

General Description

FUEL INJECTION (FUEL SYSTEMS)

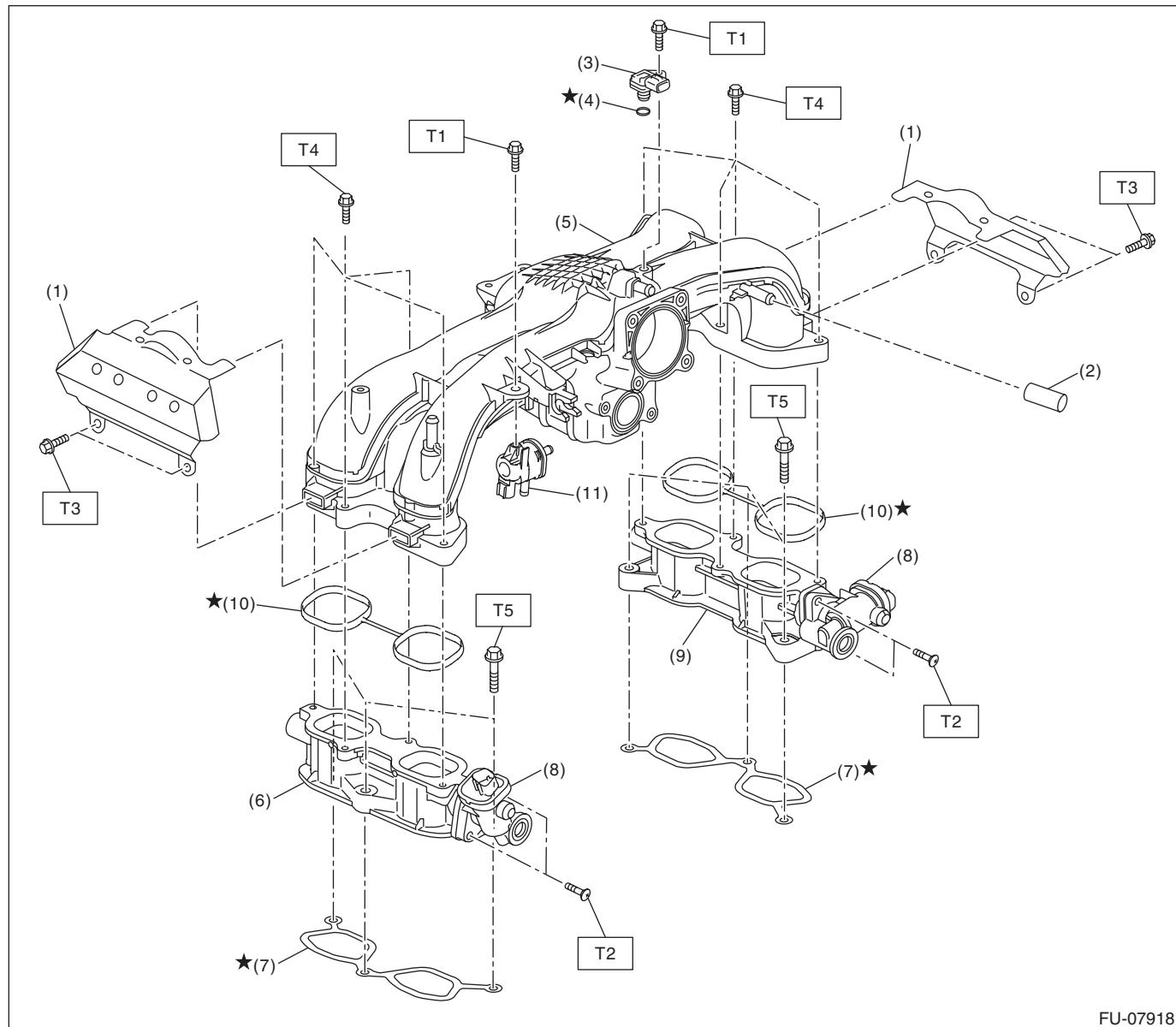
1. General Description

A: SPECIFICATION

Fuel tank	Capacity	60 L (15.9 US gal, 13.2 Imp gal)
	Location	Under rear seat
Fuel pump	Type	Impeller
	Shutoff discharge pressure	840 kPa (8.6 kgf/cm ² , 121.8 psi) or less
	Discharge rate	114 L (30.1 US gal, 25.1 Imp gal)/h or more [12 V at 343 kPa (3.5 kgf/cm ² , 49.7 psi)]
Fuel filter		In-tank type

B: COMPONENT

1. INTAKE MANIFOLD 1



FU-07918

(1) Intake manifold protector	(7) Gasket
(2) Cap	(8) Tumble generator valve actuator
(3) Manifold absolute pressure sensor	(9) Tumble generator valve RH
(4) O-ring	(10) Gasket
(5) Intake manifold	(11) Purge control solenoid valve
(6) Tumble generator valve LH	

