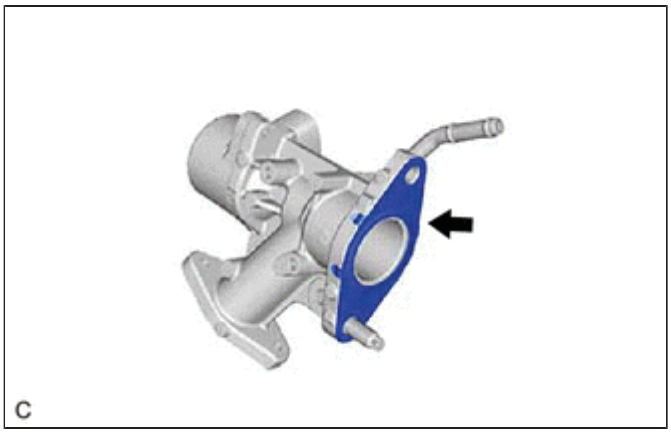
(g) Slide the clip and disconnect the No. 6 water by-pass hose from the EGR pipe with cooler sub-assembly.



(h) Remove the 2 nuts and EGR pipe with cooler sub-assembly from the EGR valve assembly.



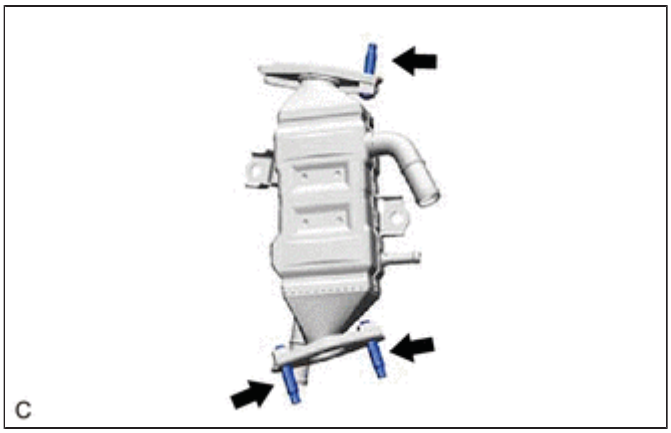
(i) Remove the EGR valve gasket from the EGR valve assembly.



(j) Using an E8 "TORX" socket wrench, remove the 3 stud bolts from the EGR pipe with cooler sub-assembly.

HINT:

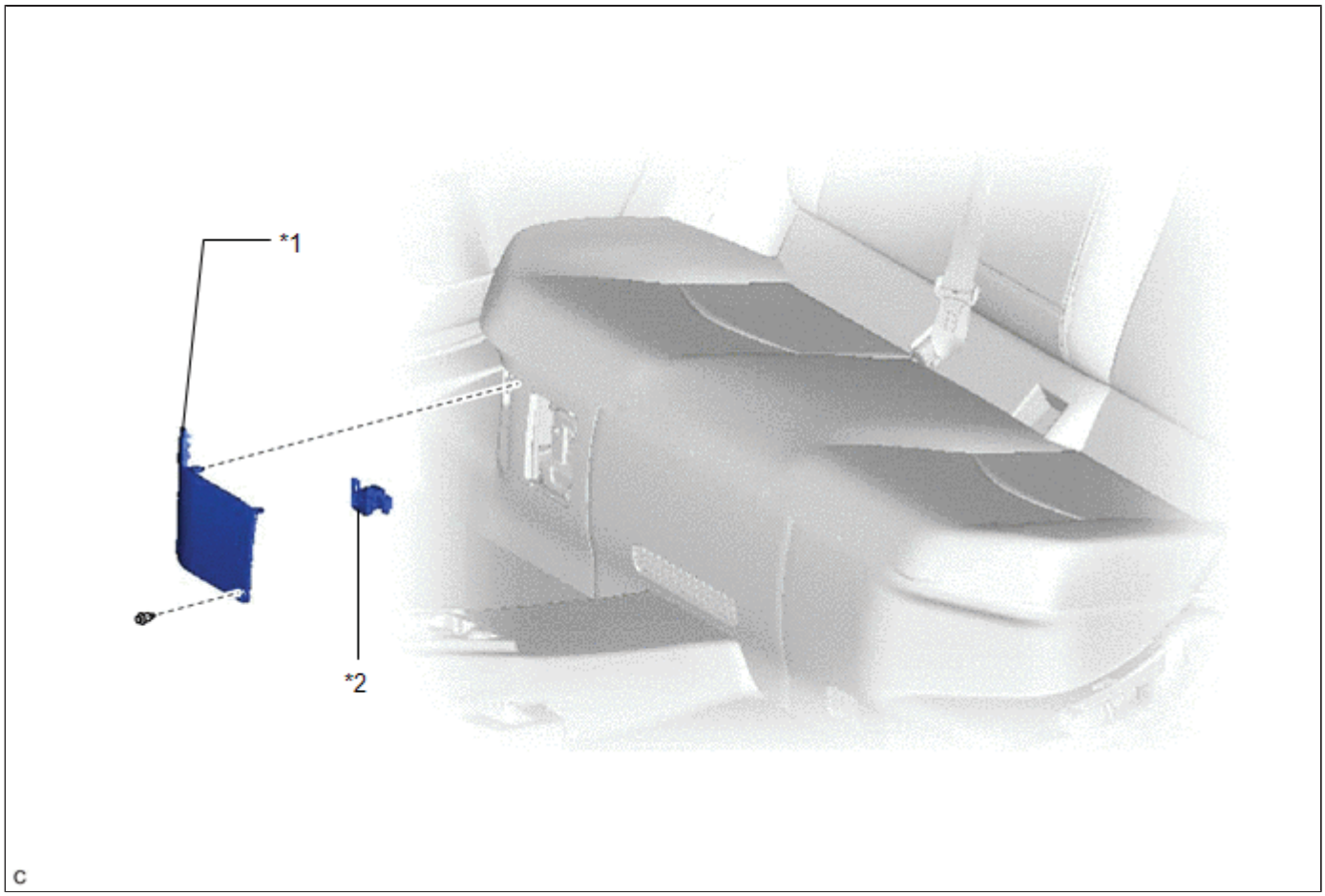
If a stud bolt is deformed or the threads are damaged, replace it.



Last Modified: 01-14-2019	6.8:8.0.48	**Doc ID:** RM100000000TAY5
Model Year Start: 2016	**Model:** Prius	**Prod Date Range:** [11/2015 -]
Title: 2ZR-FXE (EMISSION CONTROL): EGR VALVE: COMPONENTS; 2016 - 2019 MY Prius [11/2015 -]		

