

General Description

FUEL INJECTION (FUEL SYSTEMS)

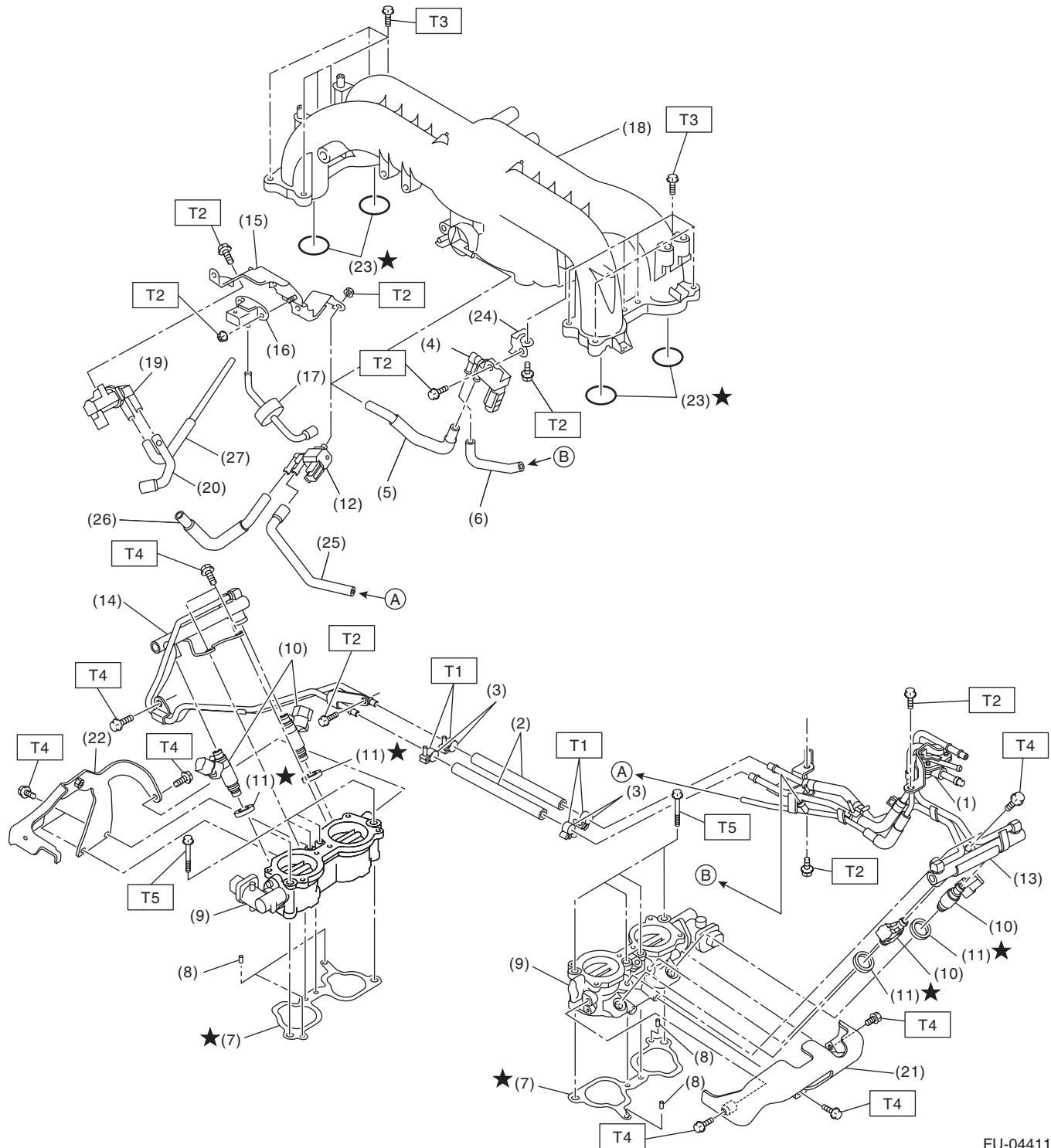
1. General Description

A: SPECIFICATION

Fuel tank	Capacity	64 ℓ (16.9 US gal, 14.1 Imp gal)
	Location	Under rear seat
Fuel pump	Type	Impeller
	Shutoff discharge pressure	550 — 850 kPa (5.61 — 8.67 kgf/cm ² , 79.8 — 123.3 psi)
	Discharge rate	155 ℓ (40.9 US gal, 34.1 Imp gal)/h or more [12 V at 300 kPa (3.06 kgf/cm ² , 43.5 psi)]
Fuel filter		In-tank type