Tightening torque: N·m (kgf·m, ft-lb)

T1: 3.4 (0.3, 2.5)

T2: 6 (0.6, 4.4)

T3: 6.4 (0.7, 4.7)

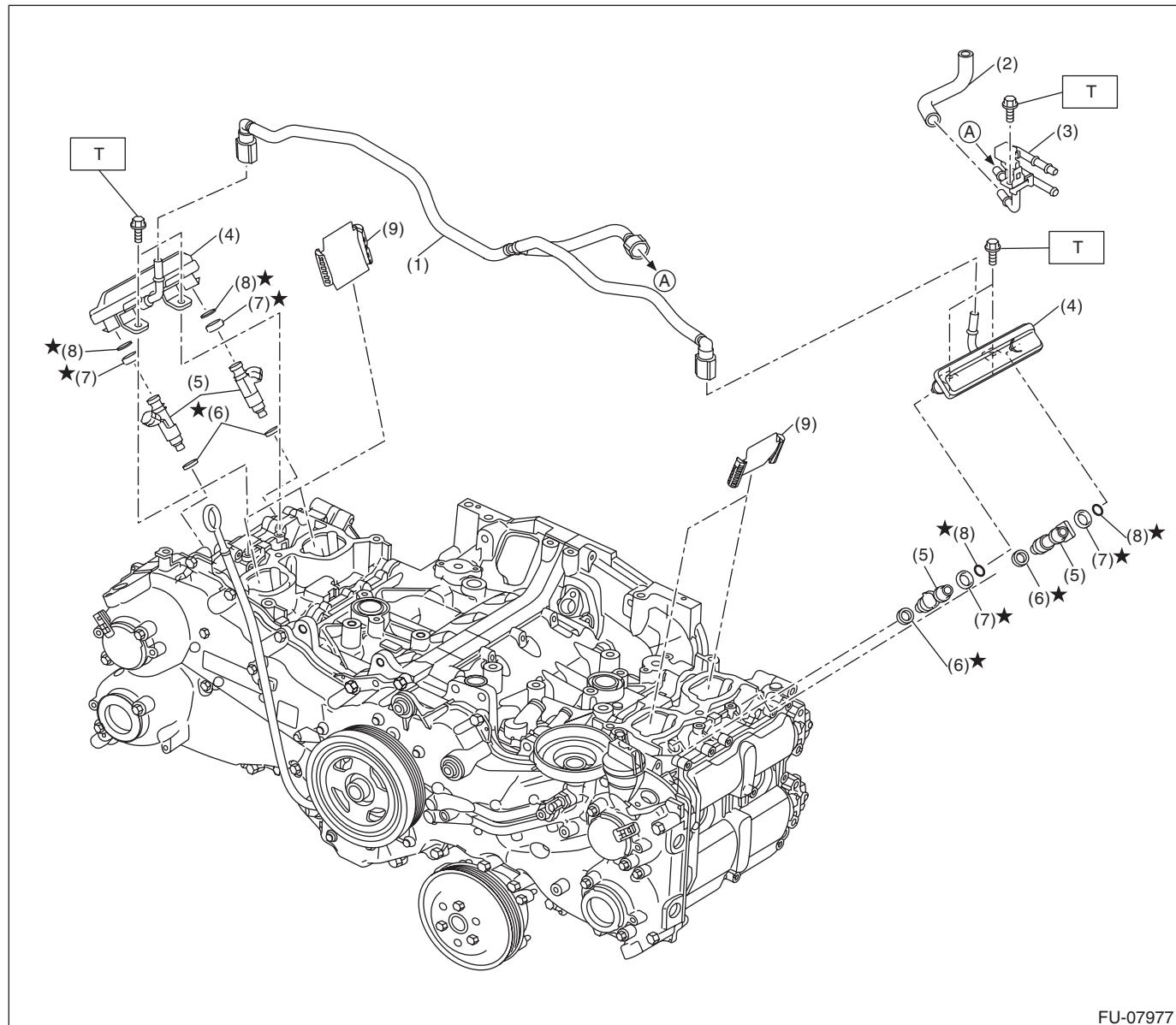
T4: 8.3 (0.8, 6.1)

T5: 25 (2.5, 18.4)

