

# General Description

FUEL INJECTION (FUEL SYSTEMS)

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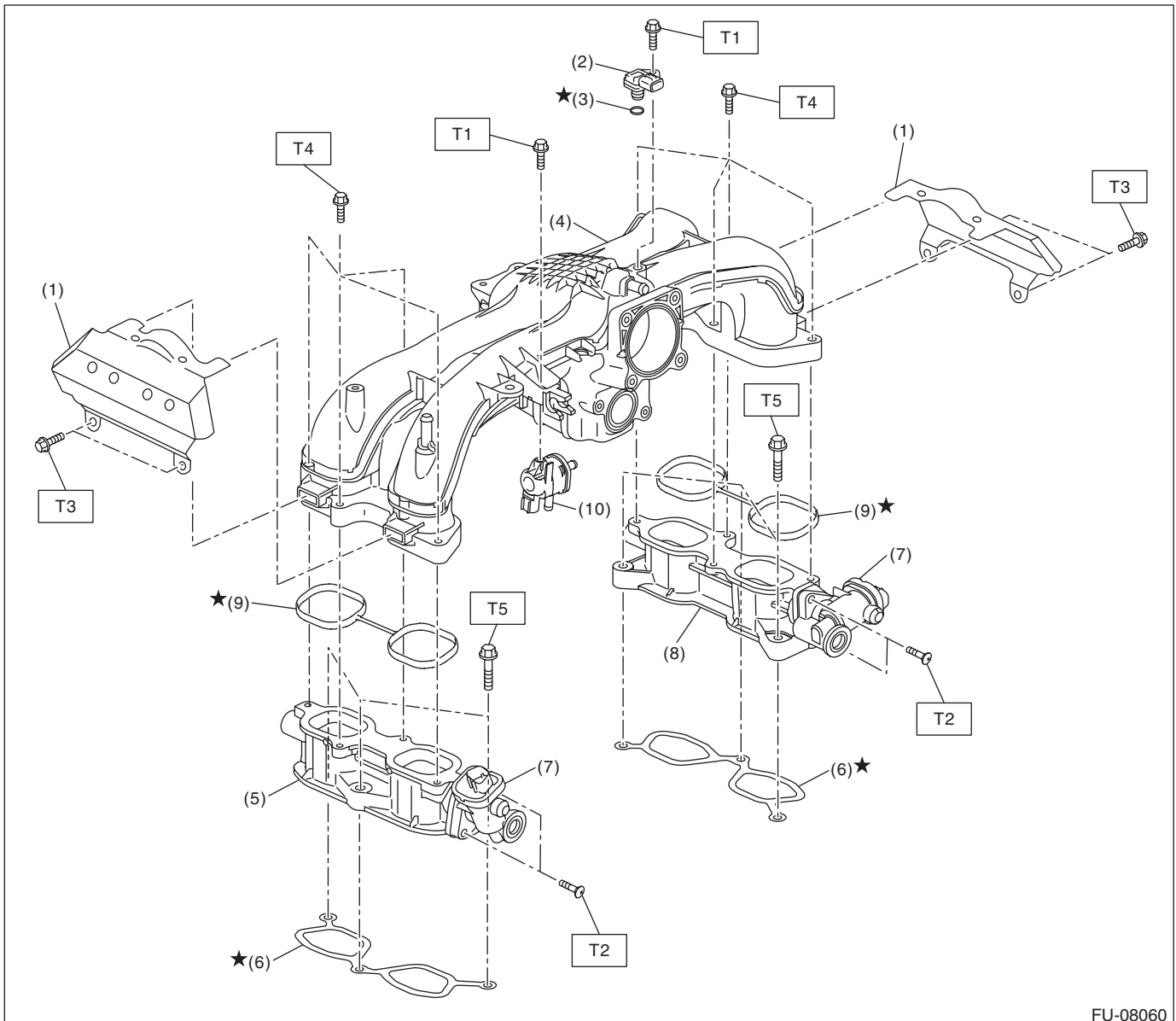
## 1. General Description