B: COMPONENT

1. INTAKE MANIFOLD



FU-04411

General Description

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|-------------------------------------|--|
| (1) Pressure regulator | (13) Fuel injector pipe LH |
| (2) Fuel hose | (14) Fuel injector pipe RH |
| (3) Clamp | (15) Solenoid valve bracket |
| (4) Purge control solenoid valve 1 | (16) Manifold absolute pressure sensor |
| (5) Vacuum hose D | (17) Filter |
| (6) Vacuum hose C | (18) Intake manifold |
| (7) Intake manifold gasket | (19) Wastegate control solenoid valve ASSY |
| (8) Guide pin | (20) Vacuum hose |
| (9) Tumble generator valve ASSY | (21) Fuel pipe protector LH |
| (10) Fuel injector | (22) Fuel pipe protector RH |
| (11) Seal ring | (23) O-ring |
| (12) Purge control solenoid valve 2 | (24) Solenoid valve bracket |

- | |
|-----------------------|
| (25) Vacuum hose B |
| (26) Vacuum hose A |
| (27) Air control hose |

Tightening torque: N·m (kgf-m, ft-lb)

T1: 1.25 (0.1, 0.9)

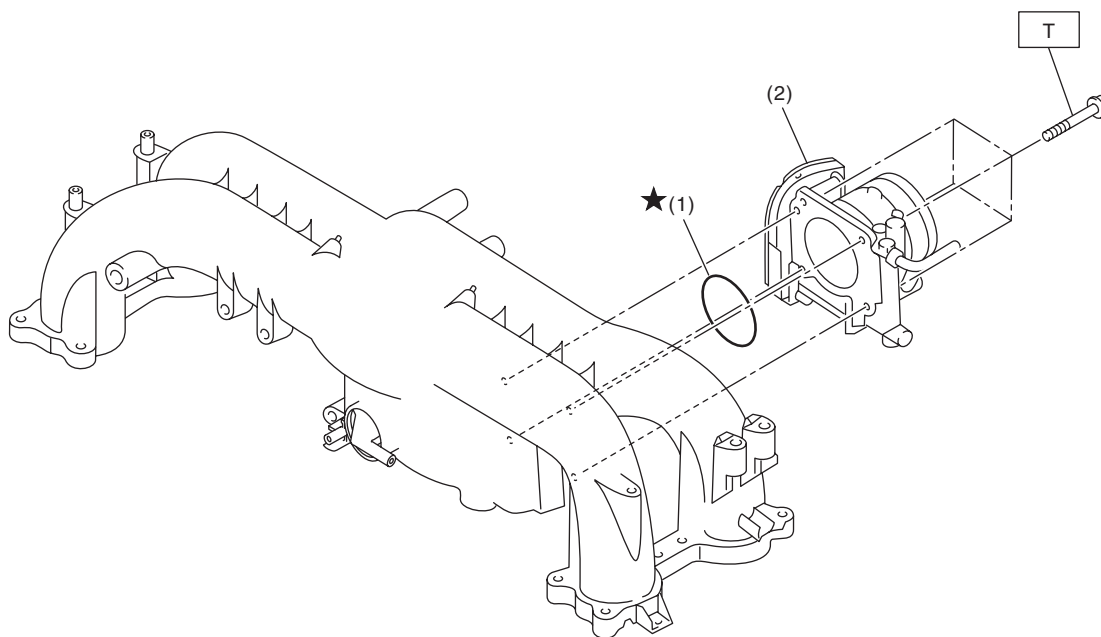
T2: 6.4 (0.7, 4.7)

T3: 8.3 (0.8, 6.1)