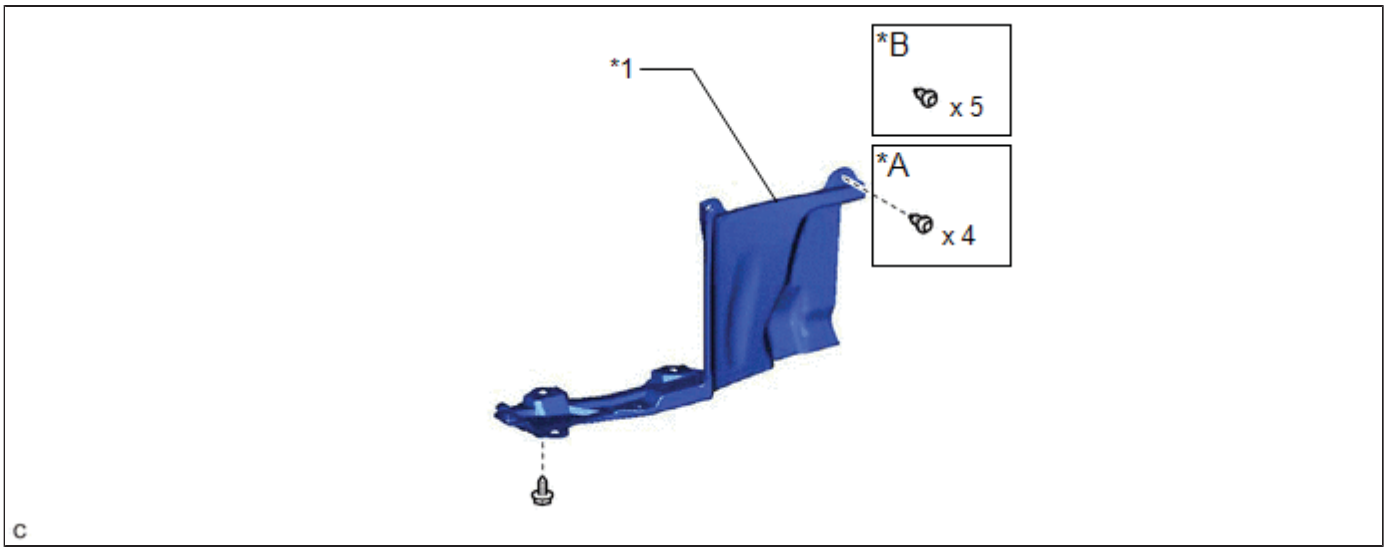
COMPONENTS

ILLUSTRATION



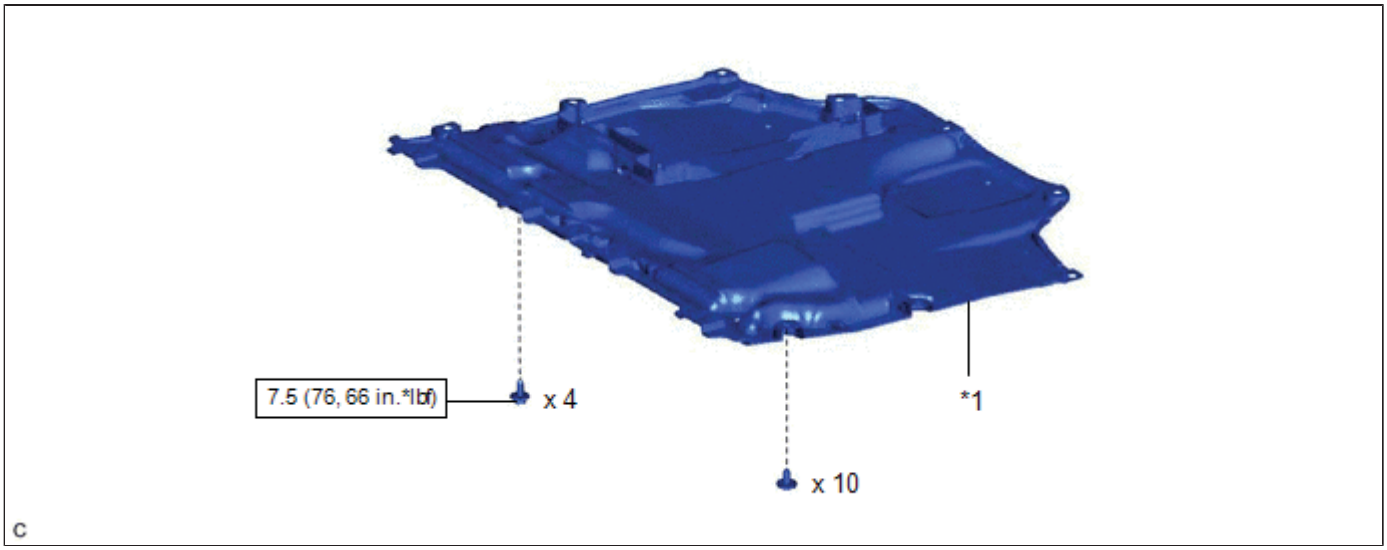
*1	BATTERY SERVICE HOLE COVER	*2	SERVICE PLUG GRIP

ILLUSTRATION



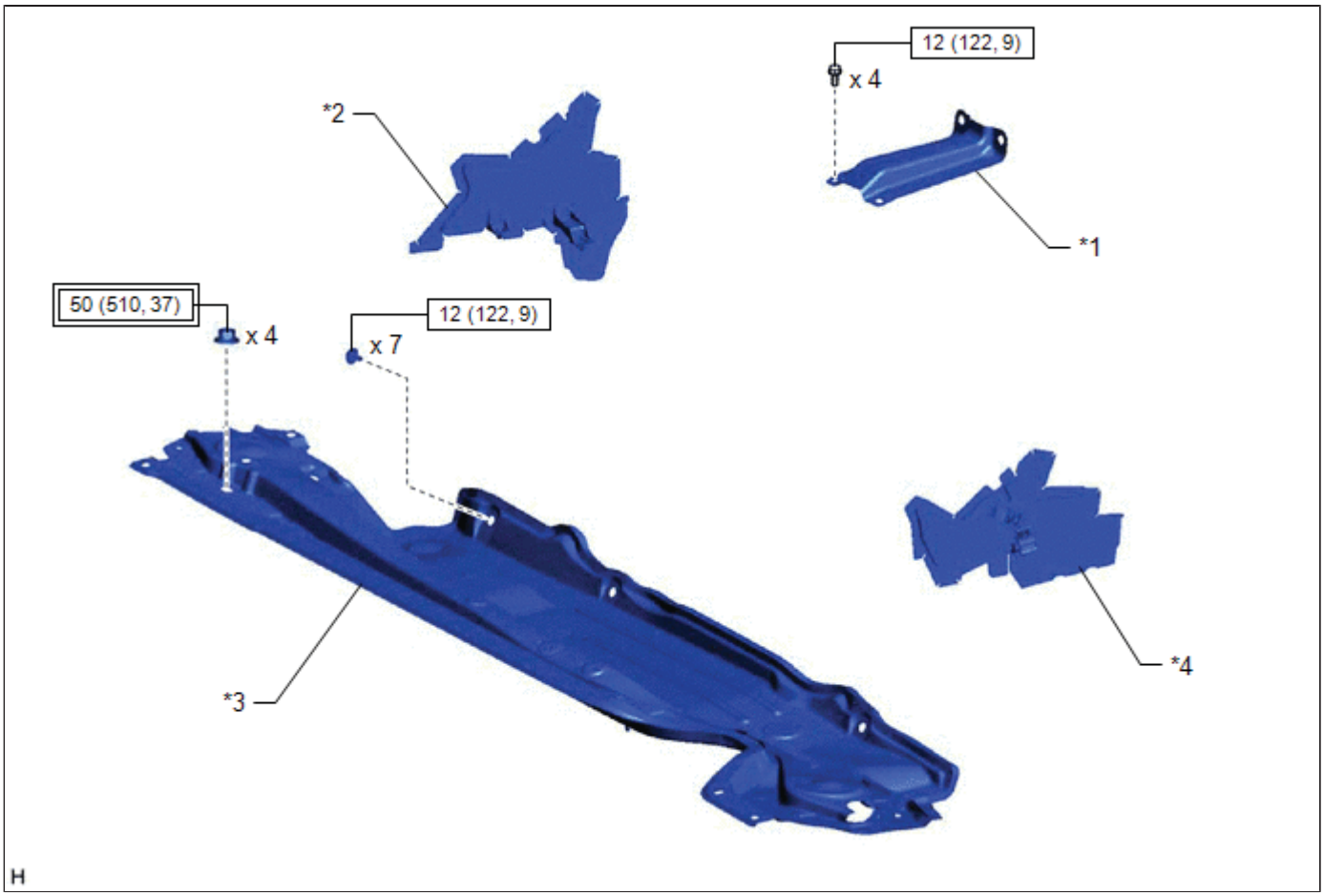
*A	except Rough Road Area Specification Vehicles	*B	for Rough Road Area Specification Vehicles
*1	REAR MOTOR UNDER COVER LH	-	-

