1. General Description

A: SPECIFICATION

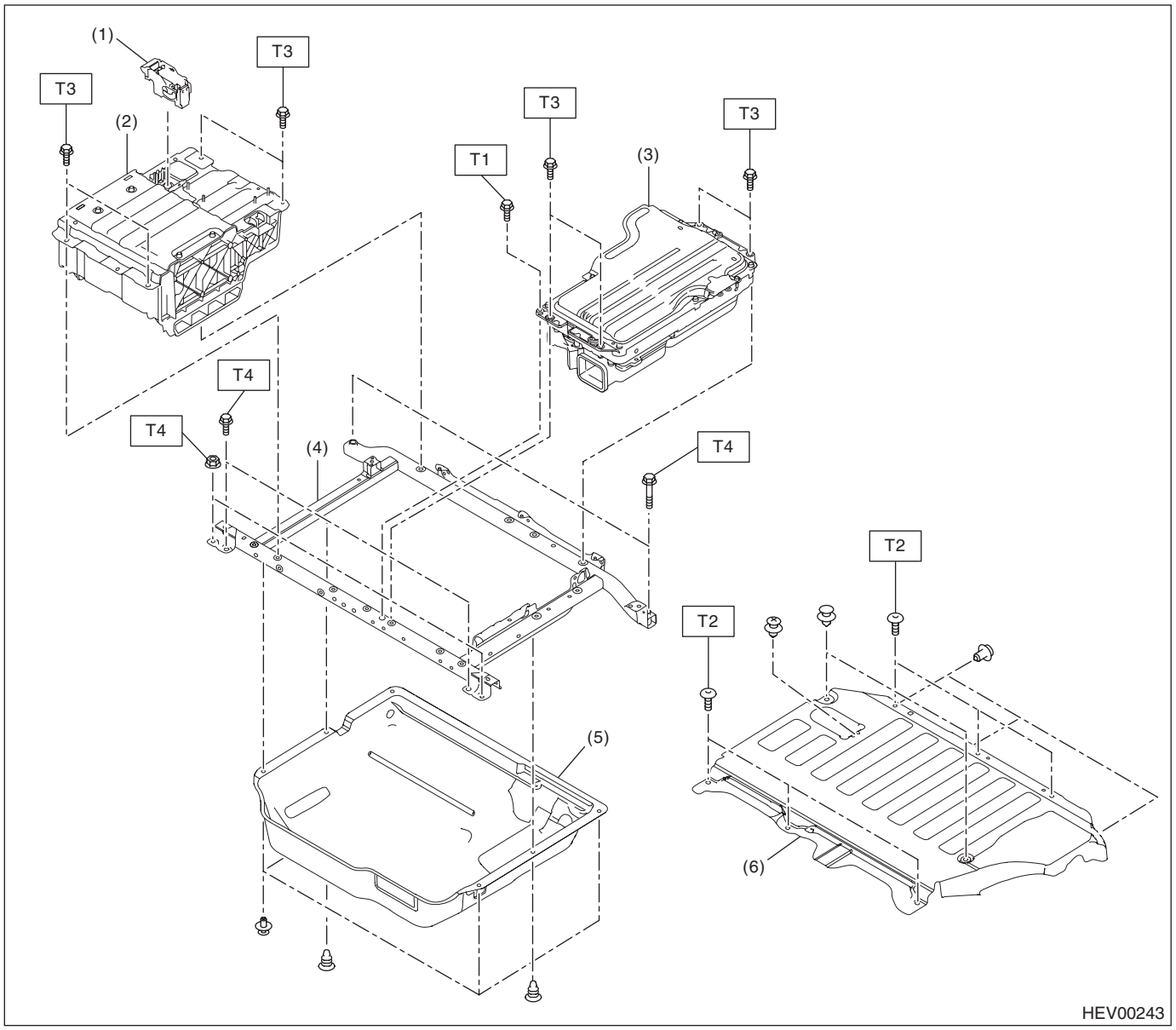
High voltage battery	Type	Ni - MH (nickel metal hydride) battery
	Total voltage	100.8 V
	Rated capacity	5.5 Ah
	Maximum output	13.5 kW
Drive motor inverter	Type	Pulse width modulation
	Maximum output	15 kW
DC/DC converter	Type	Pulse width modulation
	Rated output	12 V - 130 A
Cooling fan assembly	Type	Plastic flange integrated brushless motor
	Rated voltage	12 V
	Maximum output	72 W
	Fan diameter (diameter × width)	130 × 43.7 mm (5.12 × 1.72 in)