T4: 19 (1.9, 14.0)

T5: 25 (2.5, 18.4)

2. AIR INTAKE SYSTEM



FU-04406

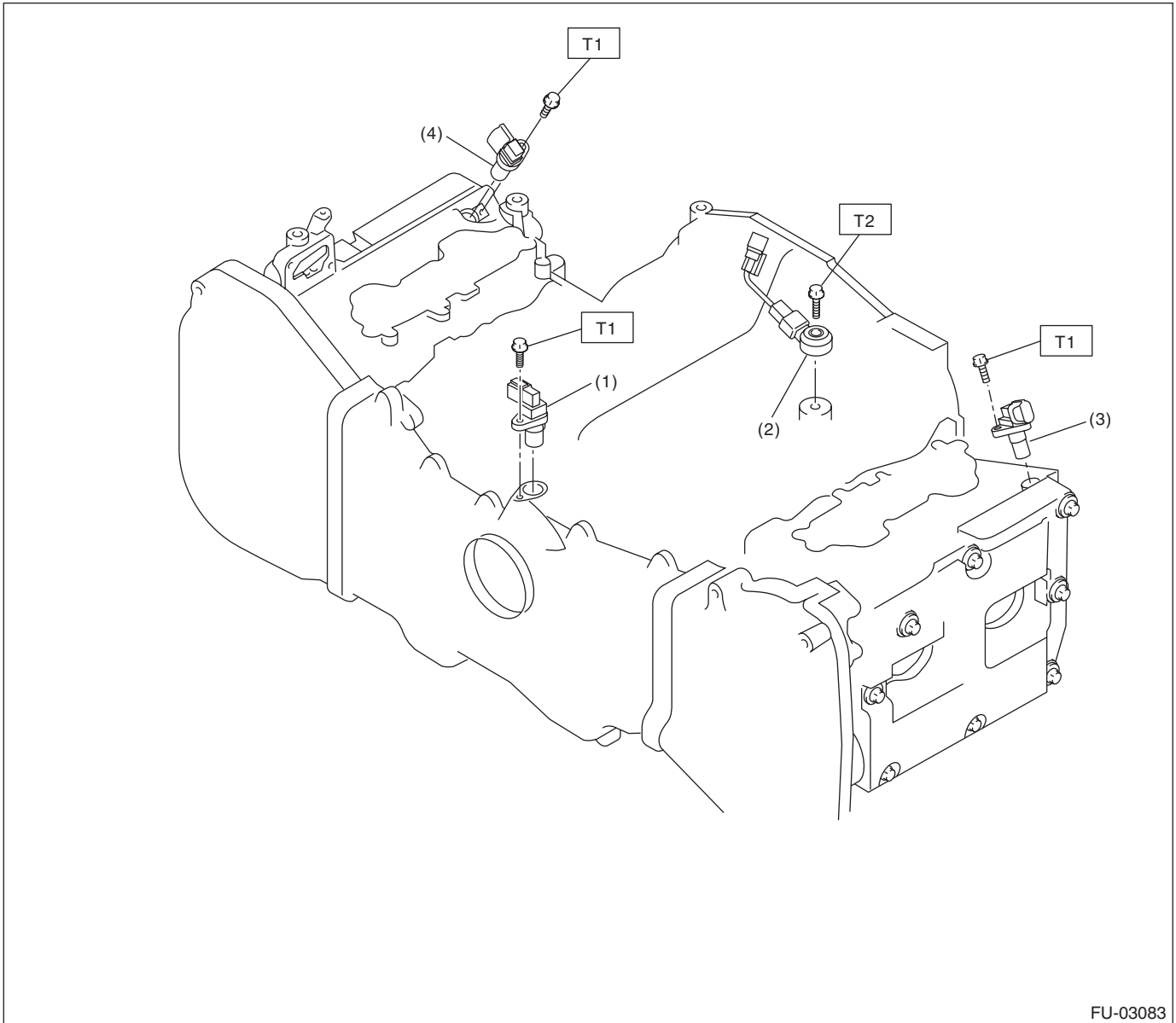
- (1) O-ring

- (2) Throttle body

Tightening torque: N·m (kgf-m, ft-lb)