### A: SPECIFICATION

Fuel tank	Capacity	70 L (18.5 US gal, 15.4 Imp gal)
	Location	Under rear seat
Fuel pump	Type	Impeller
	Shutoff discharge pressure	677 kPa (6.9 kgf/cm <sup>2</sup> , 98.2 psi) or less
	Discharge rate	105 L (27.7 US gal, 23.1 Imp gal)/h or more [12 V at 300 kPa (3.06 kgf/cm <sup>2</sup> , 43.5 psi)]
Fuel filter		In-tank type

## B: COMPONENT

### 1. INTAKE MANIFOLD 1



FU-08060

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

**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)**

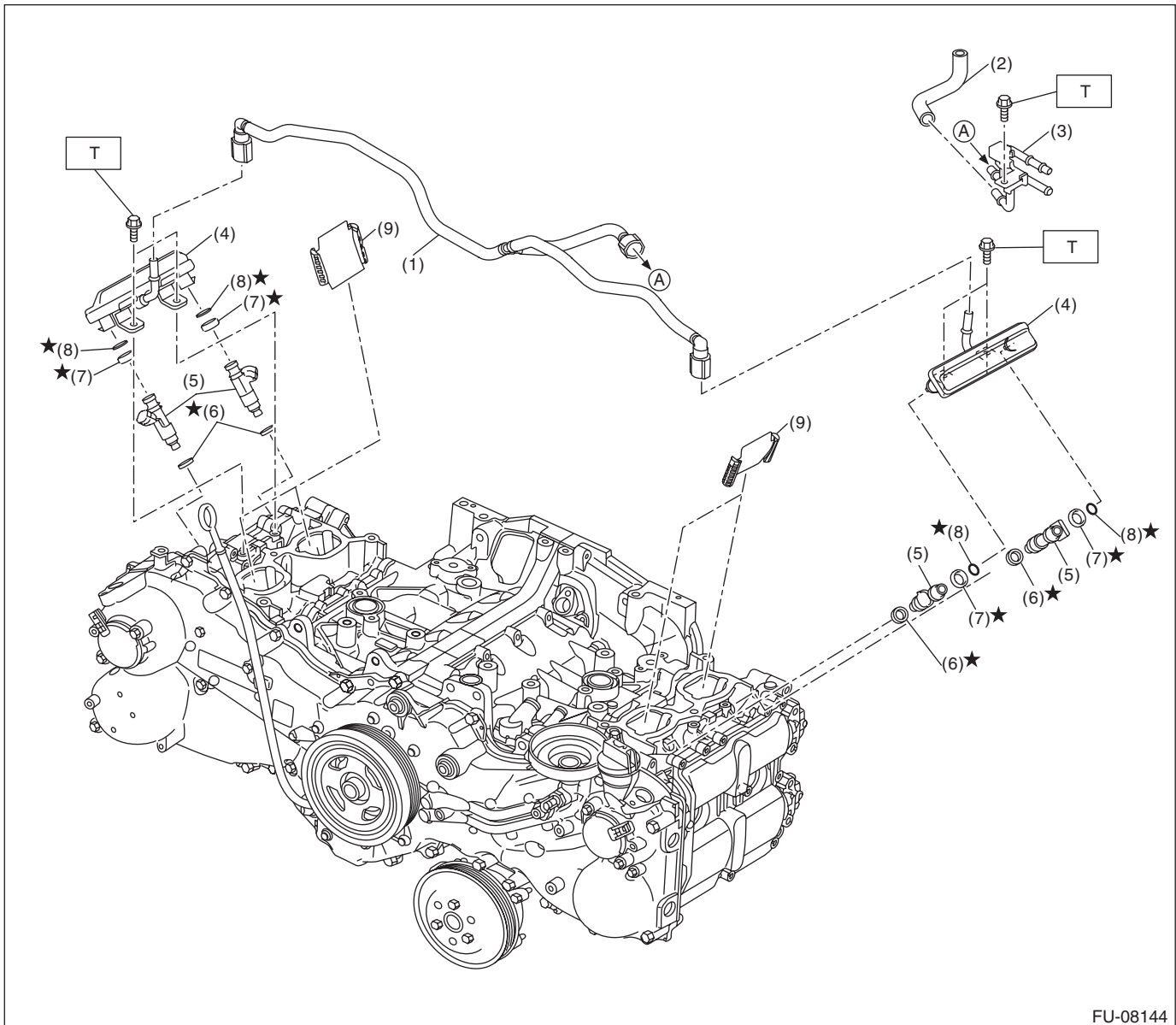
**T4: 8.3 (0.8, 6.1)**

**T5: 25 (2.5, 18.4)**

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

### 2. INTAKE MANIFOLD 2



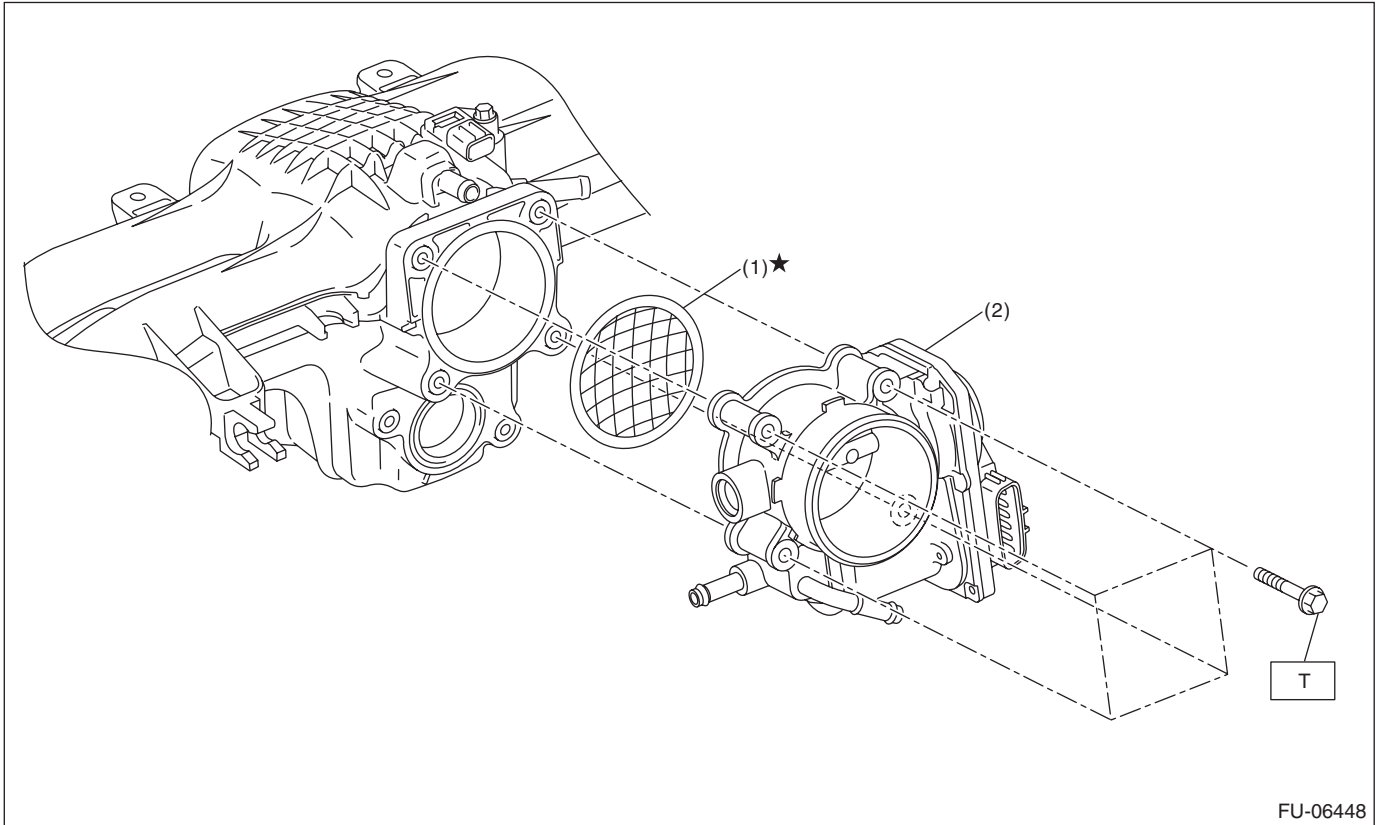
FU-08144

- |                        |                         |
|------------------------|-------------------------|
| (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