B: LOCATION

For installation location of the hybrid system electrical components, refer to “Electrical Component Location” in the “HYBRID ELECTRIC VEHICLE (DIAGNOSTICS)” section. <Ref. to HEV(diag)-9, Electrical Component Location.>

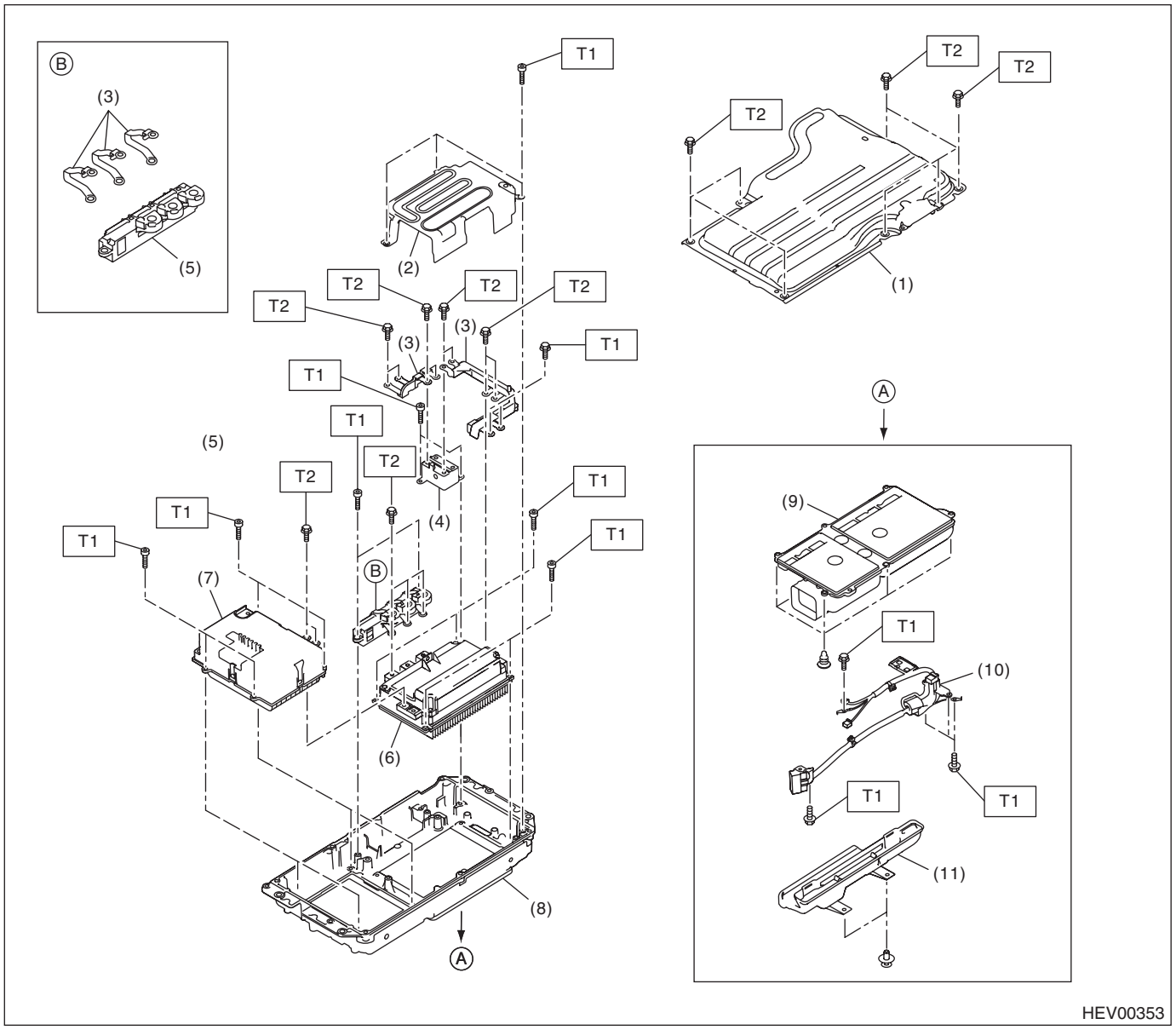
C: COMPONENT

1. HIGH VOLTAGE BATTERY



(1)	Service disconnect plug	(4)	High voltage battery frame ASSY	***Tightening torque: N·m (kgf-m, ft-lb)***
(2)	High voltage battery (including battery energy control module (BECM))	(5)	Cover - battery LWR	***T1: 6.5 (0.7, 4.8)***
(3)	Inverter ASSY	(6)	Battery cover	***T2: 7.5 (0.8, 5.5)***
				T3: 22 (2.2, 16.2)
				T4: 24.5 (2.5, 18.1)