ILLUSTRATION



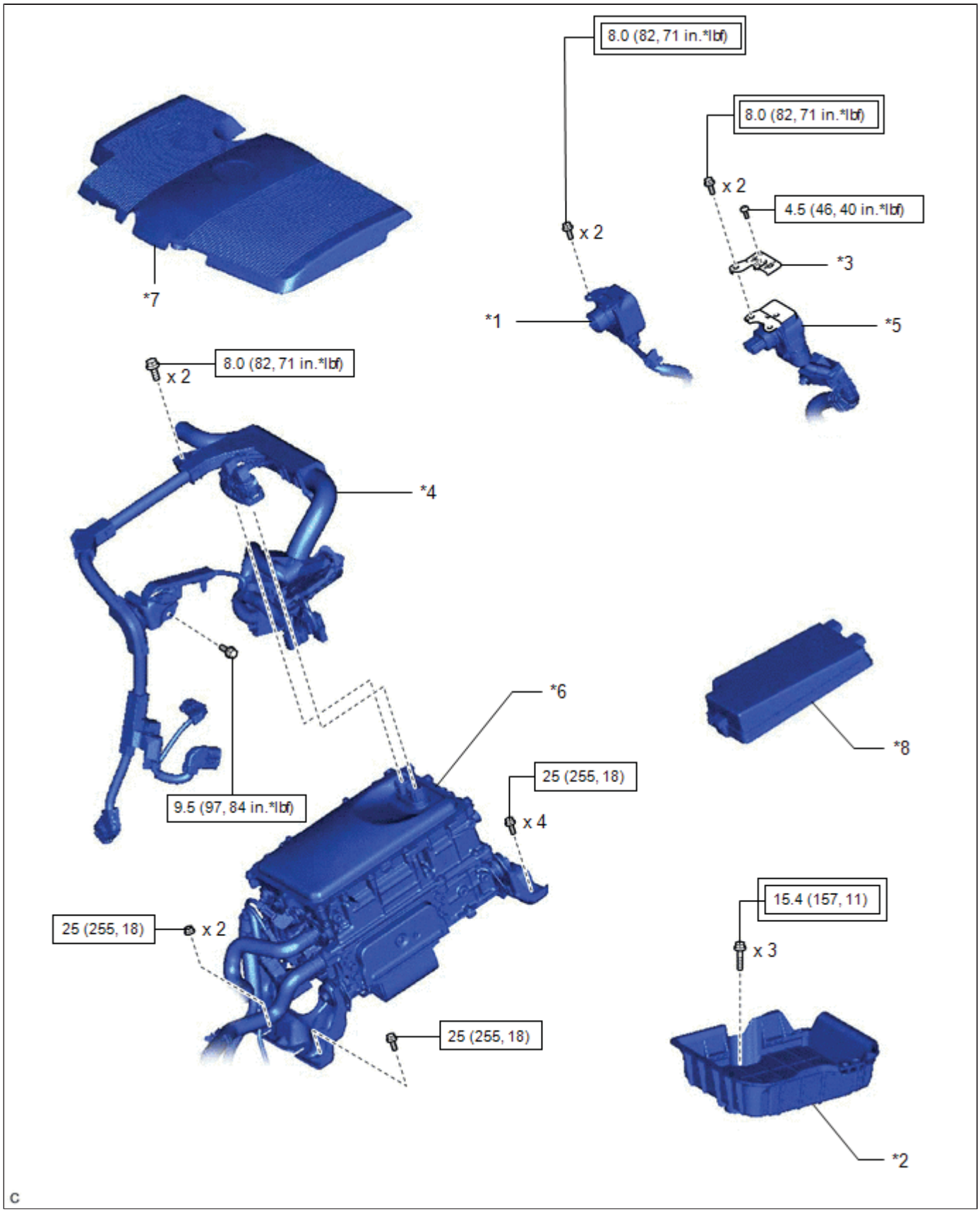
*1	REAR MOTOR UNDER COVER LH	-	-

ILLUSTRATION



*1	COWL BODY MOUNTING REINFORCEMENT LH	*2	NO. 1 HEATER AIR DUCT SPLASH SHIELD SEAL
*3	OUTER COWL TOP PANEL SUB-ASSEMBLY	*4	WATER GUARD PLATE LH
▭	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping" : N*m (kgf*cm, ft.*lbf)	▭	N*m (kgf*cm, ft.*lbf): Specified torque

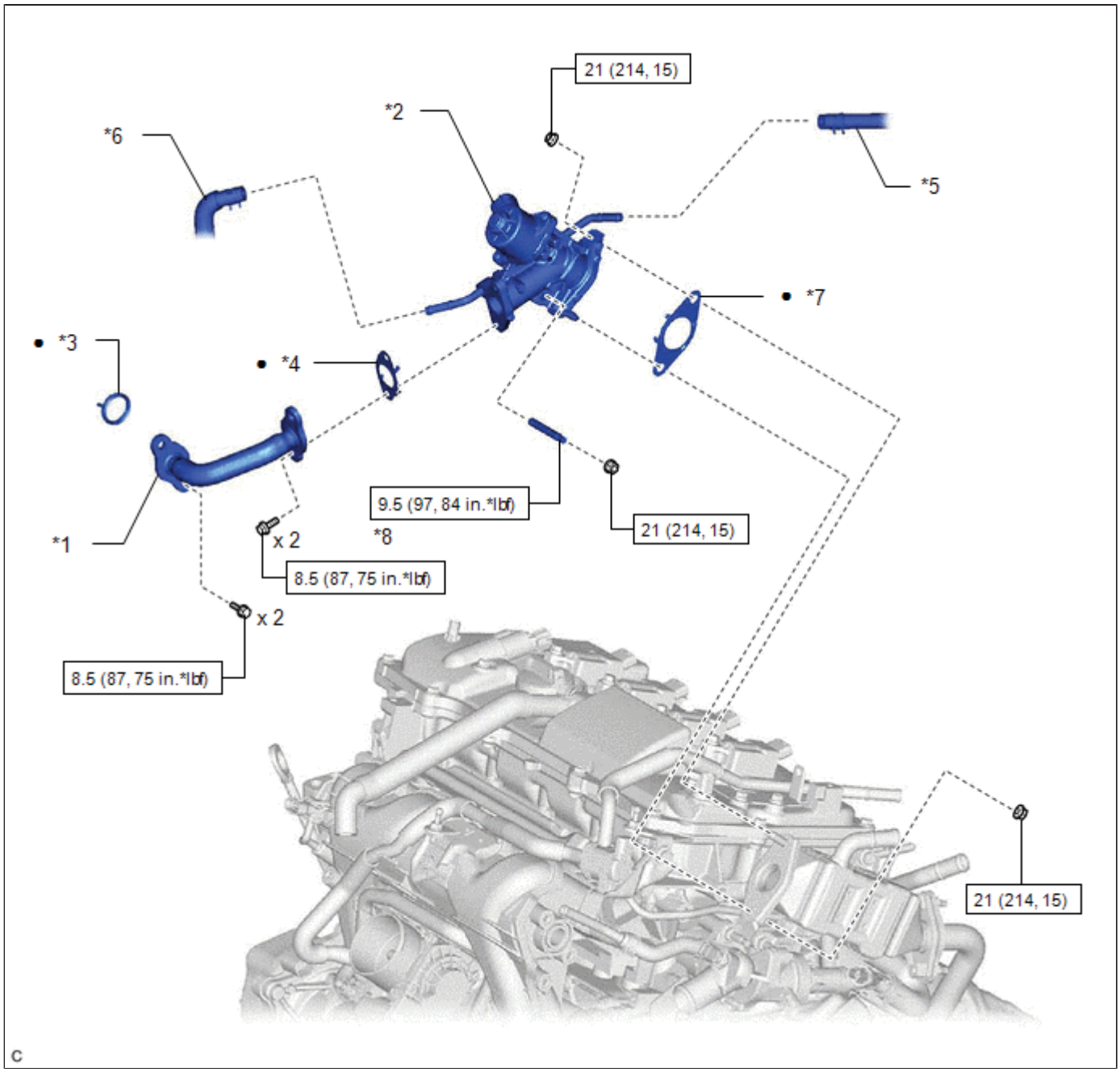
ILLUSTRATION



*1	AIR CONDITIONING WIRE	*2	BATTERY CLAMP SUB-ASSEMBLY
*3	CONNECTOR COVER ASSEMBLY	*4	ENGINE WIRE

*5	HV FLOOR UNDER WIRE	*6	INVERTER WITH CONVERTER ASSEMBLY
*7	NO. 1 ENGINE COVER SUB-ASSEMBLY	*8	NO. 1 RELAY BLOCK COVER
▭	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping" : N*m (kgf*cm, ft.*lbf)	▭	N*m (kgf*cm, ft.*lbf): Specified torque

ILLUSTRATION



*1	EGR PIPE ASSEMBLY	*2	EGR VALVE ASSEMBLY
*3	INLET EGR GASKET	*4	EGR PIPE GASKET

*5	NO. 6 WATER BY-PASS HOSE	*6	WATER BY-PASS HOSE
*7	EGR VALVE GASKET	*8	STUD BOLT
□	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part

Last Modified: 01-14-2019	6.8:8.0.48	**Doc ID:** RM100000000TAY4
Model Year Start: 2016	**Model:** Prius	**Prod Date Range:** [11/2015 -]
Title: 2ZR-FXE (EMISSION CONTROL): EGR VALVE: INSPECTION; 2016 - 2019 MY Prius [11/2015 -]		

INSPECTION

PROCEDURE

1. INSPECT EGR VALVE ASSEMBLY

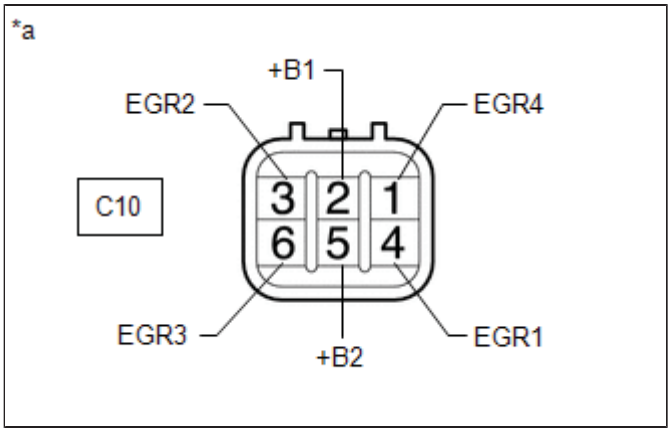
(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(C10)
Click Connector(C10)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
C10-5 (+B2) - C10-4 (EGR1)	20°C (68°F)	18 to 22 Ω
C10-5 (+B2) - C10-6 (EGR3)	20°C (68°F)	18 to 22 Ω
C10-2 (+B1) - C10-1 (EGR4)	20°C (68°F)	18 to 22 Ω
C10-2 (+B1) - C10-3 (EGR2)	20°C (68°F)	18 to 22 Ω



*a	Component without wire harness connected (EGR Valve Assembly)

If the result is not as specified, replace the EGR valve assembly.