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2. INTAKE MANIFOLD 2



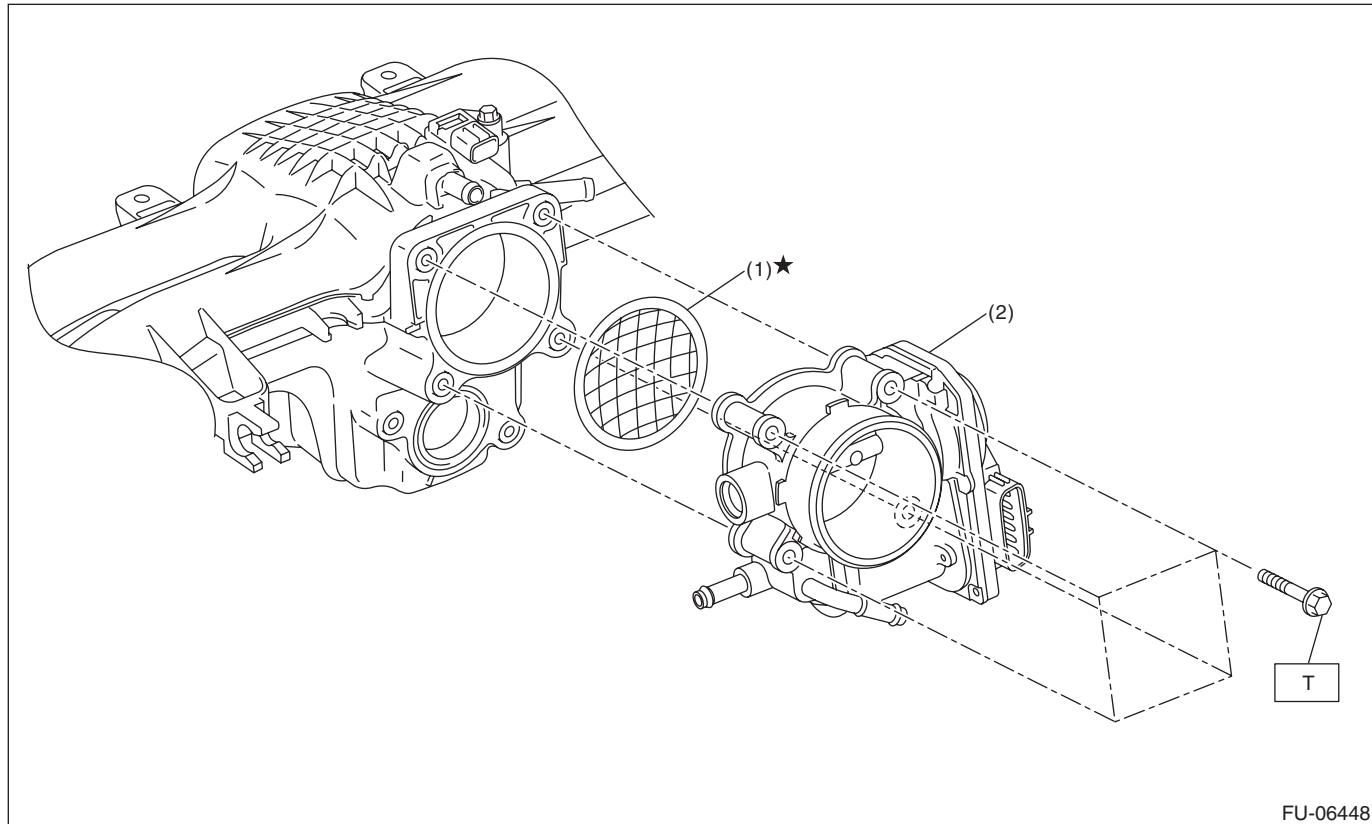
FU-07977

(1) Fuel delivery pipe	(6) Seal ring
(2) Vacuum hose	(7) Rubber
(3) Fuel pipe A	(8) O-ring
(4) Fuel pipe B	(9) Cylinder head plate
(5) Fuel injector	

Tightening torque: N·m (kgf·m, ft·lb)

T: 6.4 (0.7, 4.7)