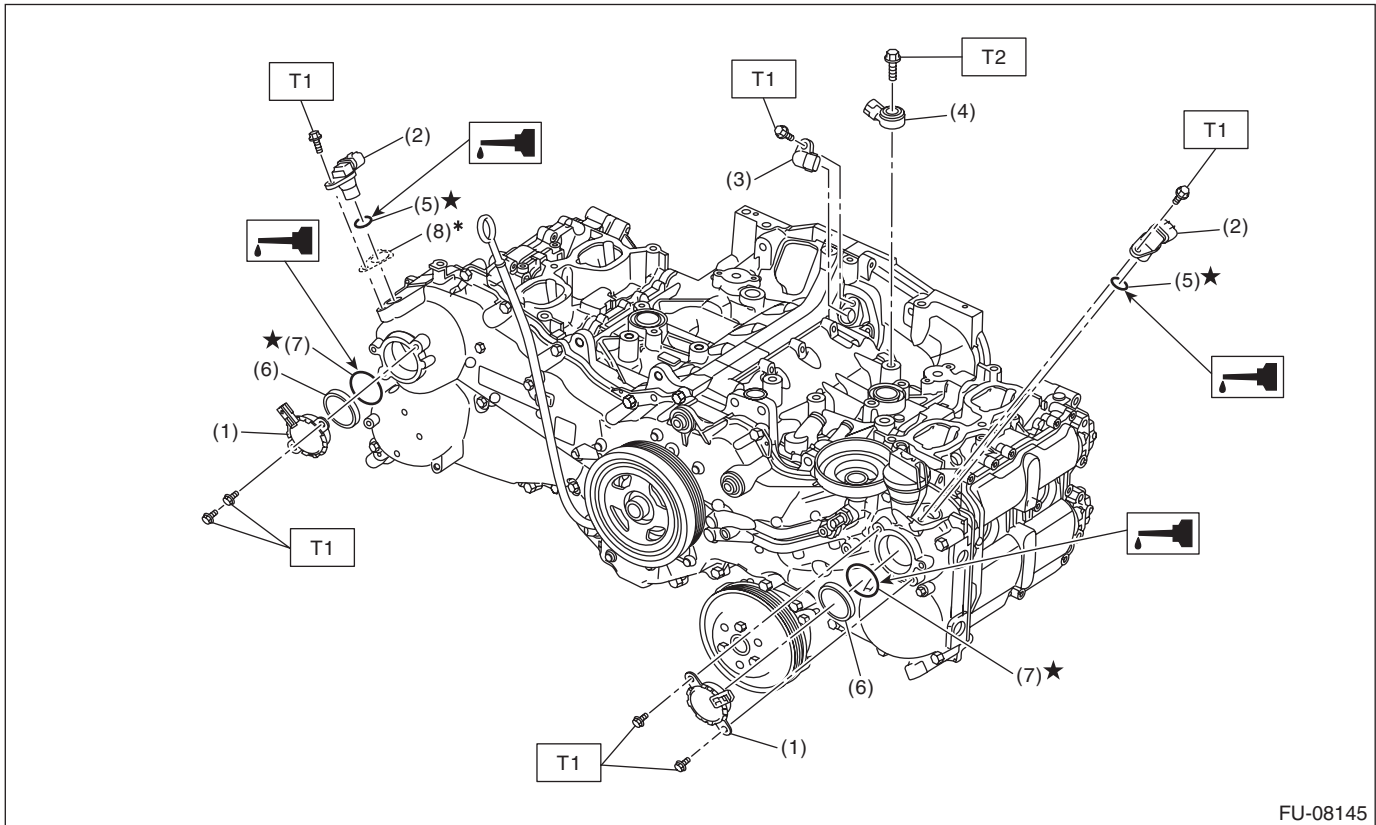
**Tightening torque: N·m (kgf-m, ft-lb)**

**T: 8 (0.8, 5.9)**

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

### 4. CRANKSHAFT POSITION, CAMSHAFT POSITION AND KNOCK SENSORS



- |                                |                  |
|--------------------------------|------------------|
| (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       |

\* Zero or one spacer for gap adjustment.

