

Last Modified: 12-04-2024	6.11:8.1.0	Doc ID: RM10000002BNRI
Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [03/2023 -]
Title: PA10/PB10/PB12 (HYBRID TRANSMISSION / TRANSAXLE): PB10/PB12 HYBRID VEHICLE TRANSAXLE: INSTALLATION; 2023 - 2024 MY Prius Prius Prime [03/2023 -]		

INSTALLATION

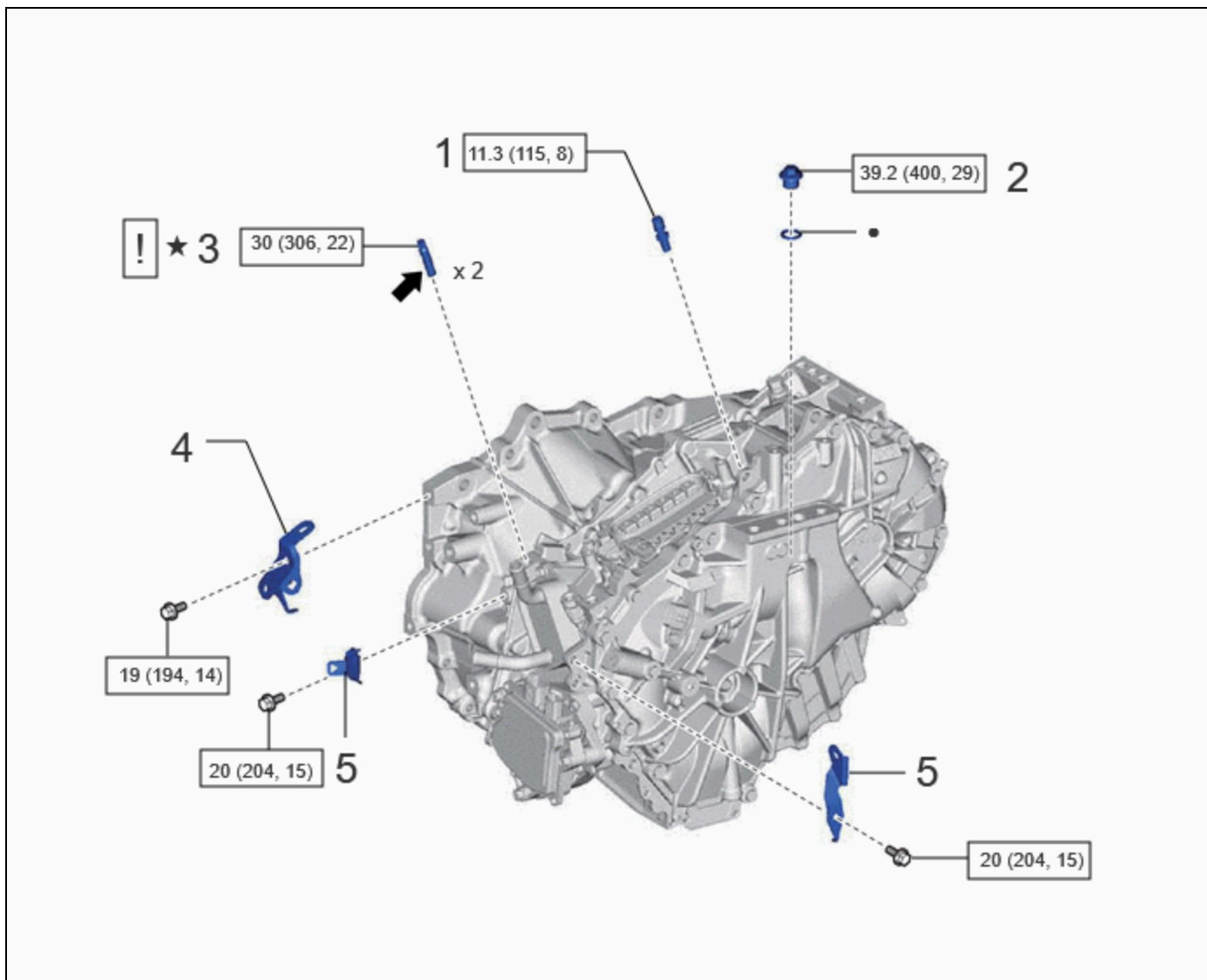
CAUTION / NOTICE / HINT




CAUTION:



The engine assembly with hybrid vehicle transaxle assembly is very heavy. Be sure to follow the procedure described in the repair manual, or the engine lifter may suddenly drop.