T: 8 (0.8, 5.9)

3. CRANKSHAFT POSITION, CAMSHAFT POSITION AND KNOCK SENSORS



FU-03083

- (1) Crankshaft position sensor
- (2) Knock sensor
- (3) Camshaft position sensor LH

- (4) Camshaft position sensor RH

Tightening torque: N·m (kgf-m, ft-lb)

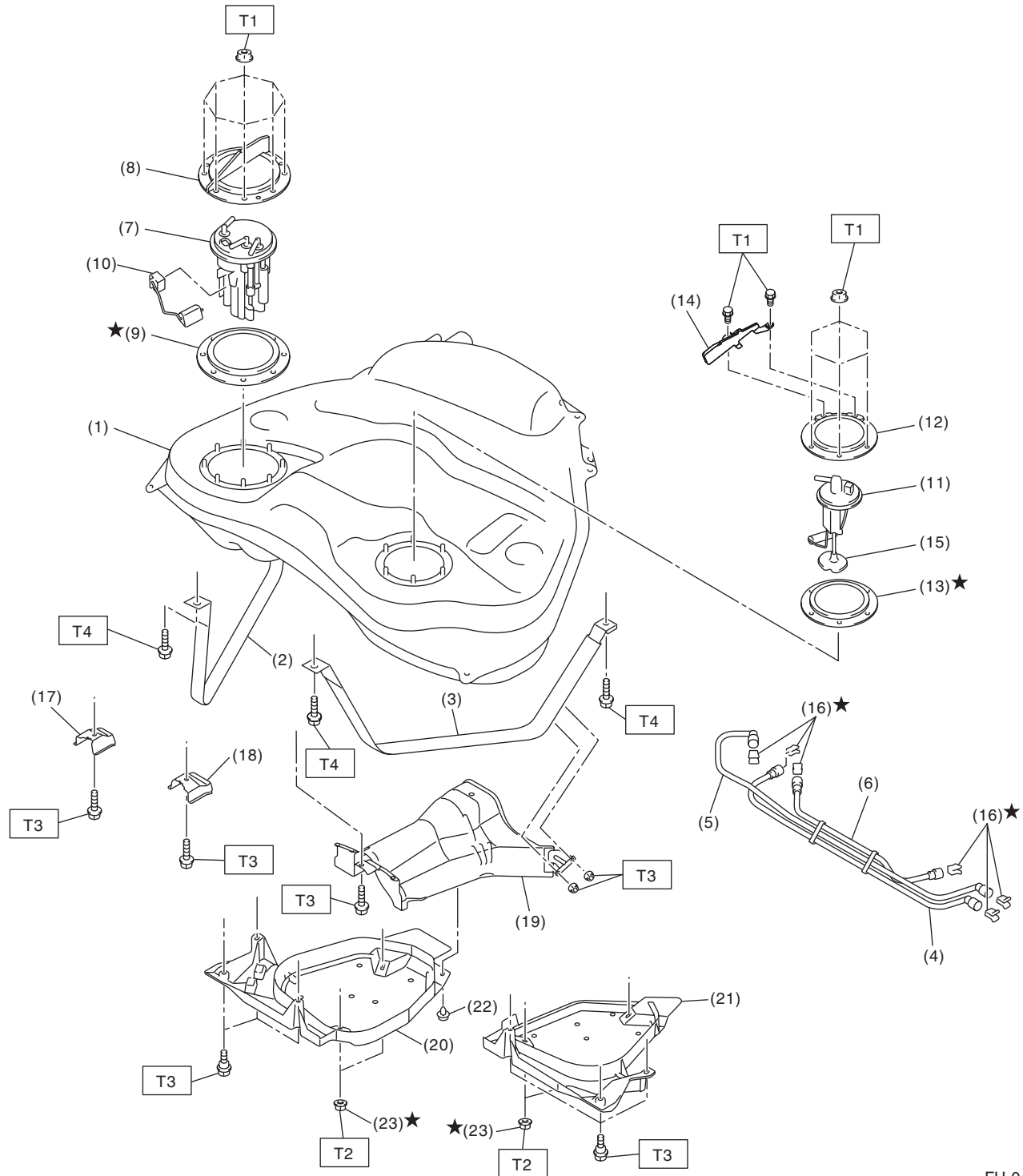
T1: 6.4 (0.7, 4.7)