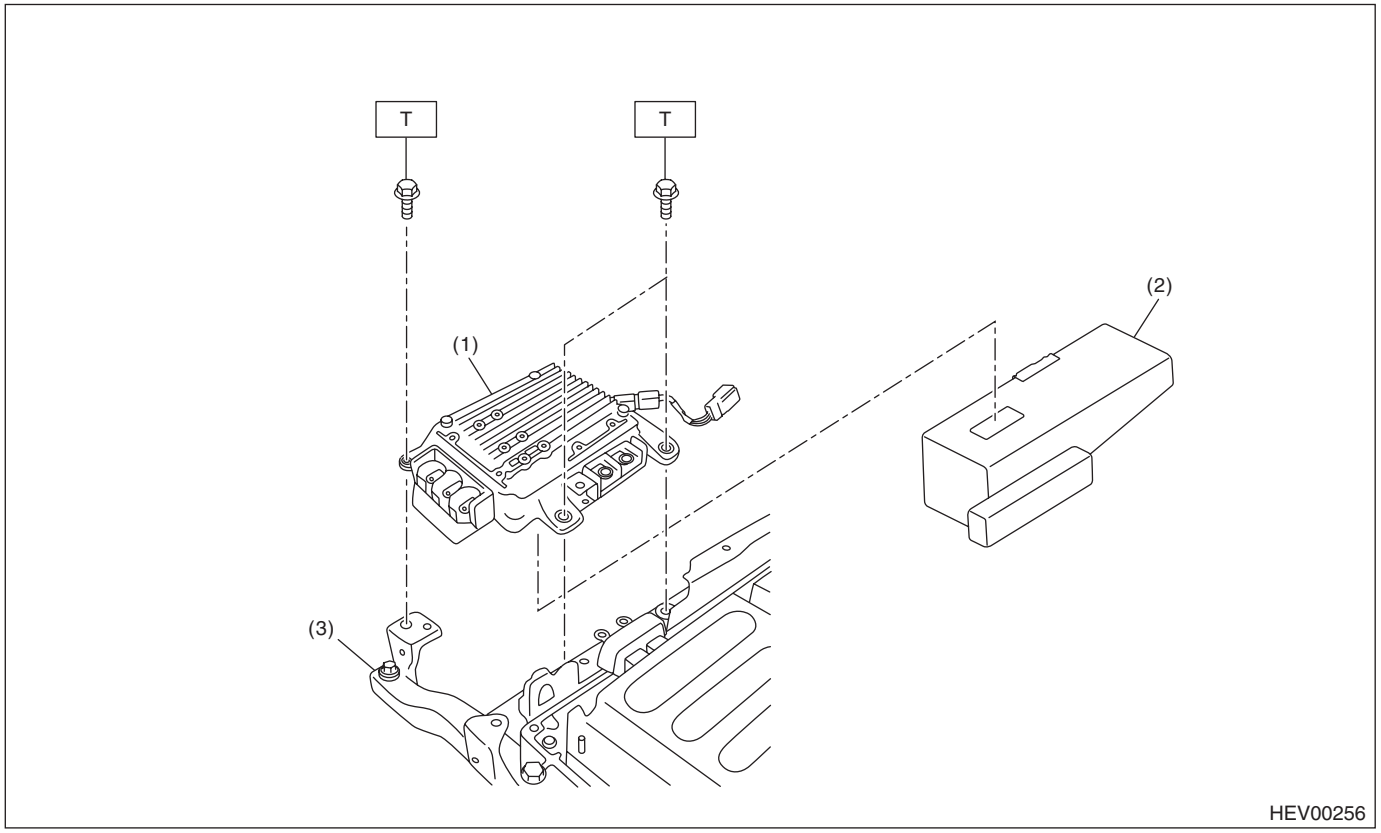
2. INVERTER ASSEMBLY



(1) Inverter cover
(2) Inverter shield
(3) Bus bar
(4) Electric noise filter
(5) Drive motor inverter amperage sensor
(6) Drive motor inverter
(7) DC/DC converter
(8) Inverter frame ASSY
(9) Duct inverter OUT
(10) Inverter harness
(11) Duct inverter IN