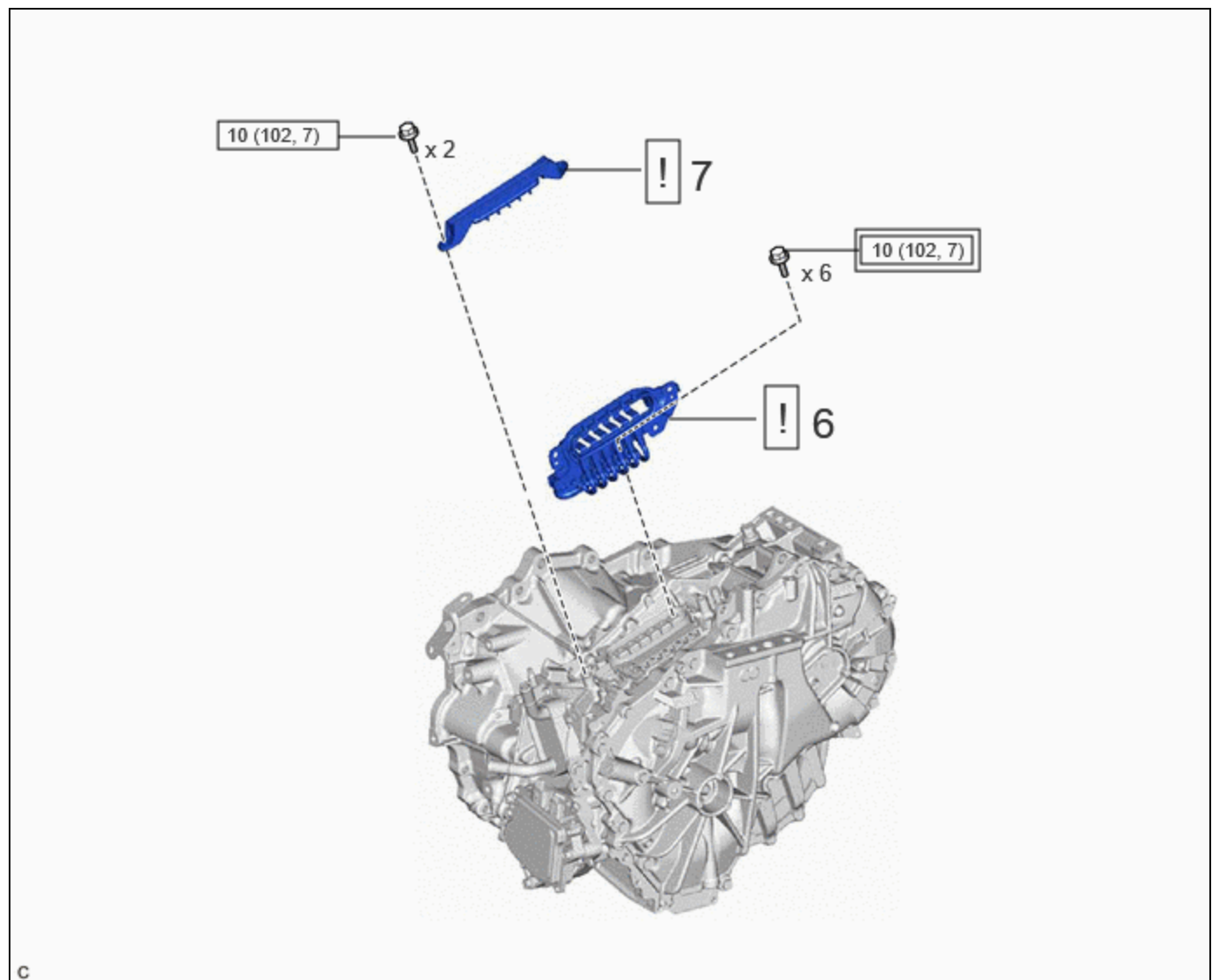
CAUTION / NOTICE / HINT




COMPONENTS (INSTALLATION)