T2: 24 (2.4, 17.7)

General Description

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4. FUEL TANK



FU-04297

General Description

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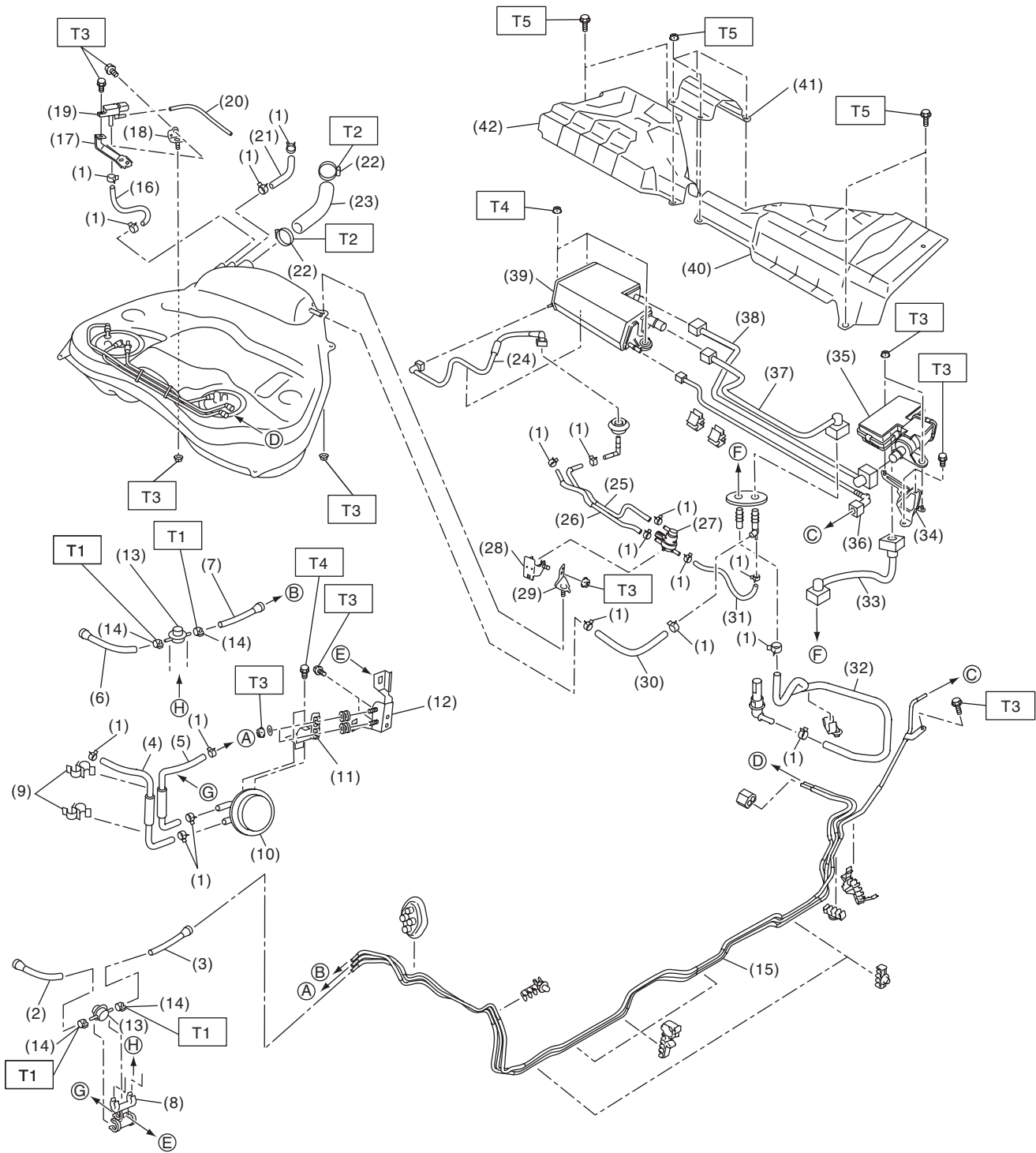
(1) Fuel tank	(11) Fuel sub level sensor	(21) Fuel tank protector LH
(2) Fuel tank band RH	(12) Fuel sub level sensor upper plate	(22) Clip
(3) Fuel tank band LH	(13) Fuel sub level sensor gasket	(23) Self-locking nut
(4) Delivery tube	(14) Fuel sub level sensor protector	
(5) Return tube	(15) Fuel sub level sensor filter	
(6) Jet pump tube	(16) Retainer	
(7) Fuel pump ASSY	(17) Stopper RH	
(8) Fuel pump upper plate	(18) Stopper LH	
(9) Fuel pump gasket	(19) Heat shield cover	
(10) Fuel level sensor	(20) Fuel tank protector RH	