Tightening torque: N·m (kgf-m, ft-lb)
T1: 6.5 (0.7, 4.8)
T2: 7.5 (0.8, 5.5)

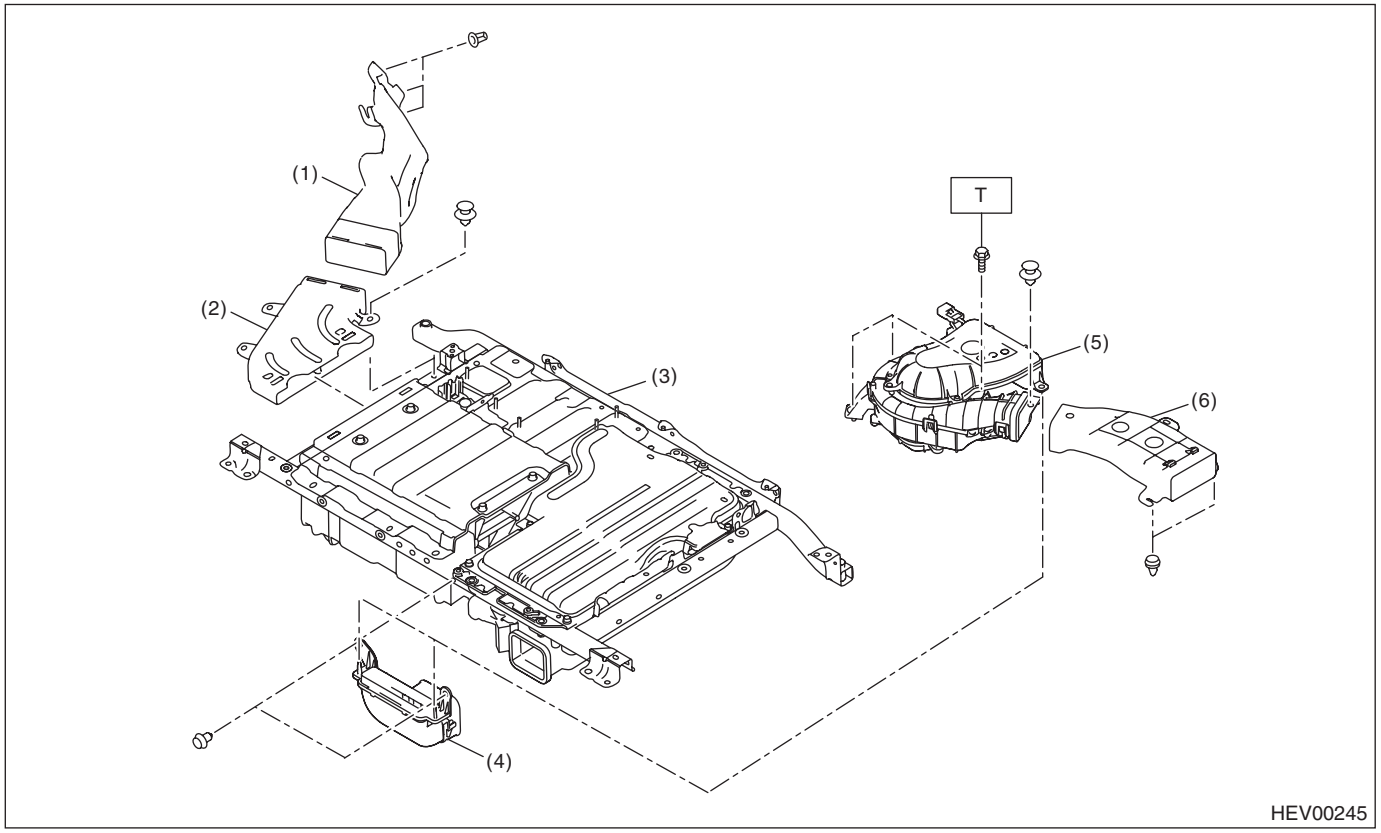
3. ELECTRIC OIL PUMP INVERTER



(1) Electric oil pump inverter
(2) Inverter spacer
(3) High voltage battery frame ASSY

Tightening torque: N·m (kgf-m, ft-lb)
T: 22 (2.2, 16.2)