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Model Year Start: 2016	**Model:** Prius	**Prod Date Range:** [11/2015 -]
Title: 2ZR-FXE (EMISSION CONTROL): EGR VALVE: INSTALLATION; 2016 - 2019 MY Prius [11/2015 -]		

INSTALLATION

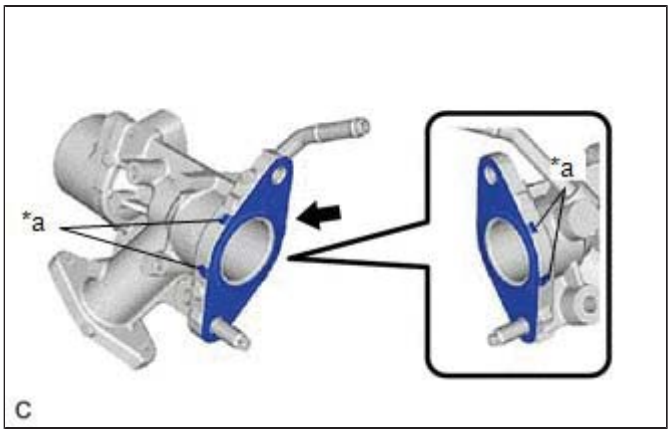
PROCEDURE

1. INSTALL EGR VALVE ASSEMBLY

(a) Install a new EGR valve gasket to the EGR valve assembly.

NOTICE:

Make sure that the claws of the EGR valve gasket are toward the EGR valve assembly side.



*a	Claw

(b) Set the EGR valve assembly to the EGR pipe with cooler sub-assembly.

(c) Using an E8 "TORX" socket wrench, install the stud bolt to the camshaft housing sub-assembly.

Torque:

9.5 N·m {97 kgf·cm, 84 in·lbf}

HINT:

If a stud bolt is deformed or the threads are damaged, replace it.

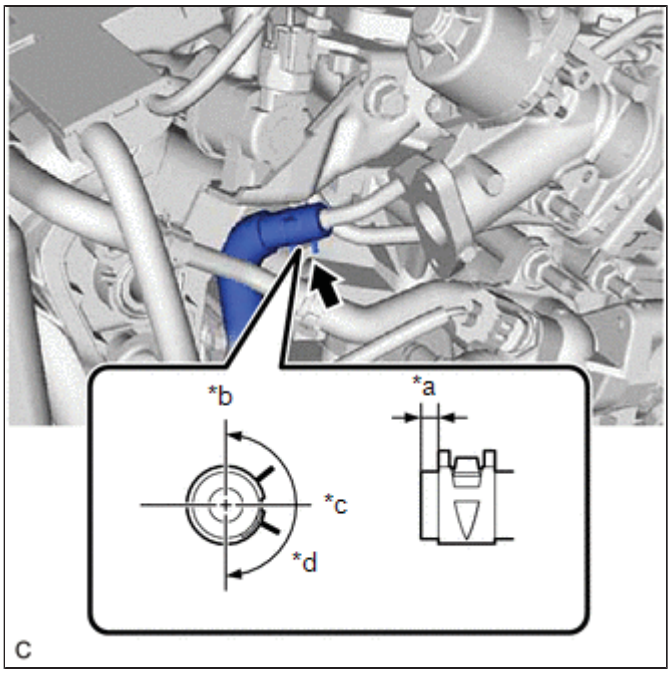
(d) Install the EGR valve assembly to the EGR pipe with cooler sub-assembly with the 3 nuts.

Torque:

21 N·m {214 kgf·cm, 15 ft·lbf}

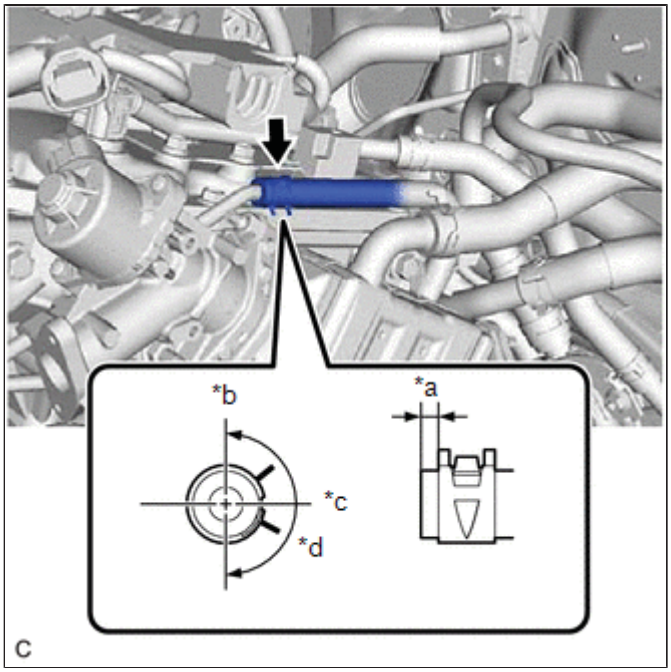
(e) Connect the water by-pass hose to the EGR valve assembly

and slide the clip to secure it.



*a	0 to 4 mm (0 to 0.157 in.)
*b	Up
*c	LH
*d	180°

(f) Connect the No. 6 water by-pass hose to the EGR valve assembly and slide the clip to secure it.



*a	0 to 4 mm (0 to 0.157 in.)
*b	Up
*c	LH
*d	180°

(g) Connect the EGR valve assembly connector.

2. INSTALL EGR PIPE ASSEMBLY

Click here INFO

3. INSTALL INVERTER WITH CONVERTER ASSEMBLY

CAUTION:

Wear insulated gloves.

NOTICE:

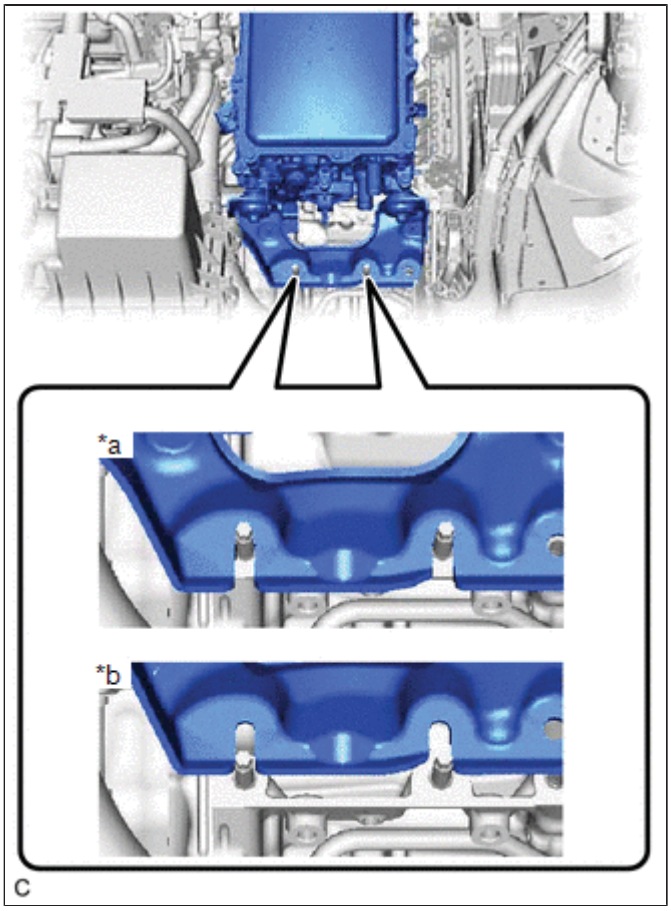
- Be careful not to damage the surrounding components when installing the inverter with converter assembly.
- To prevent damage to the inverter with converter assembly, do not hold the coolant pipe, bracket or connector when securing the inverter with converter assembly.
- To prevent damage due to static electricity, do not touch the terminals of the inverter with converter assembly connector.
- Make sure to seal the inverter with converter assembly with the connector cover assembly or tape (non-residue type) etc., until just before installing the inverter with converter assembly to prevent entry of foreign matter and water.

(a) Remove the rope or equivalent that was securing the inverter with converter assembly.

(b) Temporarily install the inverter with converter assembly with the 5 bolts and 2 nuts.

NOTICE:

Make sure that the inverter with converter assembly is positioned so that the stud bolts are in contact with the base of the U-shaped portions of the No. 1 inverter bracket.