Tightening torque: N·m (kgf-m, ft-lb)***T1: 4.4 (0.4, 3.2)******T2: 9 (0.9, 6.6)******T3: 18 (1.8, 13.3)******T4: 33 (3.4, 24.3)***

General Description

FUEL INJECTION (FUEL SYSTEMS)

5. FUEL LINE



FU-04298

General Description

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(1) Clip	(18) Fuel tank pressure sensor bracket B	(35) Drain valve
(2) Fuel return hose A	(19) Fuel tank pressure sensor	(36) Purge tube
(3) Fuel return hose B	(20) Vacuum hose	(37) Vent tube
(4) Evaporation hose A	(21) Evaporation hose C	(38) Drain tube B
(5) Evaporation hose B	(22) Clamp	(39) Canister
(6) Fuel delivery hose A	(23) Fuel filler hose	(40) Canister cover LH
(7) Fuel delivery hose B	(24) PCV drain tube	(41) Center canister cover
(8) Fuel damper holder	(25) Evaporation hose D	(42) Canister cover RH
(9) Clamp	(26) Evaporation hose E	
(10) Purge damper	(27) Pressure control solenoid valve	
(11) Purge damper bracket	(28) Pressure control solenoid valve bracket A	
(12) Damper bracket	(29) Pressure control solenoid valve bracket B	
(13) Fuel damper	(30) Evaporation hose F	
(14) Clamp	(31) Evaporation hose G	
(15) Fuel pipe ASSY	(32) Canister drain hose	
(16) Pressure hose	(33) Drain tube A	
(17) Fuel tank pressure sensor bracket A	(34) Drain valve bracket	

Tightening torque: N·m (kgf-m, ft-lb)

T1: 1.25 (0.1, 0.9)

T2: 2.5 (0.3, 1.8)

T3: 7.5 (0.8, 5.5)