3. THROTTLE BODY



(1) Gasket

(2) Throttle body

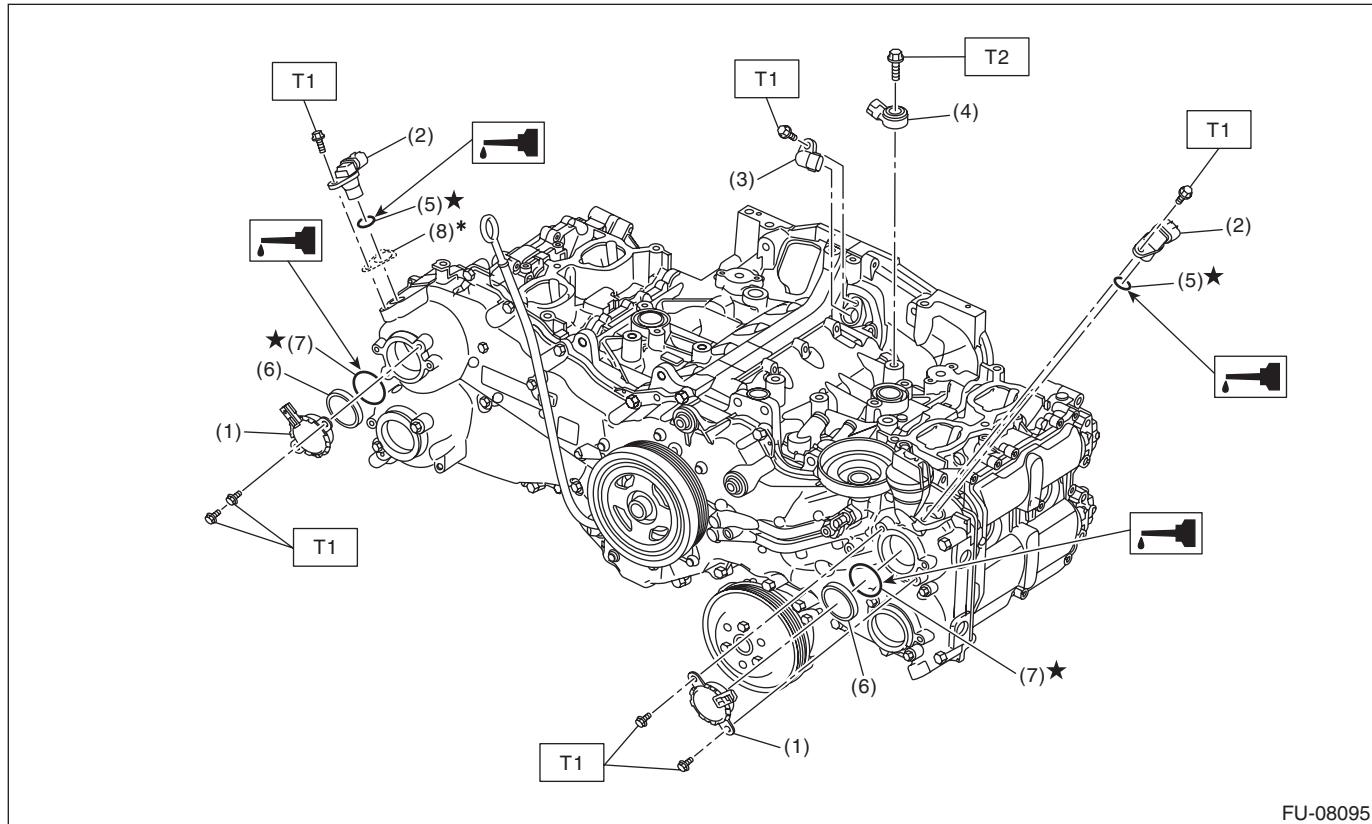
Tightening torque: N·m (kgf·m, ft·lb)

T: 8 (0.8, 5.9)

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4. CRANKSHAFT POSITION, CAMSHAFT POSITION AND KNOCK SENSORS



FU-08095

(1) Oil control solenoid	(5) O-ring
(2) Camshaft position sensor	(6) Back-up ring
(3) Crankshaft position sensor	(7) O-ring
(4) Knock sensor	(8) Spacer

Tightening torque: N·m (kgf·m, ft-lb)

T1: 6.4 (0.7, 4.7)