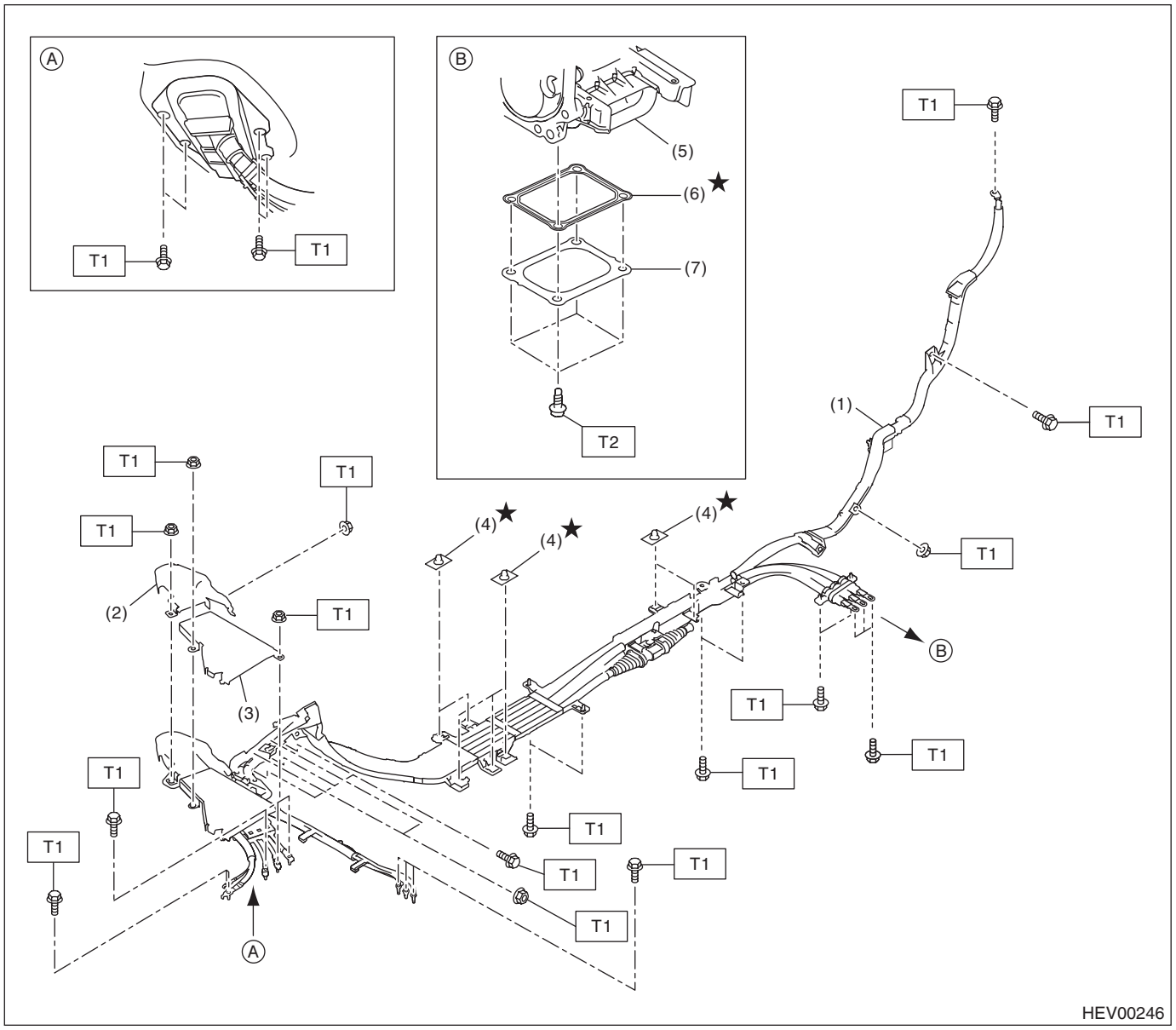
4. HIGH VOLTAGE BATTERY COOLING SYSTEM



(1) Cooling duct front (front)
(2) Cooling duct front (rear)
(3) Hybrid system SUB-ASSY
(4) Cooling fan duct
(5) Cooling fan ASSY
(6) Cooling duct rear

Tightening torque: N·m (kgf-m, ft-lb)
T: 7.5 (0.8, 5.5)