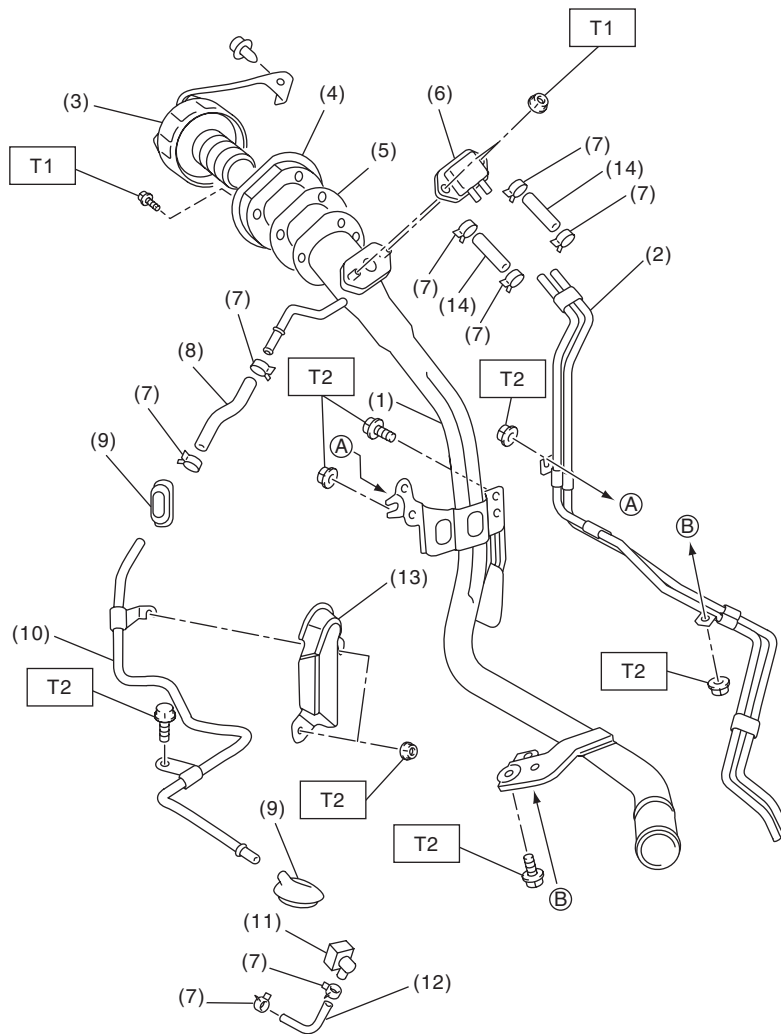
T4: 8 (0.8, 5.9)

T5: 18 (1.8, 13.3)

General Description

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6. FUEL FILLER PIPE



FU-04383

- (1) Fuel filler pipe ASSY
- (2) Evaporation pipe A
- (3) Fuel filler cap
- (4) Filler ring
- (5) Filler pipe gasket
- (6) Shut valve

- (7) Clip
- (8) Evaporation hose A
- (9) Grommet
- (10) Evaporation pipe B
- (11) Quick connector
- (12) Evaporation hose B

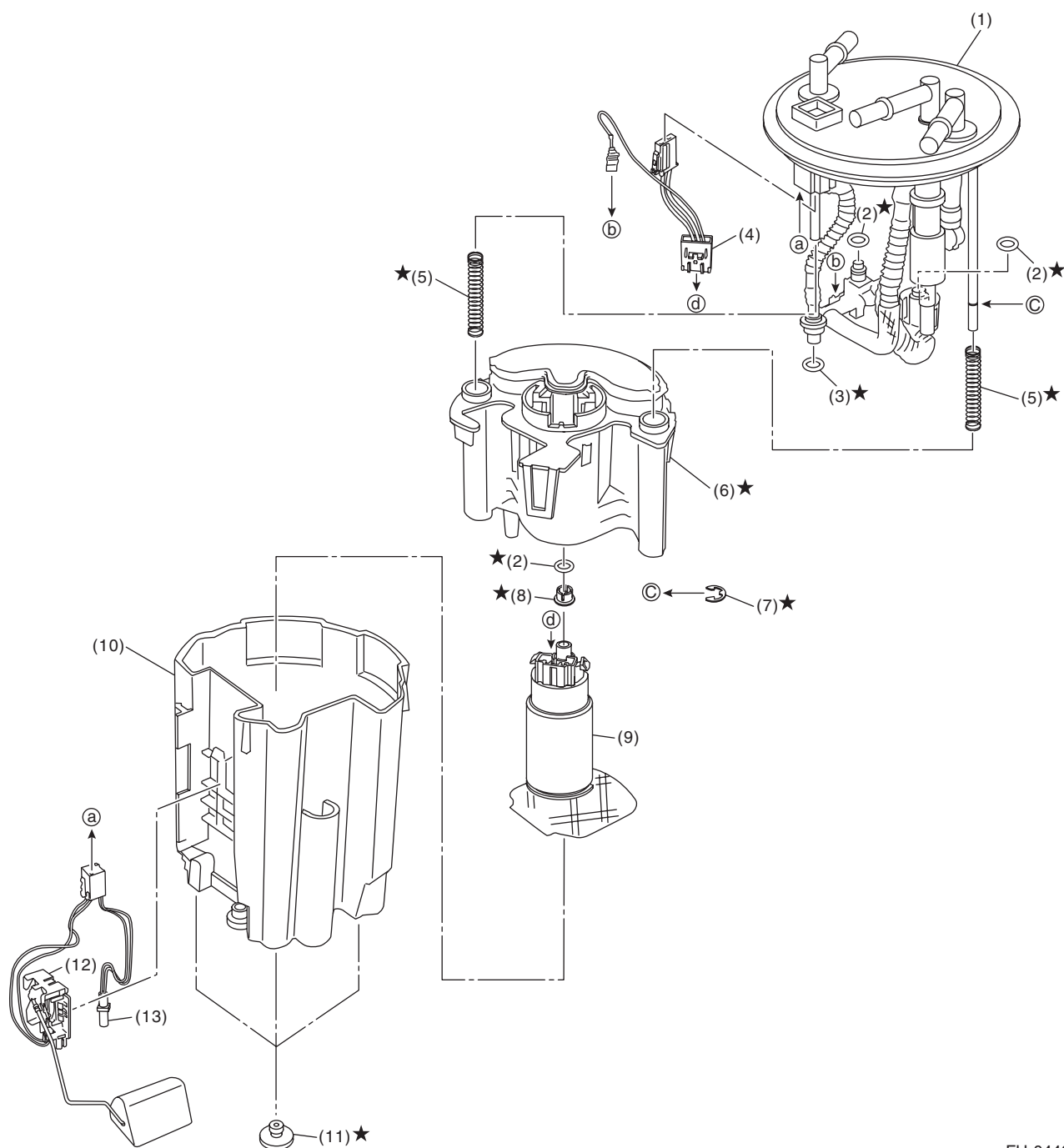
- (13) Evaporation pipe protector
- (14) Evaporation hose C