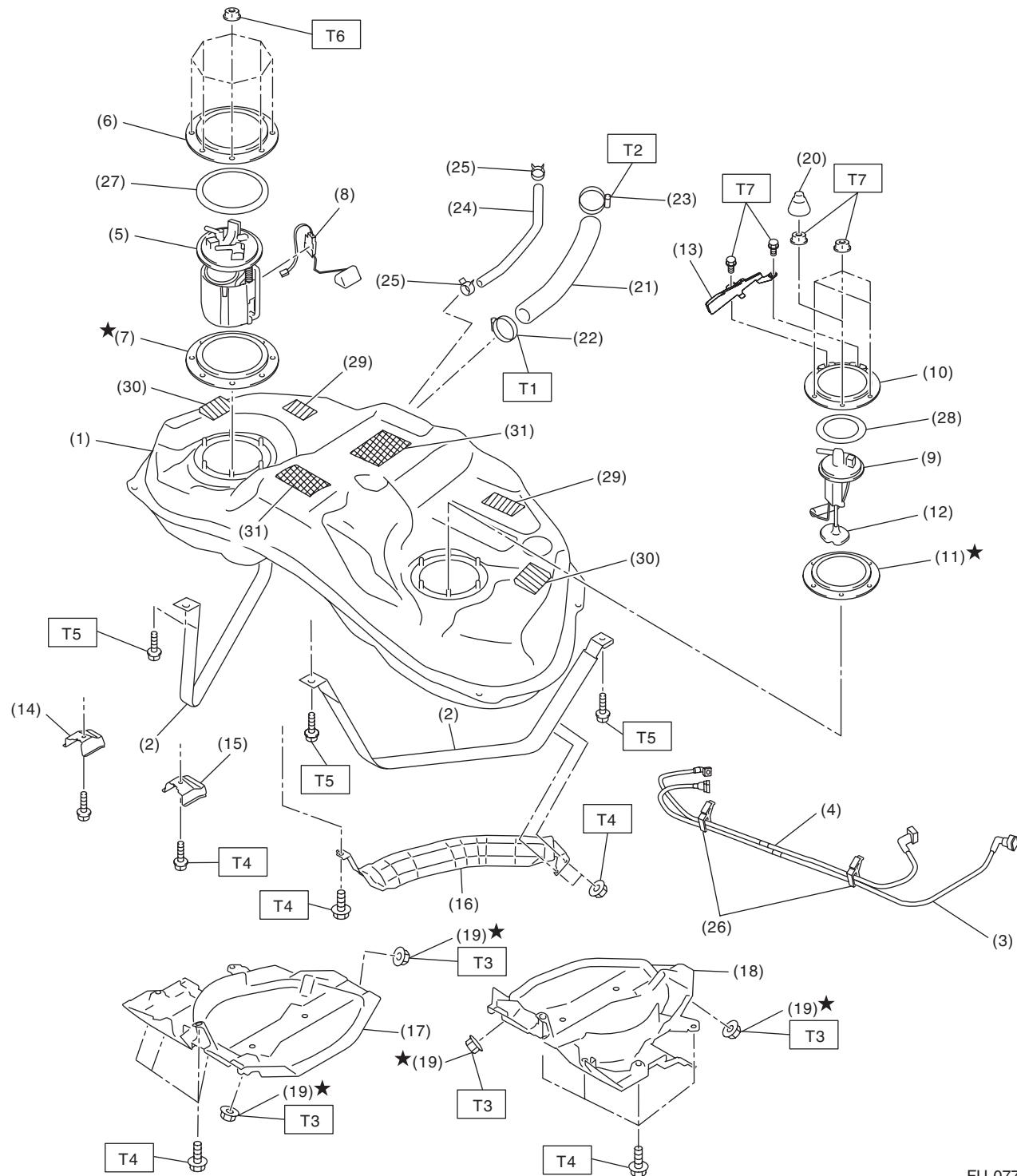
T2: 24 (2.4, 17.7)

* Use one or no spacer to adjust the gap.