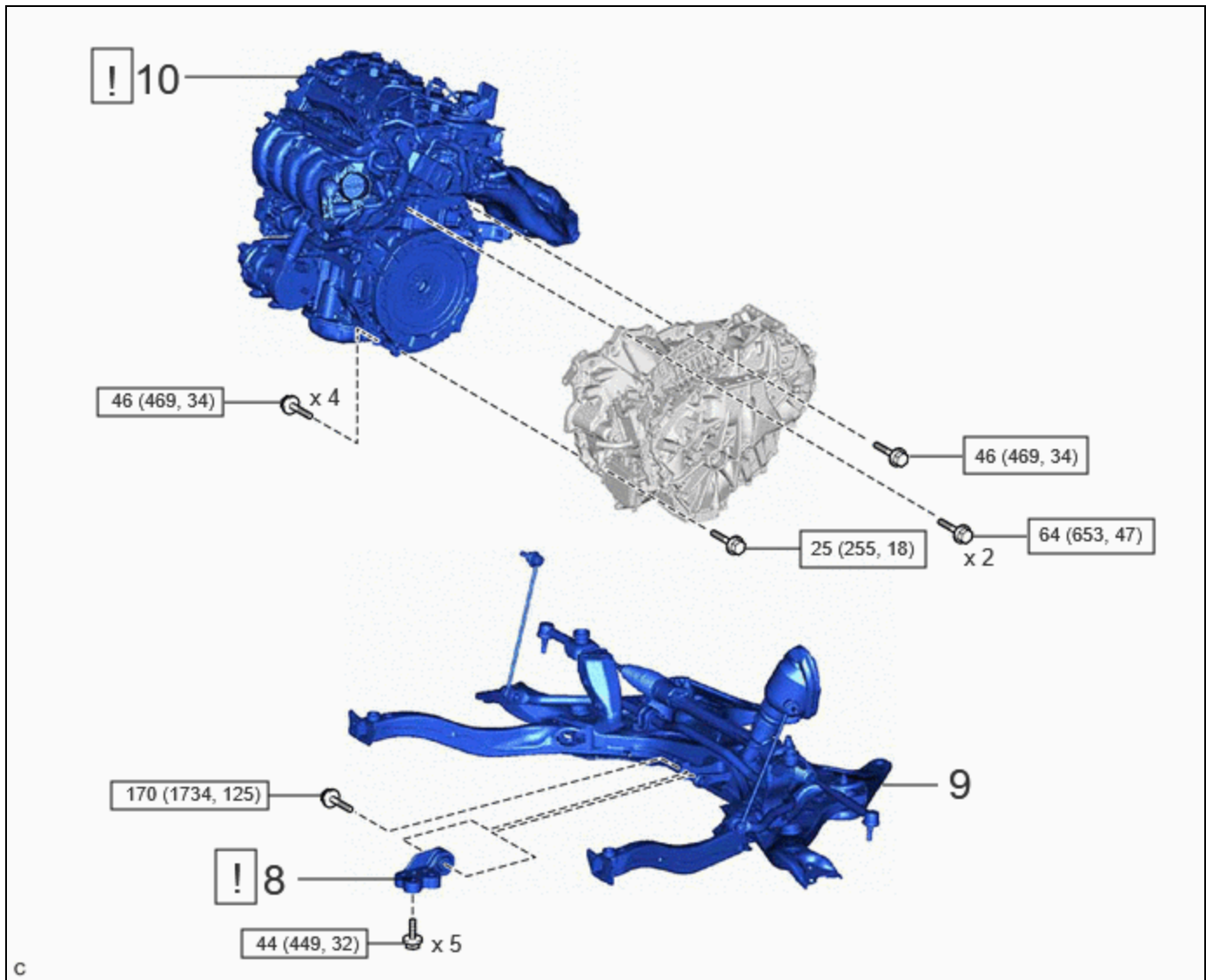
PROCEDURE		PART NAME CODE			
1	TRANSAXLE BREATHER PLUG	30900N	-	-	-
2	TRANSAXLE HOUSING PLUG	-	-	-	-
3	STUD BOLT	-	INFO	-	-
4	NO. 1 WATER HOSE CLAMP BRACKET	16575C	-	-	-
5	WIRE HARNESS CLAMP BRACKET	-	-	-	-