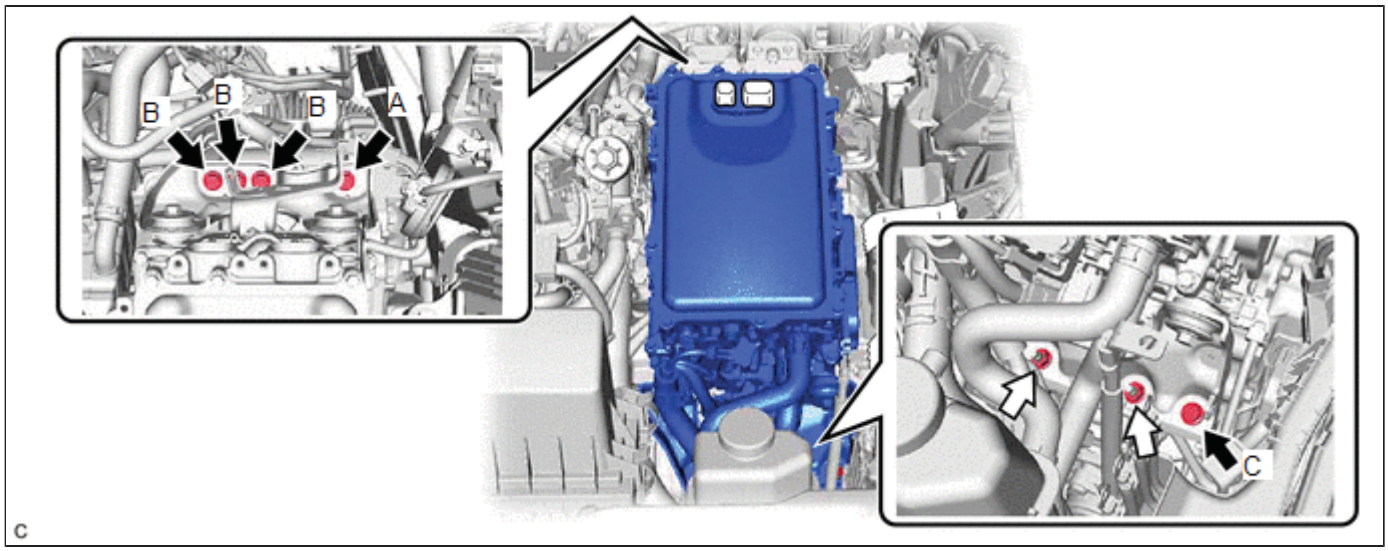


*a	Correct
*b	Incorrect

(c) Tighten the bolt (A).

Torque:

25 N·m {255 kgf·cm, 18 ft·lbf}



➡	Bolt	⇨	Nut

(d) Tighten the 3 bolts (B).

Torque:

25 N·m {255 kgf·cm, 18 ft·lbf}

(e) Tighten the bolt (C).

Torque:

25 N·m {255 kgf·cm, 18 ft·lbf}

(f) Tighten the 2 nuts.

Torque:

25 N·m {255 kgf·cm, 18 ft·lbf}

4. CONNECT AIR CONDITIONING WIRE

Click here INFO

5. CONNECT HV FLOOR UNDER WIRE

Click here INFO

6. CONNECT ENGINE WIRE

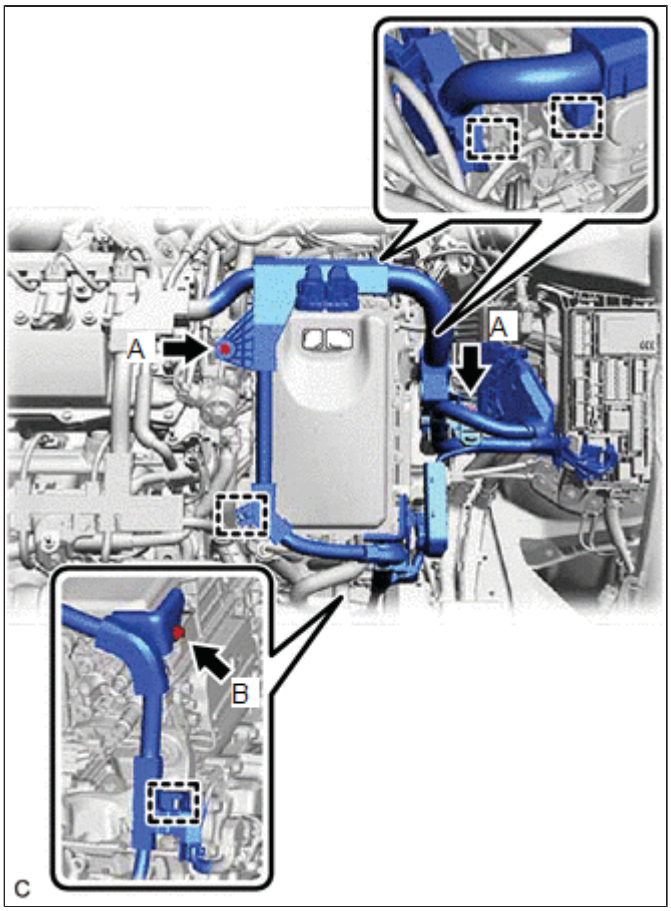
CAUTION:

Wear insulated gloves.

NOTICE:

Do not allow any foreign matter or water to enter the inverter with converter assembly.

(a) Engage the 4 clamps.



(b) Install the 2 bolts (A).

Torque:

8.0 N·m {82 kgf·cm, 71 in·lbf}

(c) Install the bolt (B).

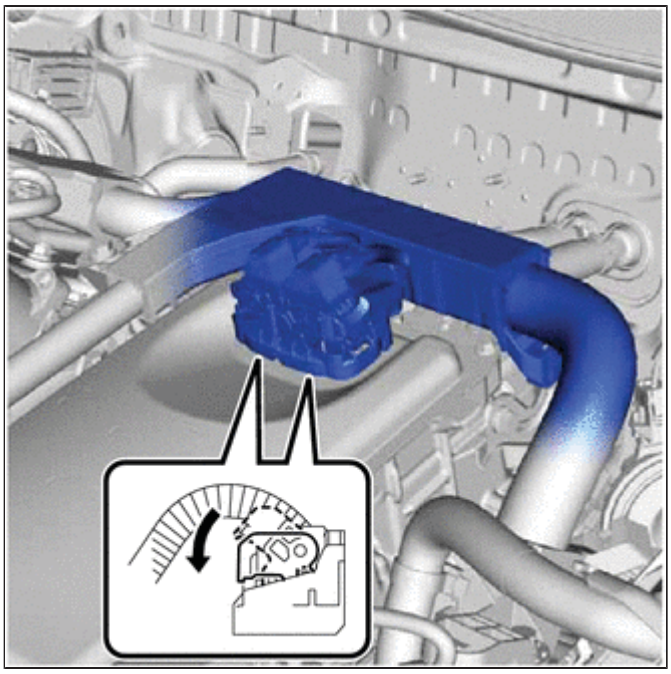
Torque:

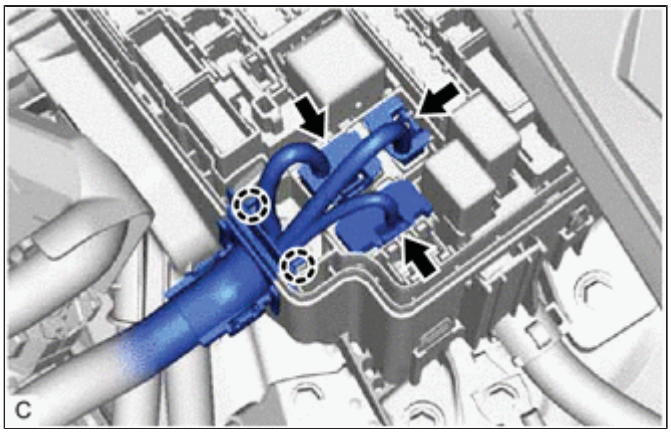
9.5 N·m {97 kgf·cm, 84 in·lbf}

(d) Move the 2 lock levers as shown in the illustration and connect the 2 inverter with converter assembly connectors.

NOTICE:

- Do not damage the terminals, connector housing or inverter with converter assembly during disconnection.
- Cover the hole where the cable was connected with tape (non-residue type) or equivalent to prevent entry of foreign matter.
- Do not allow any foreign matter or water to enter the inverter with converter assembly.
- Insulate the disconnected terminals with insulating tape.
- Do not touch the waterproof seal or terminals of the connector.

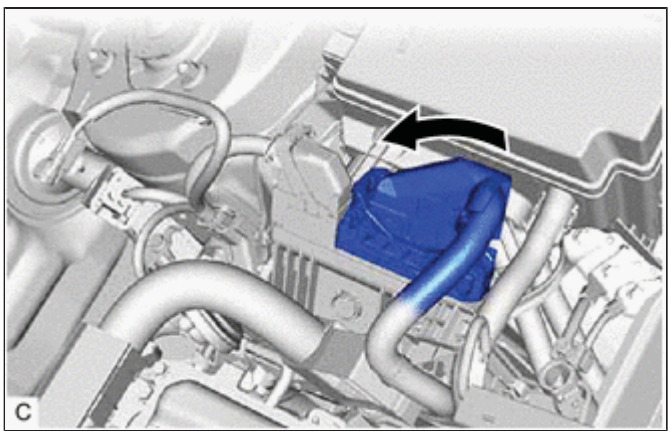




(e) Engage the 2 claws.

(f) Connect the 3 No. 1 engine room relay block and No. 1 junction block assembly connectors.

(g) Install the No.1 relay block cover.



(h) Connect the ECM connector and lower the lever.

NOTICE:

- When connecting the ECM connector, make sure that the connecting part of the ECM connector is free of dirt, water or other foreign matter.
- Be sure to securely connect the ECM connector.