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5. FUEL TANK



FU-07738

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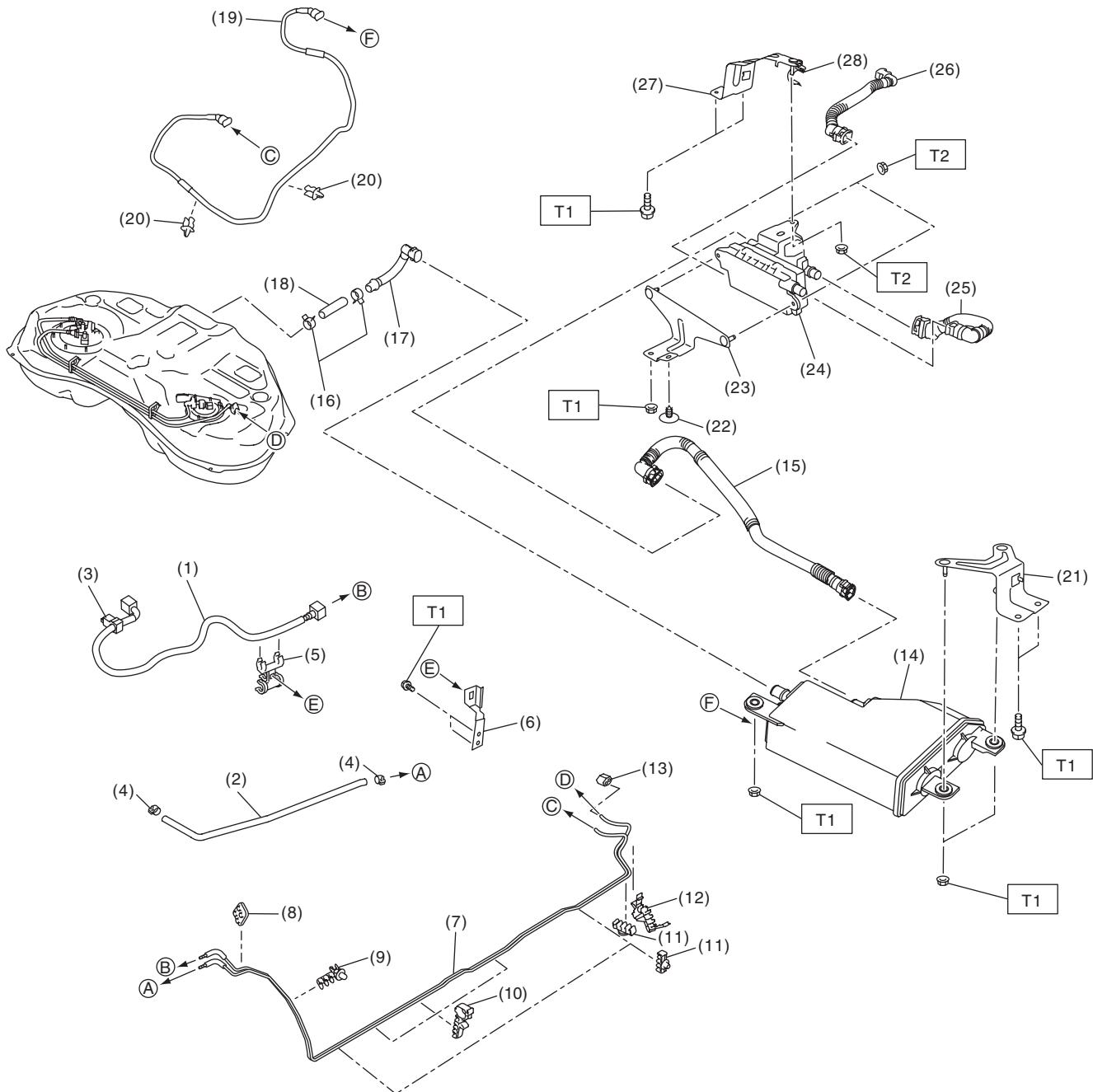
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(1) Fuel tank	(15) Stopper LH	(29) Cushion
(2) Fuel tank band	(16) Heat shield cover	(30) Cushion
(3) Delivery tube	(17) Fuel tank protector RH	(31) Cushion
(4) Jet pump tube	(18) Fuel tank protector LH	
(5) Fuel pump ASSY	(19) Self-locking nut	Tightening torque: N·m (kgf·m, ft·lb)
(6) Fuel pump upper plate	(20) Rubber cap	T1: 2 (0.2, 1.5)
(7) Fuel pump gasket	(21) Fuel filler hose	T2: 2.5 (0.3, 1.8)
(8) Fuel level sensor	(22) Clamp	T3: 9 (0.9, 6.6)
(9) Fuel sub level sensor	(23) Clamp	T4: 18 (1.8, 13.3)
(10) Fuel sub level sensor upper plate	(24) Air vent hose	T5: <Ref. to FU(H4DO)-119, INSTALLATION, Fuel Tank.>
(11) Fuel sub level sensor gasket	(25) Clip	T6: <Ref. to FU(H4DO)-138, INSTALLATION, Fuel Pump.>
(12) Fuel sub level sensor filter	(26) Tube clamp	T7: <Ref. to FU(H4DO)-148, INSTALLATION, Fuel Sub Level Sensor.>
(13) Fuel sub level sensor protector	(27) Fuel pump upper plate cushion	
(14) Stopper RH	(28) Fuel sub level sensor upper plate cushion	

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6. FUEL LINE



FU-07857

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(1) Fuel delivery tube	(12) Pipe clamp	(23) Leak check valve bracket A
(2) Evaporation hose	(13) Fuel pipe rear grommet	(24) Leak check valve ASSY
(3) Tube clamp	(14) Canister	(25) Drain tube B
(4) Clip	(15) Drain tube A	(26) Drain tube C
(5) Hose clamp	(16) Clip	(27) Leak check valve bracket B
(6) Hose clamp bracket	(17) Vent tube	(28) Tube clamp
(7) Fuel pipe ASSY	(18) Vent hose	
(8) Fuel pipe front grommet	(19) Purge pipe	
(9) Pipe clamp	(20) Pipe clamp	
(10) Pipe clamp	(21) Canister bracket	
(11) Pipe clamp	(22) Clip	

Tightening torque: N·m (kgf·m, ft-lb)