	N*m (kgf*cm, ft.*lbf): Specified torque	• Non-reusable part
	Toyota Genuine Adhesive 1324, Three Bond 1324 or equivalent	★ Precoated part








PROCEDURE		PART NAME CODE			
6	MOTOR CABLE	G1148	INFO	-	-
7	TERMINAL CAP	82823M	INFO	-	-

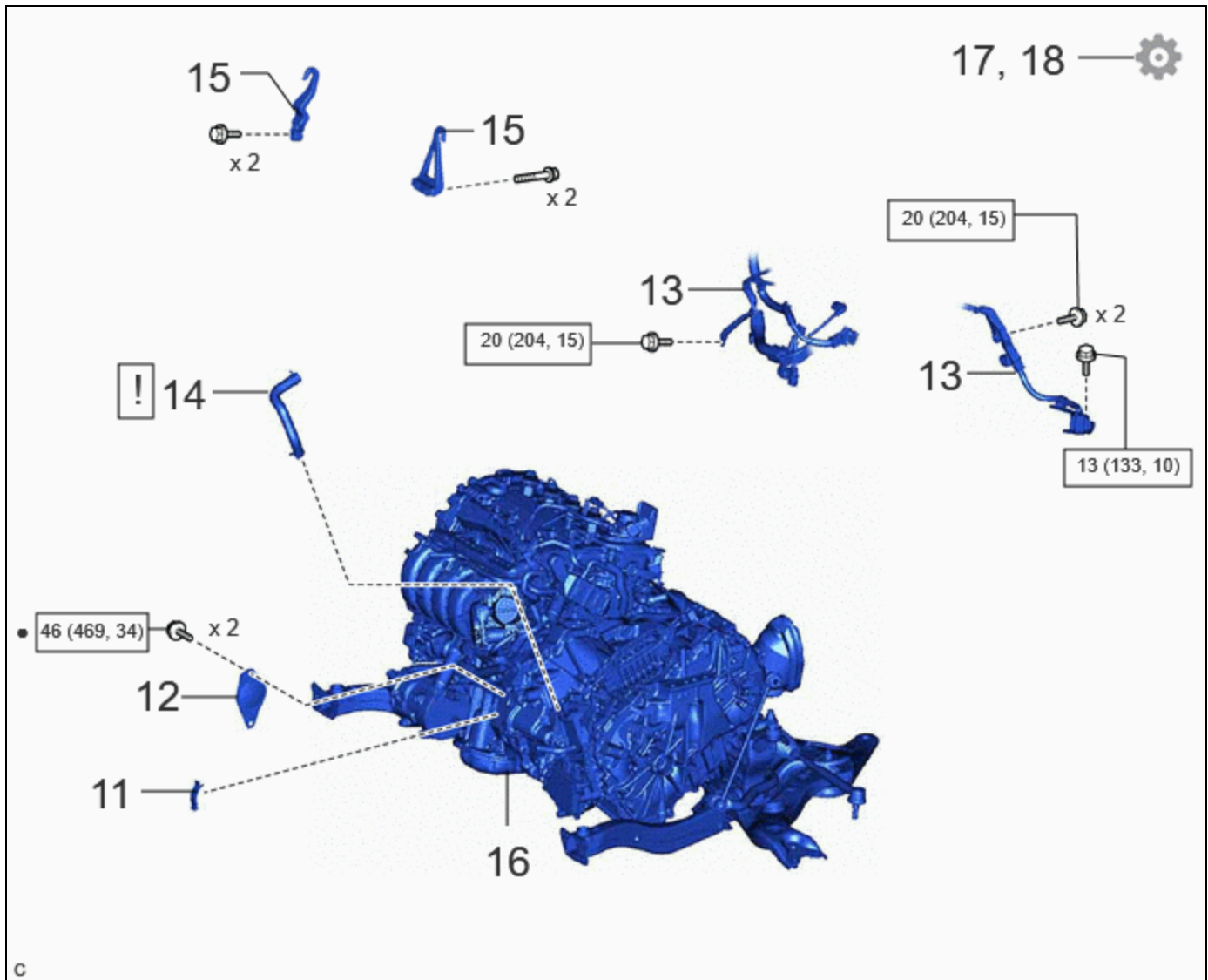
	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping": N*m (kgf*cm, ft.*lbf)		N*m (kgf*cm, ft.*lbf): Specified torque
---	--	---	---