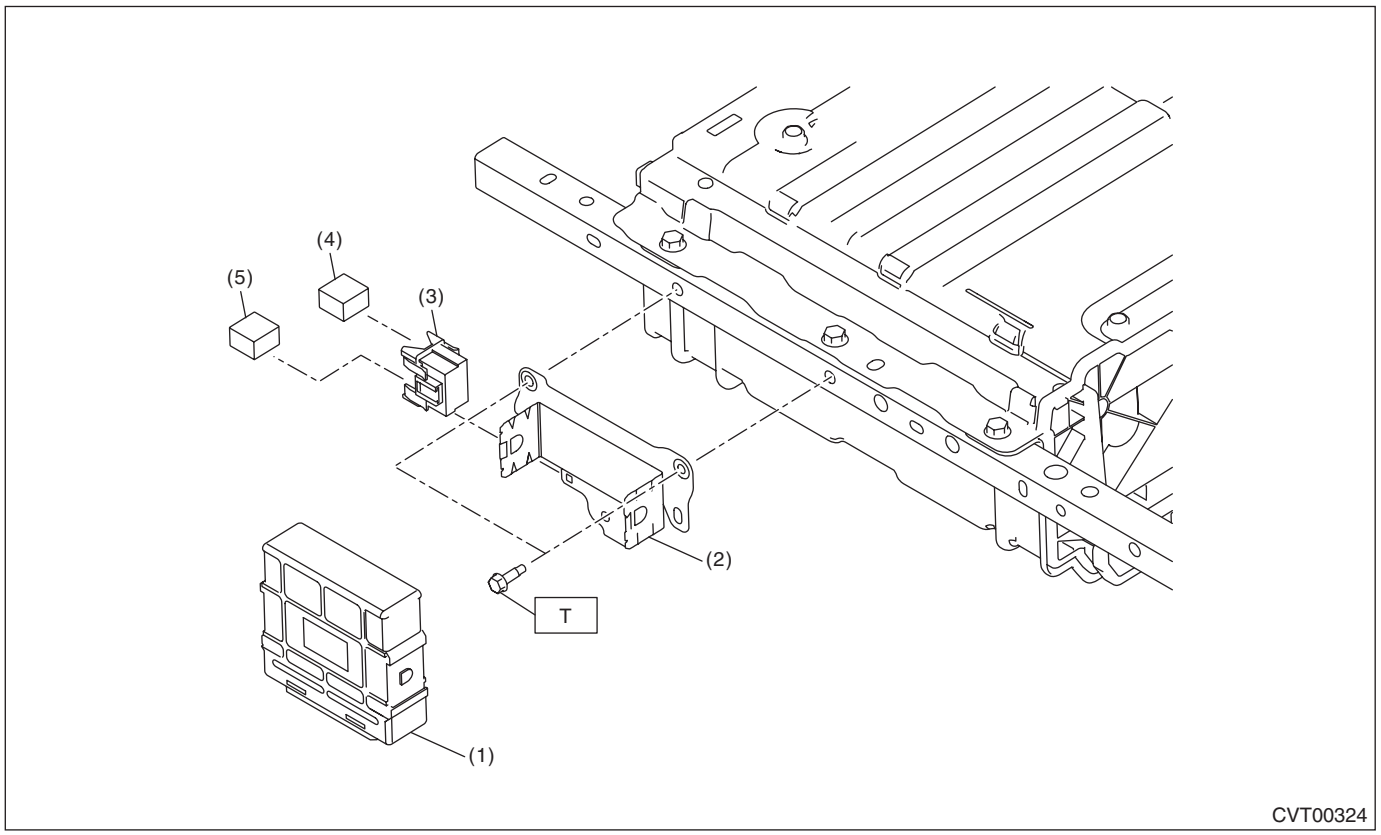
5. POWER CABLE



(1) Power cable
(2) Cover - shield seat
(3) Cover - shield battery
(4) Clip
(5) Drive motor case ASSY
(6) Gasket
(7) Power connect cover

Tightening torque: N·m (kgf-m, ft-lb)
T1: 7.5 (0.8, 5.5)
T2: 25 (2.5, 18.4)