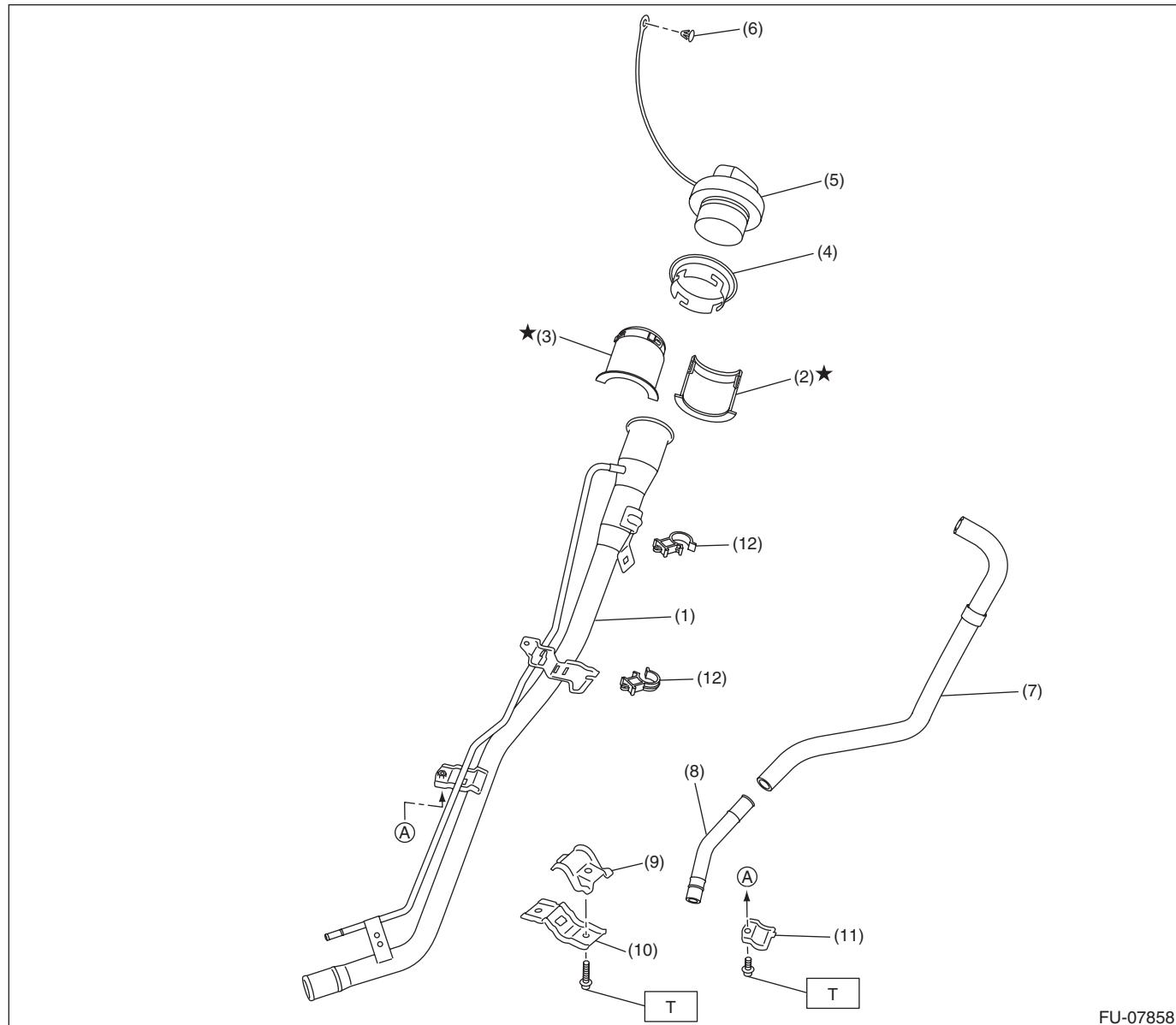
T1: 7.5 (0.8, 5.5)

T2: 18 (1.8, 13.3)

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7. FUEL FILLER PIPE



- (1) Fuel filler pipe ASSY
- (2) Neck holder A
- (3) Neck holder B
- (4) Fuel filler pipe protector
- (5) Fuel filler cap

- (6) Clip
- (7) Drain hose
- (8) Drain pipe
- (9) Upper bracket
- (10) Lower bracket