PROCEDURE		PART NAME CODE			
8	NO. 2 ENGINE MOVING CONTROL ROD	12364B	INFO	-	-
9	FRONT SUSPENSION CROSSMEMBER SUB-ASSEMBLY	51201	-	-	-


PROCEDURE		PART NAME CODE			
10	ENGINE ASSEMBLY	-		-	-

	N*m (kgf*cm, ft.*lbf): Specified torque	-	-
---	---	---	---



PROCEDURE		PART NAME CODE			
11	FLYWHEEL HOUSING SIDE COVER	11363A	-	-	-
12	STARTER HOLE INSULATOR	28193	-	-	-
13	ENGINE WIRE	82121	-	-	-

PROCEDURE		PART NAME CODE			
14	OUTLET NO. 1 INVERTER COOLING HOSE	G922C	INFO	-	-
15	ENGINE HANGERS	-	-	-	-
16	ENGINE ASSEMBLY WITH TRANSAXLE	-	-	-	-
17	PERFORM RESOLVER LEARNING	-	-	-	INFO

	N*m (kgf*cm, ft.*lbf): Specified torque	<ul style="list-style-type: none"> Non-reusable part
---	---	---

PROCEDURE

1. INSTALL TRANSAXLE BREATHER PLUG

HINT:

Perform this procedure only when replacement of the transaxle breather plug is necessary.

Torque:

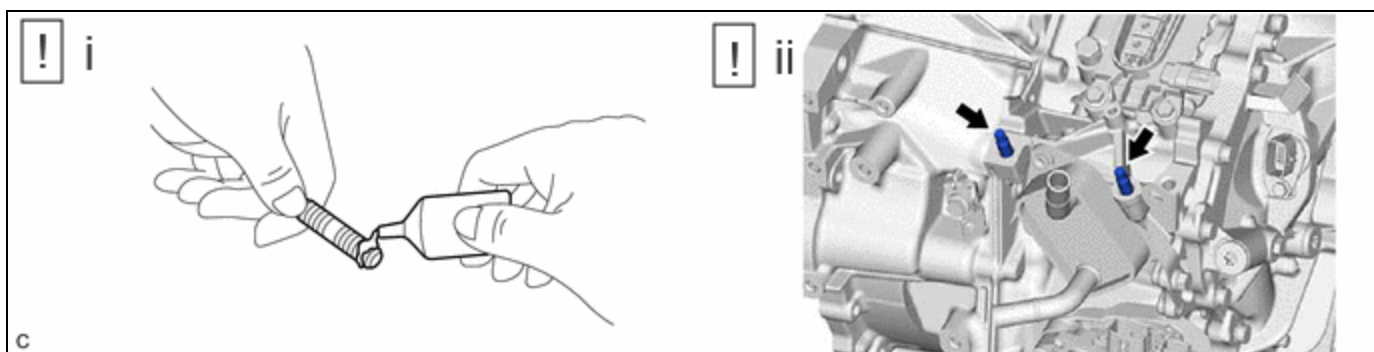
11.3 N·m {115 kgf·cm, 8 ft·lbf}

2. INSTALL TRANSAXLE HOUSING PLUG

Torque:

39.2 N·m {400 kgf·cm, 29 ft·lbf}

3. INSTALL STUD BOLT



(1) Apply adhesive to the 2 stud bolts.