7. INSTALL BATTERY CLAMP SUB-ASSEMBLY

Click here INFO

8. INSTALL AUXILIARY BATTERY

Click here INFO INFO

9. CONNECT ENGINE WIRE

Click here INFO

10. ADD ENGINE COOLANT (for Engine)

Click here INFO INFO

11. INSPECT FOR COOLANT LEAK (for Engine)

Click here INFO INFO

12. INSTALL REAR MOTOR UNDER COVER LH

Click here INFO

13. INSTALL OUTER COWL TOP PANEL SUB-ASSEMBLY

Click here INFO INFO

14. INSTALL COWL BODY MOUNTING REINFORCEMENT LH

Click here INFO INFO

15. INSTALL WATER GUARD PLATE LH

Click here INFO INFO

16. INSTALL NO. 1 HEATER AIR DUCT SPLASH SHIELD SEAL

Click here INFO INFO

17. INSTALL WINDSHIELD WIPER MOTOR AND LINK ASSEMBLY

Click here INFO

18. INSTALL NO. 1 ENGINE COVER SUB-ASSEMBLY

Click here INFO INFO INFO

19. INSTALL SERVICE PLUG GRIP

Click here INFO

Last Modified: 01-14-2019	6.8:8.0.48	**Doc ID:** RM100000000TAY7
Model Year Start: 2016	**Model:** Prius	**Prod Date Range:** [11/2015 -]
Title: 2ZR-FXE (EMISSION CONTROL): EGR VALVE: ON-VEHICLE INSPECTION; 2016 - 2019 MY Prius [11/2015 -]		

ON-VEHICLE INSPECTION

PROCEDURE

1. PERFORM ACTIVE TEST USING TECHSTREAM (CONTROL THE EGR STEP POSITION)

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Put the engine in inspection mode (maintenance mode).

Powertrain > Hybrid Control > Utility

TESTER DISPLAY
Inspection Mode

(e) Start the engine and warm it up until the engine coolant temperature reaches 75°C (167°F) or higher.

HINT:

The A/C switch and all accessory switches should be off.

(f) Enter the following menus: Powertrain / Engine / Active Test / Control the EGR Step Position / Data List / Intake Manifold Absolute Pressure, EGR Step Position and Engine Independent.

Powertrain > Engine > Active Test

ACTIVE TEST DISPLAY
Control the EGR Step Position

DATA LIST DISPLAY
Intake Manifold Absolute Pressure
EGR Step Position
Engine Independent

EGR Step Position

(g) According to the display on the Techstream, compare the values of Data List item Intake Manifold Absolute Pressure before and while performing the Active Test.

NOTICE:

- Make sure that the value of Data List item Engine Independent is "Operate" while performing the Active Test.

Do not leave the EGR valve open for 10 seconds or more during the Active Test.

- Be sure to return the EGR valve to step 0 when the Active Test is completed.
- Do not open the EGR valve 30 steps or more during the Active Test.

OK:

The value of Intake Manifold Absolute Pressure changes according to the EGR valve step set by the Active Test.

Standard:

DATA LIST	CONTROL THE EGR STEP POSITION (ACTIVE TEST)		
	BEFORE ACTIVE TEST (ENGINE IDLING)	0 STEPS	0 TO 30 STEPS (ENGINE IDLING)
Intake Manifold Absolute Pressure	20 to 40 kPa (2.9 to 5.8 psi)	(EGR valve is fully closed)	Intake Manifold Absolute Pressure value is at least +10 kPa (1.45 psi) higher than when EGR valve is fully closed

HINT:

- If the value of Data List item Engine Independent is "Not Opr" when the engine is idling, charge control is being performed. Perform the Active Test after charge control is complete ("Operate" is displayed).
- While performing the Active Test, if the increase in the value of Intake Manifold Absolute Pressure value is small, the EGR valve assembly may be a malfunctioning.
- Even if the EGR valve assembly is malfunctioning, rough idling or an increase in the value of Intake Manifold Absolute Pressure value may occur while performing the Active Test. However, the amount that the value of Intake Manifold Absolute Pressure value increases will be smaller than normal.

Last Modified: 01-14-2019	6.8:8.0.48	**Doc ID:** RM100000000TAY6
Model Year Start: 2016	**Model:** Prius	**Prod Date Range:** [11/2015 - 12/2018]
Title: 2ZR-FXE (EMISSION CONTROL): EGR VALVE: REMOVAL; 2016 - 2018 MY Prius [11/2015 - 12/2018]		

REMOVAL

CAUTION / NOTICE / HINT

The necessary procedures (adjustment, calibration, initialization or registration) that must be performed after parts are removed and installed, or replaced during EGR valve assembly removal/installation are shown below.

Necessary Procedures After Parts Removed / Installed / Replaced

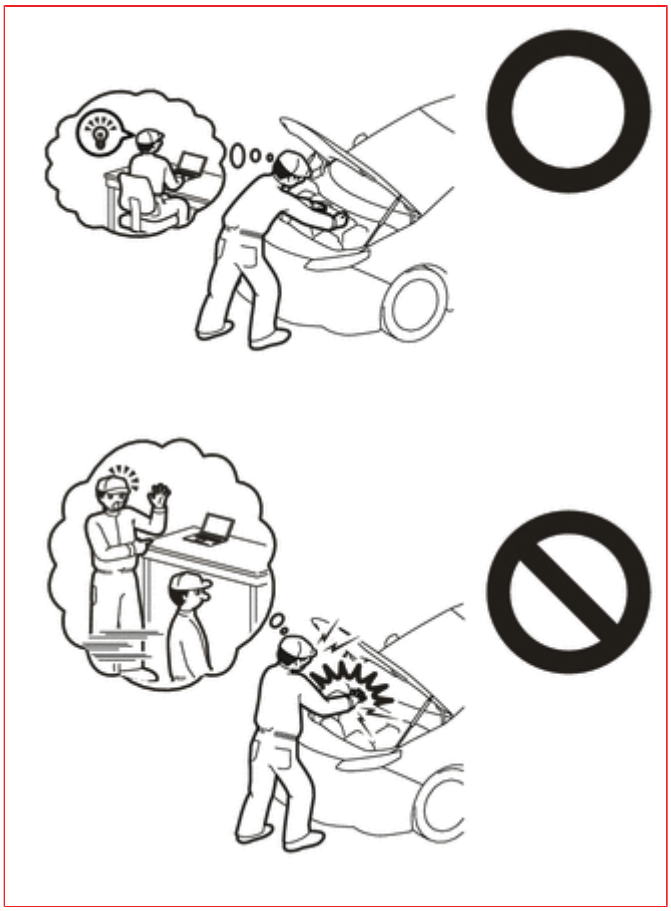
REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	LINK
Auxiliary battery terminal is disconnected/reconnected	Memorize steering angle neutral point	Lane departure alert system (w/ Steering Control System)	INFO
		Pre-collision system	
		Intelligent clearance sonar system*1	
		Simple advanced parking guidance system*1	
	Initialize back door lock	Power door lock control system	INFO
Replacement of inverter with converter assembly	Resolver learning	• DTCs are stored • Slight vibration at a vehicle speed of 5 km/h (3 mph) or less • Shock or vibration during acceleration	INFO for Nickel Metal Hydride Battery INFO for Lithium-ion Battery
Replacement of EGR valve assembly	Inspection After Repair	• Poor idle, etc. • Engine start function, etc.	INFO

*1: When performing learning using the Techstream.

Click here INFO

CAUTION:

- Orange wire harnesses and connectors indicate high-voltage circuits. To prevent electric shock, always follow the



procedure described in the repair manual.

for NICKEL METAL HYDRIDE BATTERY: Click here INFO

for LITHIUM-ION BATTERY: Click here INFO

- To prevent electric shock, wear insulated gloves when working on wire harnesses and components of the high voltage system.

PROCEDURE

1. PRECAUTION

NOTICE:

After turning the power 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 work.

Click here INFO INFO

2. REMOVE SERVICE PLUG GRIP

Click here INFO

3. REMOVE REAR MOTOR UNDER COVER LH

Click here INFO

4. DRAIN ENGINE COOLANT (for Engine)

Click here INFO INFO

5. DISCONNECT ENGINE WIRE

Click here INFO

6. REMOVE AUXILIARY BATTERY

Click here INFO

7. REMOVE WINDSHIELD WIPER MOTOR AND LINK ASSEMBLY

Click here INFO

8. REMOVE NO. 1 HEATER AIR DUCT SPLASH SHIELD SEAL

Click here INFO

9. REMOVE WATER GUARD PLATE LH

Click here INFO

10. REMOVE COWL BODY MOUNTING REINFORCEMENT LH

Click here INFO

11. REMOVE OUTER COWL TOP PANEL SUB-ASSEMBLY

Click here INFO

12. REMOVE NO. 1 ENGINE COVER SUB-ASSEMBLY

Click here INFO INFO

13. REMOVE BATTERY CLAMP SUB-ASSEMBLY

Click here INFO

14. DISCONNECT ENGINE WIRE

CAUTION:

Wear insulated gloves.