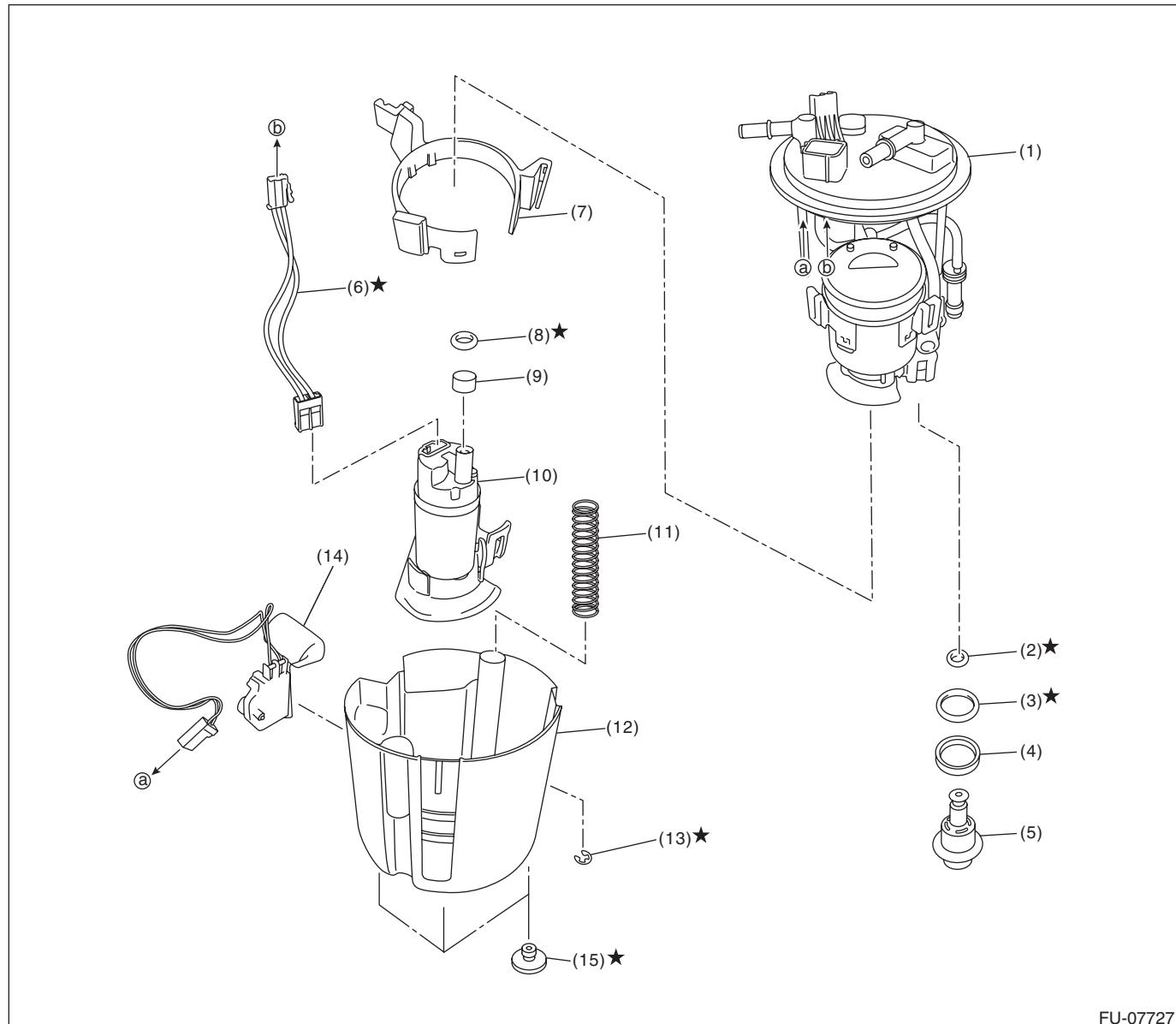
- (11) Drain lower bracket
- (12) Drain hose clamp

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

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8. FUEL PUMP



FU-07727

(1) Fuel filter ASSY	(6) Connector cable	(11) Spring
(2) O-ring	(7) Fuel pump holder	(12) Fuel chamber ASSY
(3) O-ring	(8) O-ring	(13) Clip
(4) Back-up ring	(9) Spacer	(14) Fuel level sensor
(5) Pressure regulator	(10) Fuel pump	(15) Cushion

C: CAUTION

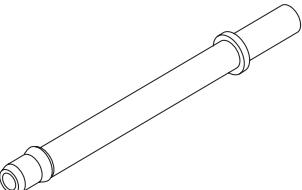
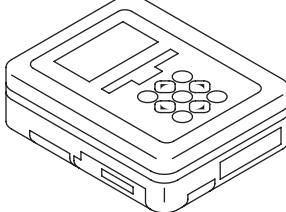
- Prior to starting work, pay special attention to the following:
 1. Always wear work clothes, a safety cap, protective shoes. Additionally, wear a helmet, protective goggles, etc. if necessary.
 2. Protect the vehicle using a seat cover, fender cover, etc.
 3. Prepare the service tools, clean cloth, containers to catch grease and oil, etc.
- Place "NO OPEN FLAMES" signs near the working area.
- Prepare a container and cloth to prevent scattering of fuels when performing work where fuels can be spilled. If the oil spills, wipe it off immediately to prevent from penetrating into floor or flowing out for environmental protection.
- Vehicle components are extremely hot immediately after driving. Be wary of receiving burns from heated parts.
- When performing a repair, identify the cause of trouble and avoid unnecessary removal, disassembly and replacement.
- Before disconnecting connectors of sensors or units, be sure to disconnect the ground cable from battery.
- Always use the jack-up point when the shop jacks or rigid racks are used to support the vehicle.
- Remove contamination including dirt and corrosion before removal, installation, disassembly or assembly.
- Keep the removed parts in order and protect them from dust and dirt.
- All removed parts, if to be reused, should be reinstalled in the original positions with attention to the correct directions, etc.
- Bolts, nuts and washers should be replaced with new parts as required.
- Follow all government and local regulations concerning disposal of refuse when disposing fuel.
- When the suspension-related components have been removed and installed, be sure to adjust the steering angle sensor. <Ref. to VDC-23, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDC-CM&H/U).>

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D: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18471AA000	18471AA000	FUEL PIPE ADAPTER	Used for draining fuel.
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for draining fuel and each inspection.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Oscilloscope	Used for inspecting the waveform of each sensor.