6. DRIVE MOTOR CONTROL MODULE & RELAY

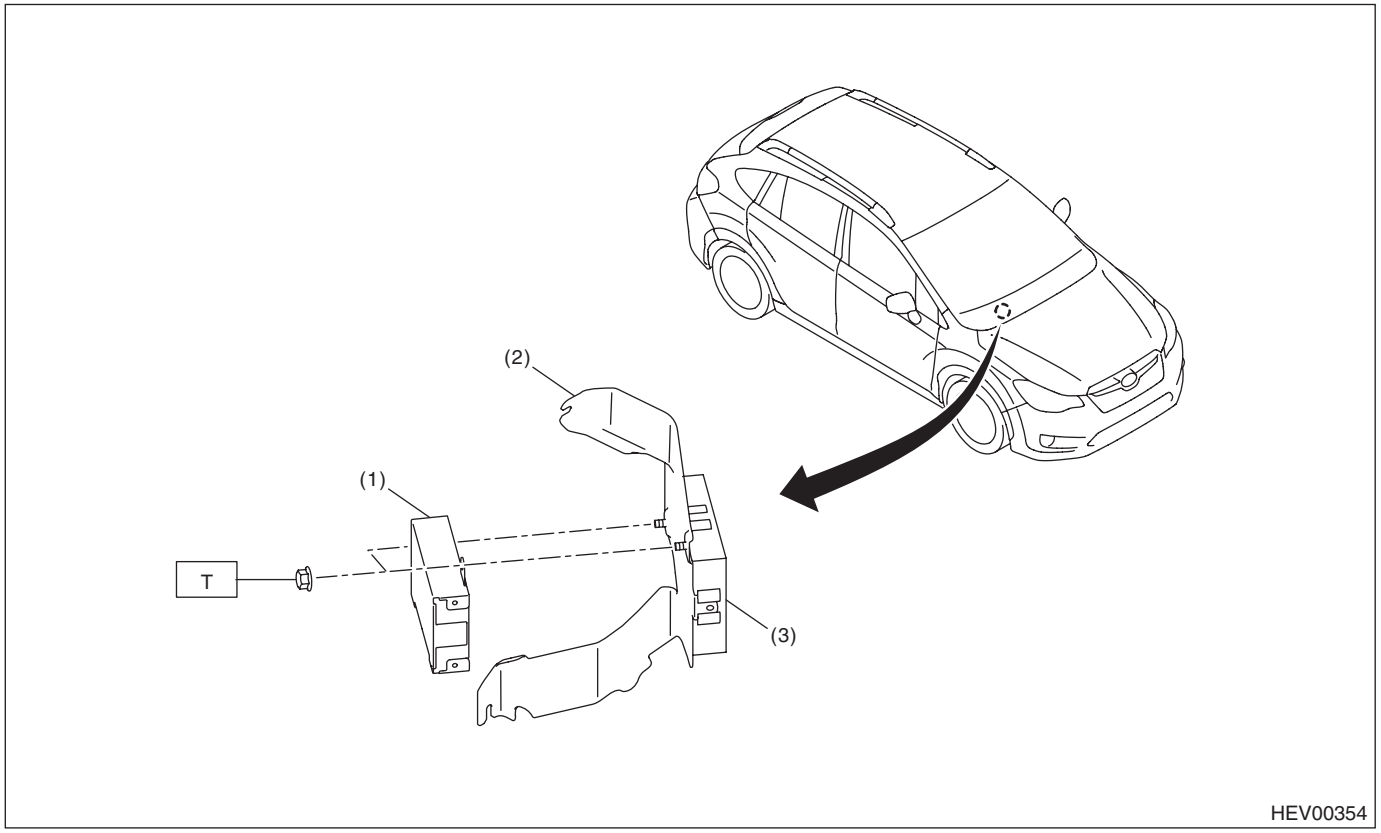


(1) Drive motor control module (DMCM)
(2) DMCM bracket
(3) Relay holder
(4) DMCM power relay
(5) Cooling fan / drive motor inverter power supply relay

Tightening torque: N·m (kgf-m, ft-lb)

T: 6.5 (0.7, 4.8)