Adhesive:

Toyota Genuine Adhesive 1324, Three Bond 1324 or equivalent

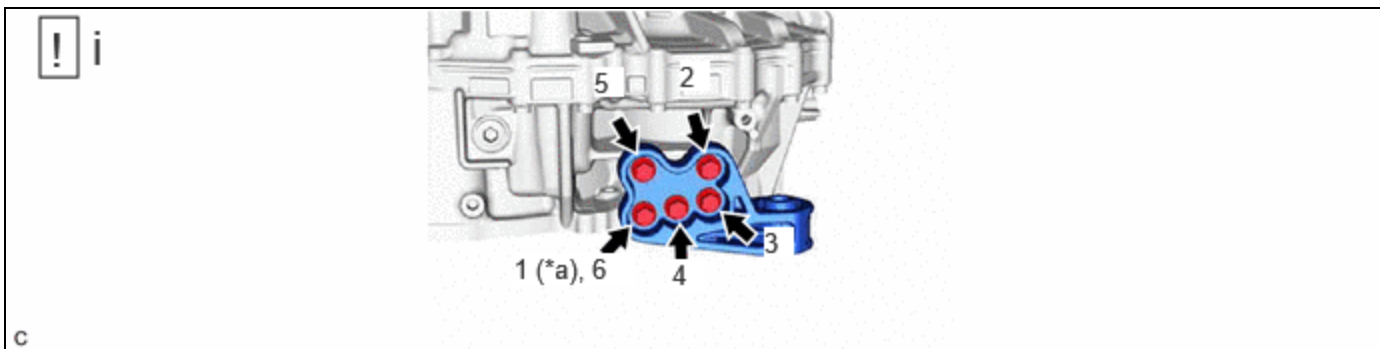
NOTICE:

Make sure to install the 2 stud bolts immediately after applying adhesive to prevent foreign matter from attaching to them.

(2) Using an E10 "TORX" socket wrench, install the 2 stud bolts to the hybrid vehicle transaxle assembly.

Torque:

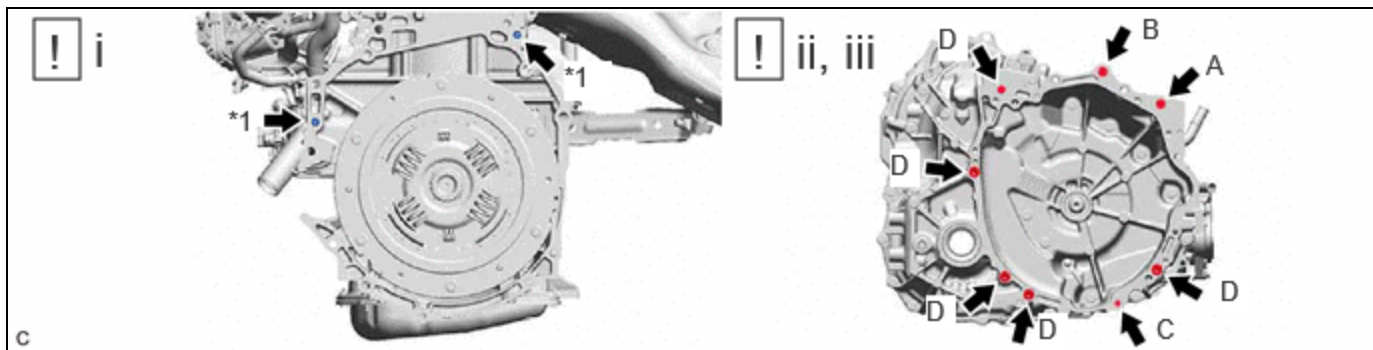
30 N·m {306 kgf·cm, 22 ft·lbf}

4. INSTALL NO. 1 WATER HOSE CLAMP BRACKET**Torque:****19 N·m {194 kgf·cm, 14 ft·lbf}****5. INSTALL WIRE HARNESS CLAMP BRACKET****Torque:****20 N·m {204 kgf·cm, 15 ft·lbf}****6. INSTALL MOTOR CABLE**Click here [INFO](#)**7. INSTALL TERMINAL CAP**Click here [INFO](#)**8. INSTALL NO. 2 ENGINE MOVING CONTROL ROD**

*a	Temporarily Tighten	-	-
----	---------------------	---	---

(1) Install the No. 2 engine moving control rod to the hybrid vehicle transaxle assembly with the 5 bolts in the order shown in the illustration.

Torque:**44 N·m {449 kgf·cm, 32 ft·lbf}****9. INSTALL FRONT SUSPENSION CROSSMEMBER SUB-ASSEMBLY****Torque:****170 N·m {1734 kgf·cm, 125 ft·lbf}****10. INSTALL ENGINE ASSEMBLY**



*1	Knock Pin	-	-
----	-----------	---	---

- (1) Make sure that the knock pins are installed to the engine assembly.
- (2) Align the knock pins with the holes in the hybrid transaxle assembly and, while keeping the contact surfaces of the engine assembly and hybrid vehicle transaxle assembly in close contact with one another, temporarily install the bolt (A).

NOTICE:

- When tightening the bolts, be sure that the contact surfaces of the engine assembly and hybrid vehicle transaxle assembly are in close contact with one another.
- Do not apply grease to the inner splines of the transmission input damper assembly or input shaft assembly.
- Make sure that the wire harness or similar items are not pinched between the contact surfaces.
- Do not use excessive force when installing the engine assembly.
- Make sure to align the hybrid vehicle transaxle assembly so that the input shaft assembly of the hybrid vehicle transaxle assembly will be inserted straight into the inner splines of the transmission input damper assembly.
- When inserting the input shaft assembly of the hybrid vehicle transaxle assembly into the inner splines of the transmission input damper assembly, do not shake the engine assembly excessively.
- When installing the engine assembly to the hybrid vehicle transaxle assembly, make sure to securely fit the knock pins into the knock pin holes.

- (3) While keeping the contact surfaces of the engine assembly and hybrid vehicle transaxle assembly in close contact with one another, install the 8 bolts.

BOLT	BOLT LENGTH	TORQUE
(A), (B)	50 mm (1.97 in.)	64 N*m (653 kgf*cm, 47 ft.*lbf)
(C)	35 mm (1.38 in.)	25 N*m (255 kgf*cm, 18 ft.*lbf)
(D)	45 mm (1.77 in.)	46 N*m (469 kgf*cm, 34 ft.*lbf)