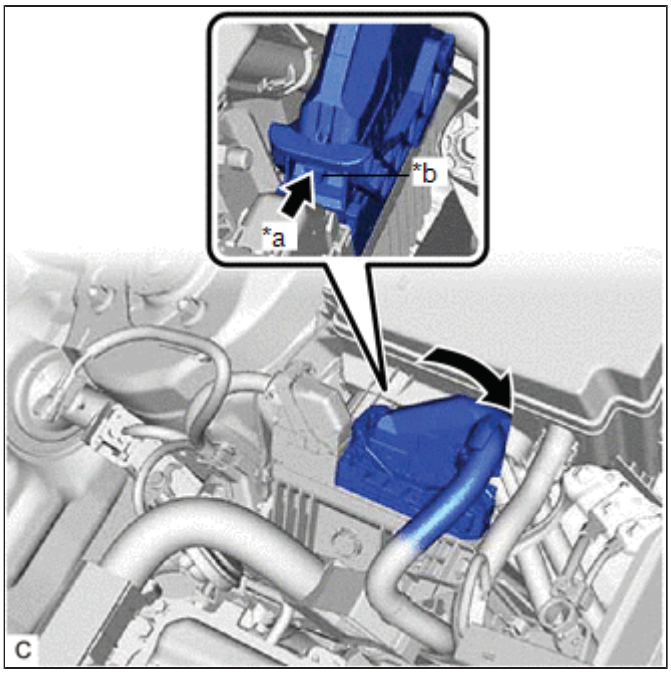
NOTICE:

Do not allow any foreign matter or water to enter the inverter with converter assembly.

(a) Raise the lever while pushing the lock on the lever, and disconnect the ECM connector.

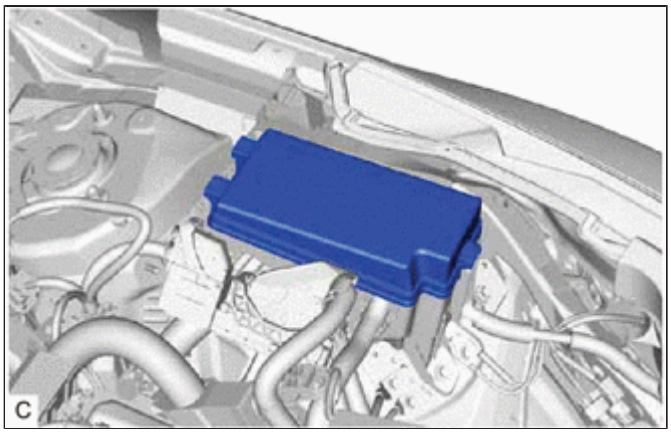
NOTICE:

After disconnecting the ECM connector, make sure that dirt, water or other foreign matter does not contact the connecting parts of the ECM connector.

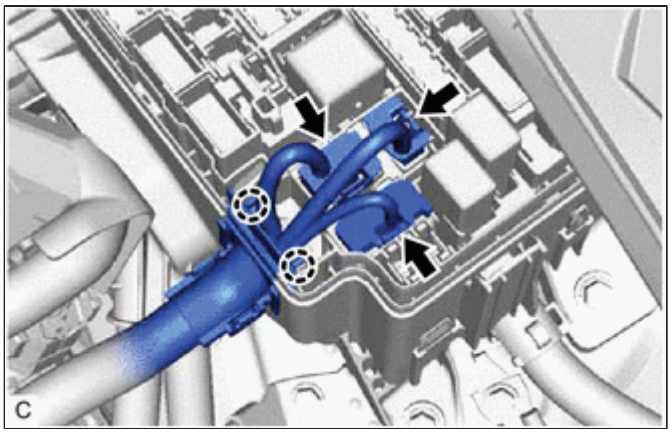


*a	Push
*b	Lock

(b) Remove the No. 1 relay block cover.

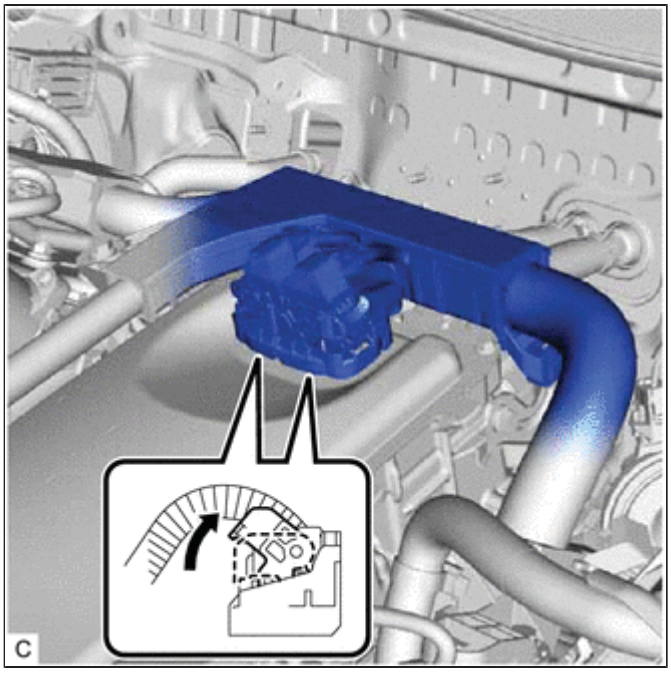


(c) Disconnect the 3 No. 1 engine room relay block and No. 1 junction block assembly connectors.



(d) Disengage the 2 claws.

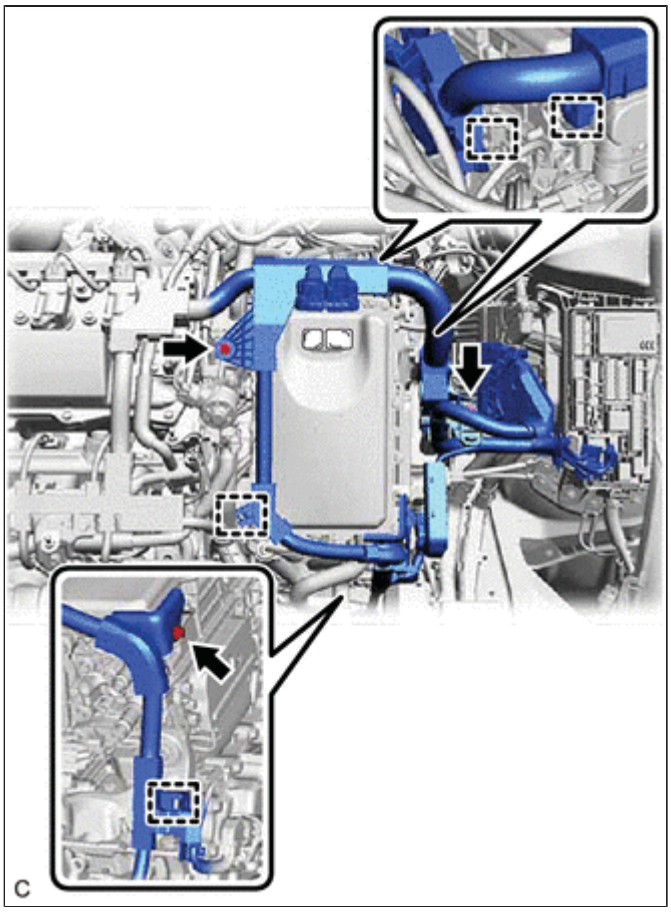
(e) Move the 2 lock levers as shown in the illustration and disconnect the 2 inverter with converter assembly connectors.



NOTICE:

- Do not damage the terminals, connector housing or inverter with converter assembly during disconnection.
- Cover the hole where the cable was connected with tape (non-residue type) or equivalent to prevent entry of foreign matter.
- Do not allow any foreign matter or water to enter the inverter with converter assembly.
- Insulate the disconnected terminals with insulating tape.
- Do not touch the waterproof seal or terminals of the connector.

(f) Remove the 3 bolts.



(g) Disengage the 4 clamps and disconnect the engine wire.