7. HYBRID POWERTRAIN CONTROL MODULE

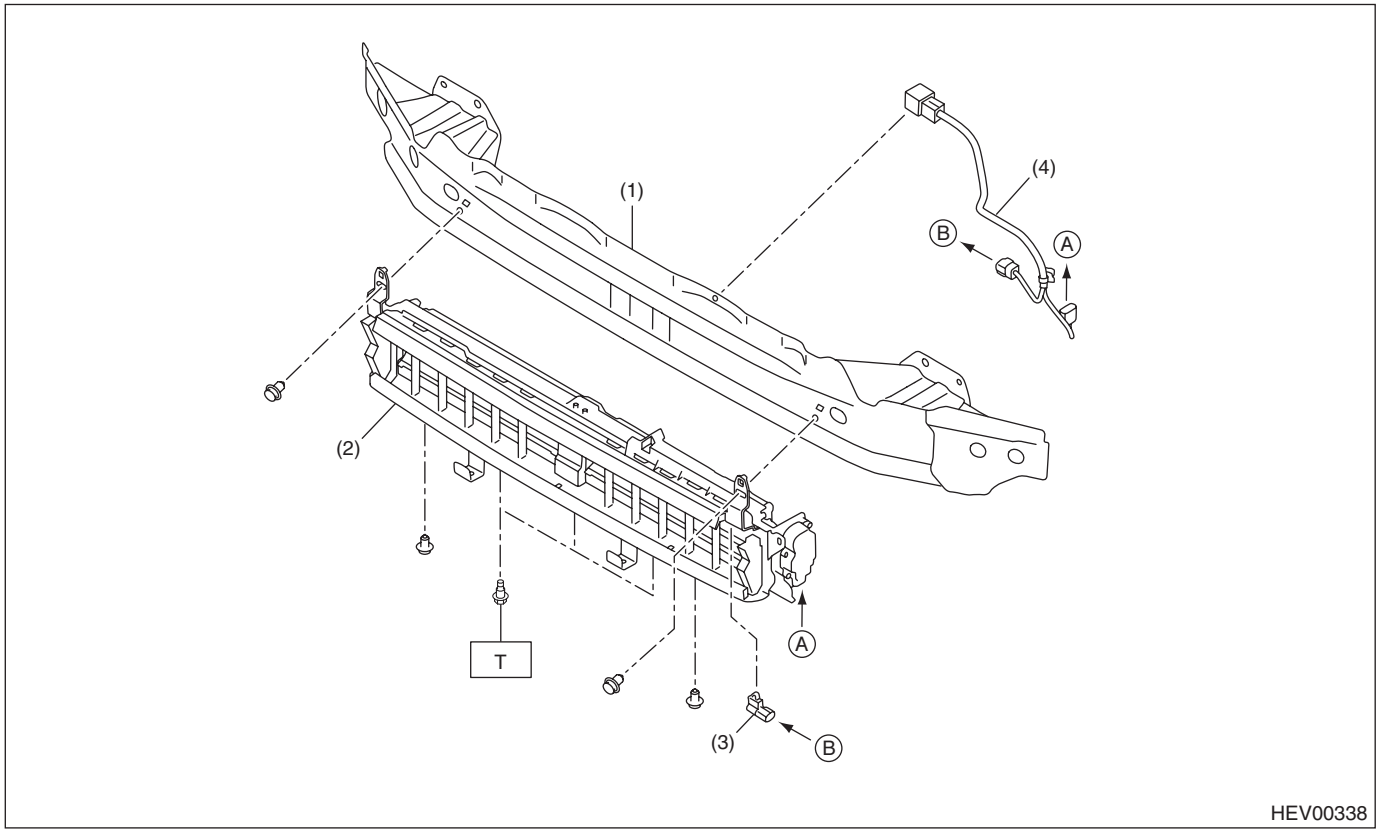


(1) Hybrid powertrain control module (HPCM)
(2) Bracket
(3) Engine control module (ECM)

Tightening torque: N·m (kgf-m, ft-lb)

T: 7.5 (0.8, 5.5)

8. ACTIVE GRILLE SHUTTER



(1)	Bumper beam COMPL - front	(3)	Ambient sensor	***Tightening torque: N·m (kgf-m, ft-lb)***
(2)	Active grille shutter (ACTGS)	(4)	Harness - ACTGS	***T: 7.5 (0.8, 5.5)***

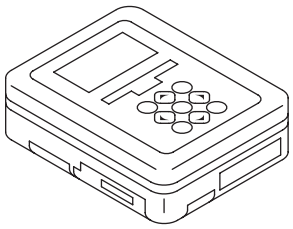
D: CAUTION

• The hybrid system includes a high voltage circuit. Mishandling could cause accidents such as electric shock or leak. Always check "CAUTION (HYBRID SYSTEM)" and perform the proper operation. <Ref. to PC-7, CAUTION (HYBRID SYSTEM), Precaution.>

• When replacing the parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that the functional parts operate normally.

E: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for setting of each function and trouble-shooting for electrical system. NOTE: For detailed operation procedures of SUBARU SELECT MONITOR III, refer to "PC application help for Subaru Select Monitor".

2. GENERAL TOOL

TOOL NAME	REMARKS
Personal Protective Equipment (PPE)	Used for removing and installing high voltage components.
Insulation multimeter	Used for measuring resistance and voltage of high voltage components.
Insulating tape	Used for power cable terminals and high voltage battery terminals.
TORX® bit T30	Used to remove and install the battery cover.
Circuit tester	Used for measuring resistance and voltage.