Tightening torque: N·m (kgf-m, ft-lb)

T1: 4.4 (0.4, 3.2)

T2: 7.5 (0.8, 5.5)

7. FUEL PUMP



FU-04407

- | | | |
|---------------------------|-----------------|------------------------------|
| (1) Sub tank bracket ASSY | (6) Fuel filter | (11) Cushion |
| (2) O-ring | (7) Clip | (12) Fuel level sensor |
| (3) O-ring | (8) Spacer | (13) Fuel temperature sensor |
| (4) Fuel pump harness | (9) Pump ASSY | |
| (5) Spring | (10) Sub tank | |

General Description

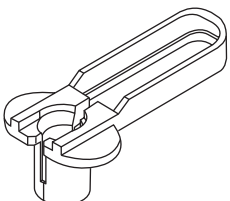
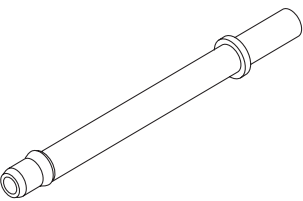
FUEL INJECTION (FUEL SYSTEMS)

C: CAUTION

- Wear appropriate work clothing, including a cap, protective goggles and protective shoes when performing any work.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust and dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.
- Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or rigid racks at the specified points.
- Before disconnecting connectors of sensors or units, be sure to disconnect the ground cable from battery.
- 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.
- Follow all government and local regulations concerning disposal of refuse when disposing fuel.

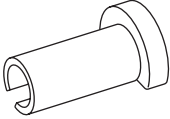
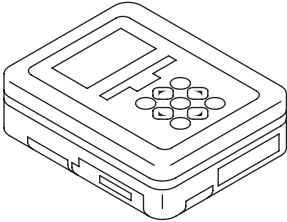
D: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	Description	REMARKS
 ST18371AA000	18371AA000	CONNECTOR REMOVER	Used for disconnecting the quick connector on the fuel return hose of the engine compartment.
 ST18471AA000	18471AA000	FUEL PIPE ADAPTER	Used for draining fuel.

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ILLUSTRATION	TOOL NUMBER	Description	REMARKS
 ST42099AE000	42099AE000	QUICK CONNEC- TOR RELEASE	Used for disconnecting quick connector on the fuel delivery hose side of the engine compartment.
 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.