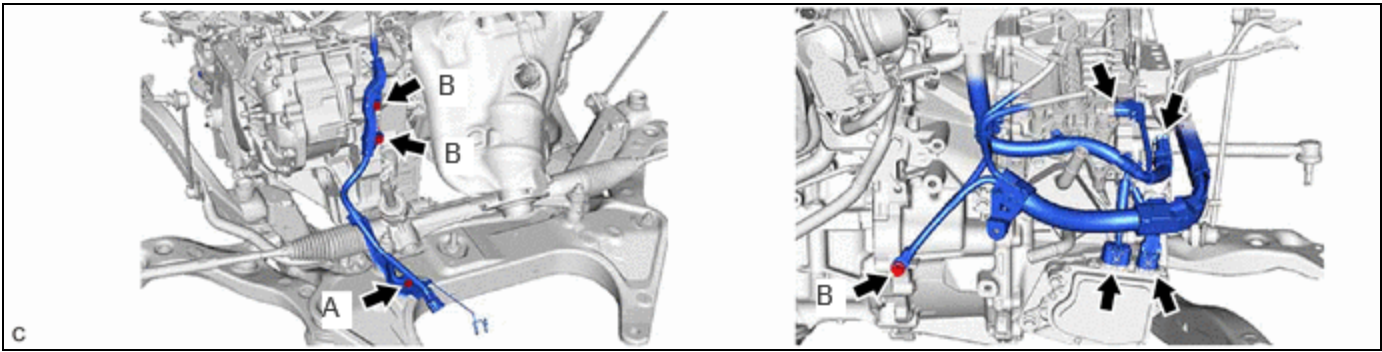
11. INSTALL FLYWHEEL HOUSING SIDE COVER

12. INSTALL STARTER HOLE INSULATOR

Torque:

46 N·m {469 kgf·cm, 34 ft·lbf}

13. CONNECT ENGINE WIRE



Torque:

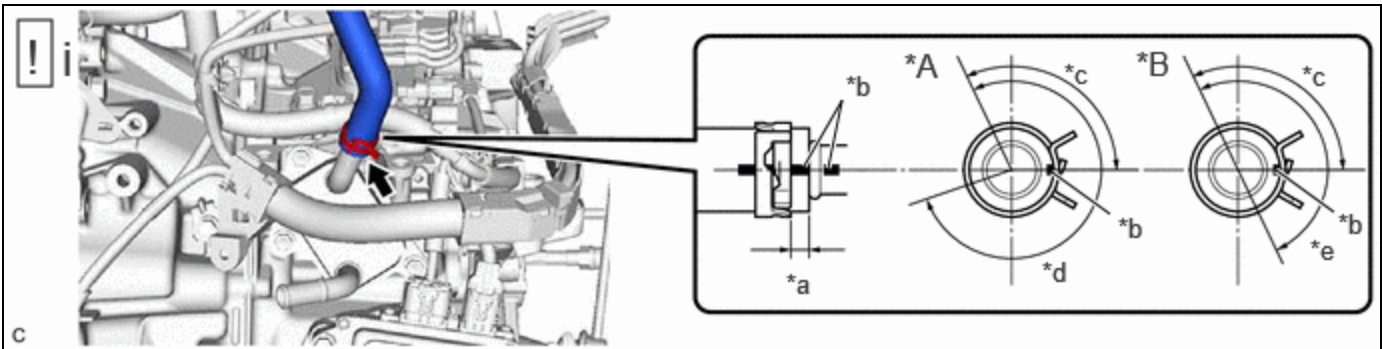
Bolt (A) :

13 N·m {133 kgf·cm, 10 ft·lbf}

Bolt (B) :

20 N·m {204 kgf·cm, 15 ft·lbf}

14. INSTALL OUTLET NO. 1 INVERTER COOLING HOSE



*A	for PB10	*B	for PB12
*a	2 to 11 mm (0.0787 to 0.433 in.)	*b	Paint Mark
*c	115° (Claw of Clip Location)	*d	275° (Claw of Clip Location)
*e	180° (Claw of Clip Location)	-	-

(1) Install the outlet No. 1 inverter cooling hose to the motor cooling cooler and slide the clip to secure it.

NOTICE:

- Make sure to slide the outlet No. 1 inverter cooling hose until it contacts the hose stopper of the motor cooling cooler.
- Make sure to align the paint mark of the outlet No. 1 inverter cooling hose with the paint mark of the motor cooling cooler.
- Make sure that the claws of the clip are within the location shown in the illustration.

15. REMOVE ENGINE HANGERS

16. INSTALL ENGINE ASSEMBLY WITH TRANSAXLE

- for HEV Model: Click here [INFO](#)
- for PHEV Model: Click here [INFO](#)

17. PERFORM RESOLVER LEARNING

!

NOTICE:

If the hybrid vehicle transaxle assembly has been replaced, make sure to perform resolver learning.

- for M20A-FXS HEV model: [Click here](#) [INFO](#)
- for M20A-FXS PHEV Model: [Click here](#) [INFO](#)