15. REMOVE CONNECTOR COVER ASSEMBLY

Click here INFO

16. CHECK TERMINAL VOLTAGE

Click here INFO

17. TEMPORARILY INSTALL CONNECTOR COVER ASSEMBLY

Click here INFO

18. DISCONNECT HV FLOOR UNDER WIRE

Click here INFO

19. DISCONNECT AIR CONDITIONING WIRE

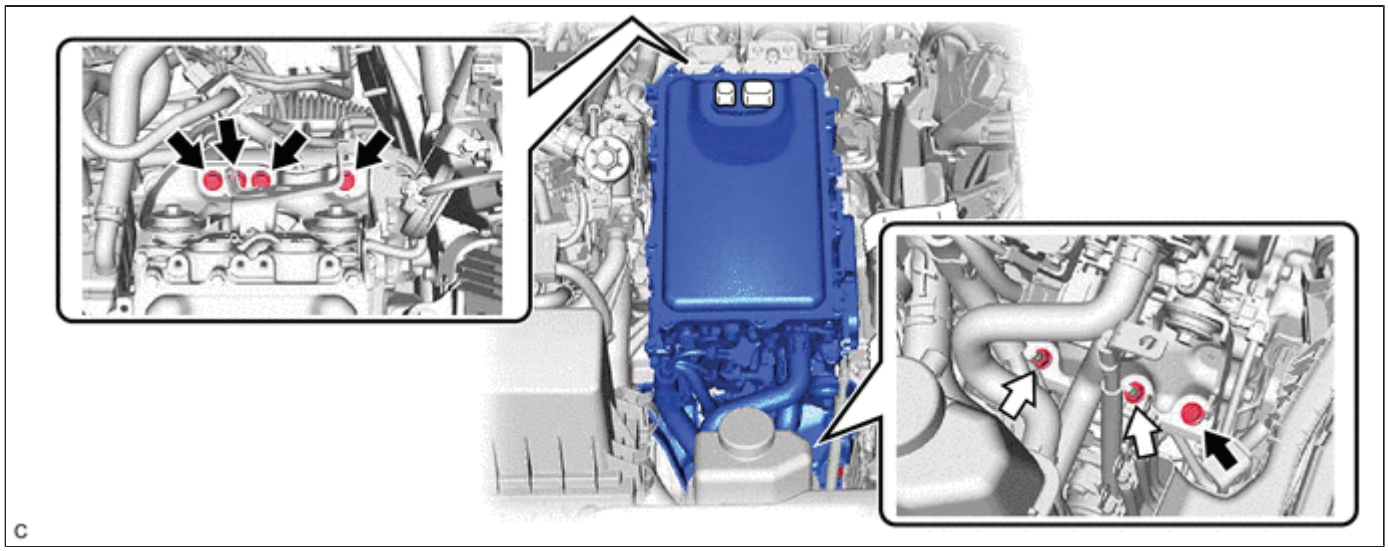
Click here INFO

20. SEPARATE INVERTER WITH CONVERTER ASSEMBLY

CAUTION:

Wear insulated gloves.

(a) Remove the 5 bolts and 2 nuts and separate the inverter with converter assembly.



➡	Bolt	⇨	Nut

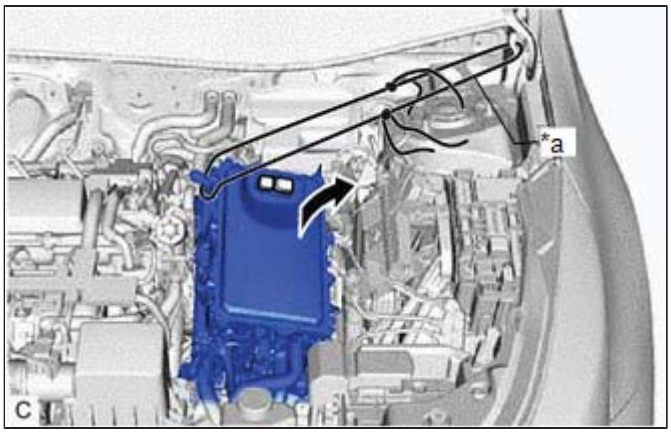
NOTICE:

- To prevent damage due to static electricity, do not touch the terminals of the inverter with converter assembly connector.
- Make sure to seal the inverter with converter assembly with the connector cover assembly or tape (non-residue type) etc., to prevent entry of foreign matter and water.

(b) Using a rope or equivalent, secure the inverter with converter assembly with the hood hinge.

NOTICE:

- Be careful not to damage the surrounding components when securing the inverter with converter assembly.
- To prevent damage to the inverter with converter assembly, do not hold the coolant pipe, bracket or connector when securing the inverter with converter assembly.
- To prevent damage due to static electricity, do not touch the terminals of the inverter with converter assembly connector.
- Make sure to seal the inverter with converter assembly with the connector cover assembly or tape (non-residue type) etc., to prevent entry of foreign matter and water.



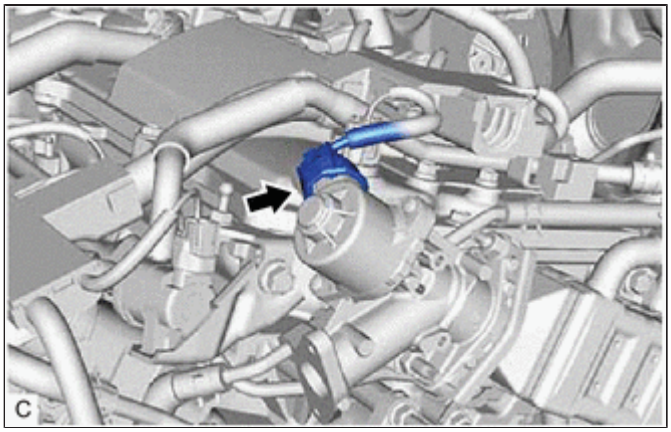
*a	Rope

21. REMOVE EGR PIPE ASSEMBLY

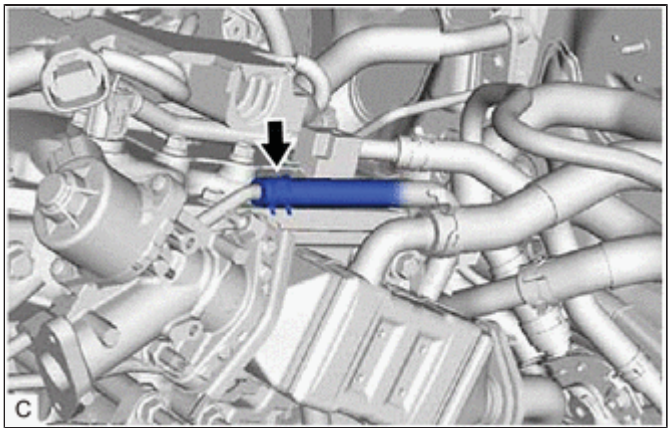
Click here INFO

22. REMOVE EGR VALVE ASSEMBLY

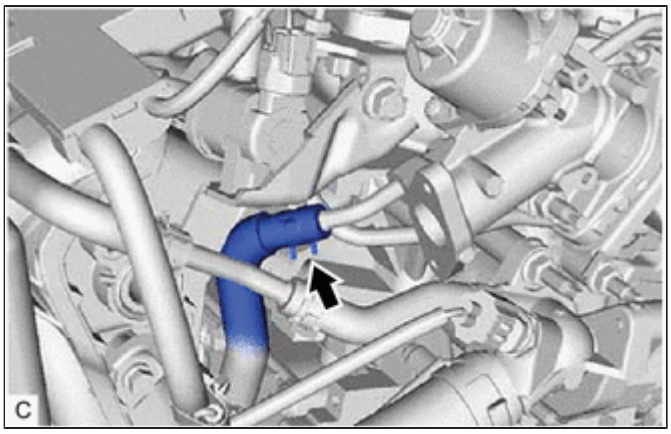
(a) Disconnect the EGR valve assembly connector.



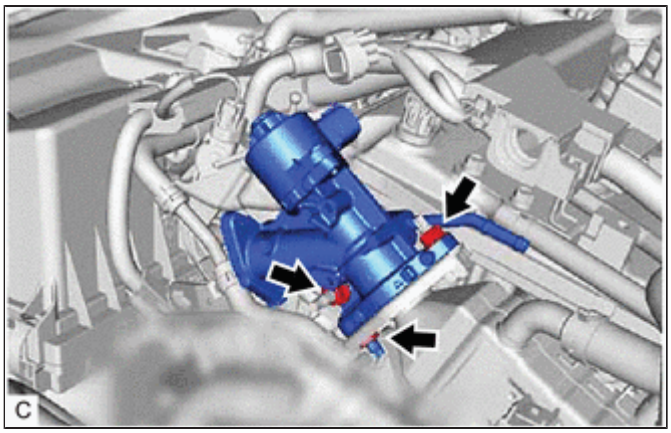
(b) Slide the clip and disconnect the No. 6 water by-pass hose from the EGR valve assembly.



(c) Slide the clip and disconnect the water by-pass hose assembly from the EGR valve assembly.



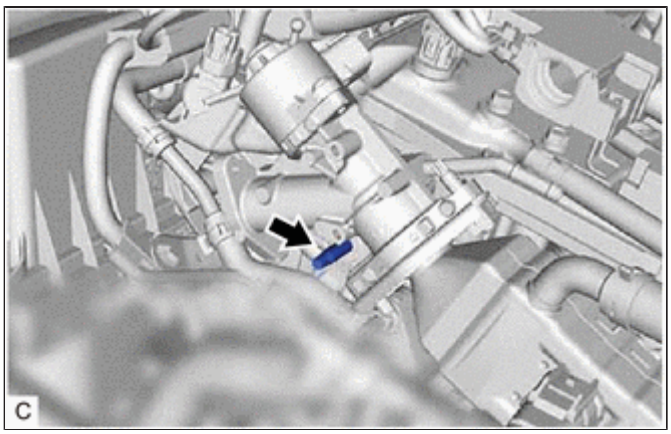
(d) Remove the 3 nuts.



(e) Using an E8 "TORX" socket wrench, remove the stud bolt from the camshaft housing sub-assembly.

HINT:

If a stud bolt is deformed or the threads are damaged, replace it.



(f) Remove the EGR valve assembly from the EGR pipe with cooler sub-assembly.

(g) Remove the EGR valve gasket from the EGR valve assembly.