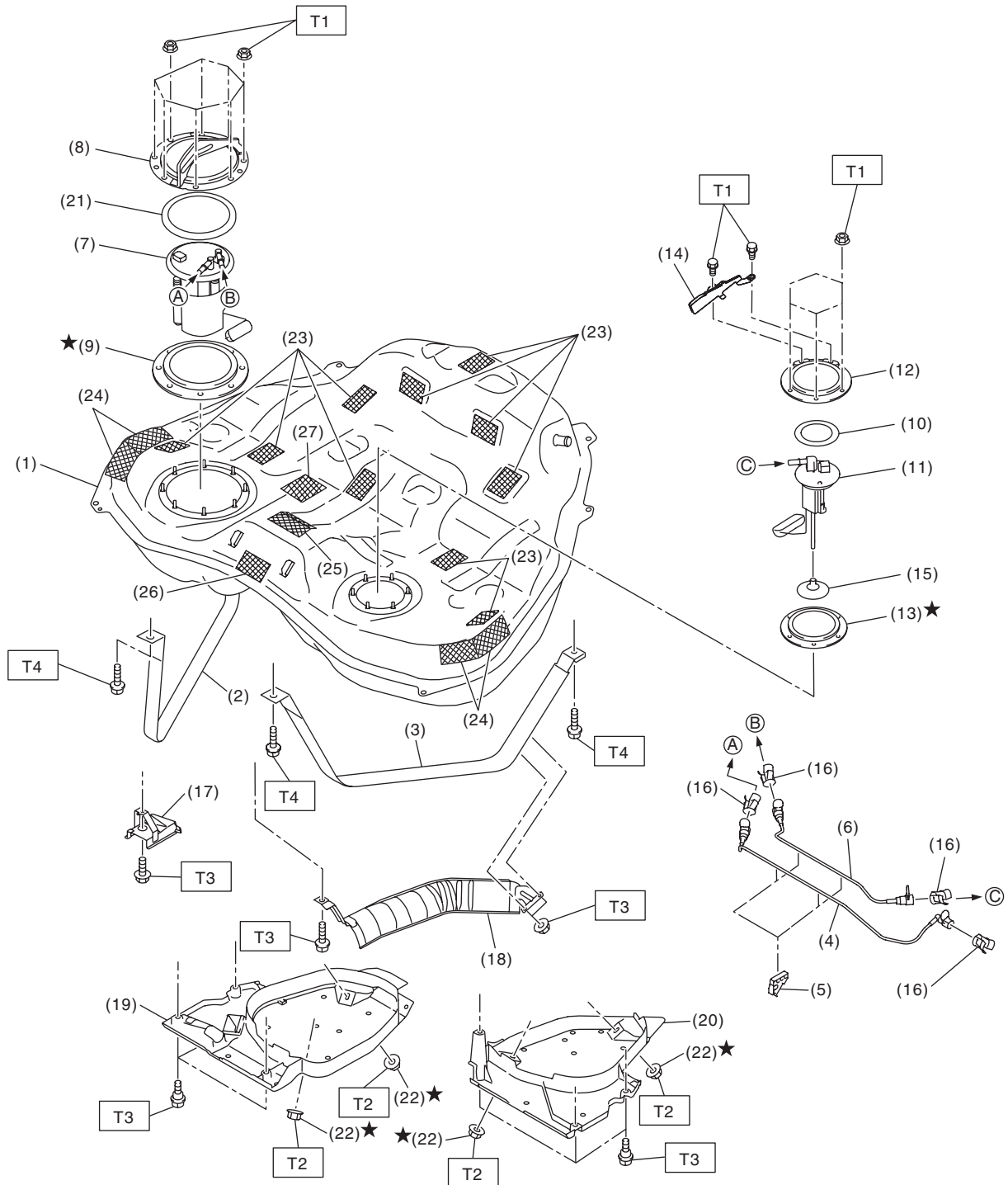
**Tightening torque: N·m (kgf·m, ft·lb)**

**T1: 6.4 (0.7, 4.7)**

**T2: 24 (2.4, 17.7)**

# General Description

## 5. FUEL TANK



FU-08131

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

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(1) Fuel tank	(12) Fuel sub level sensor upper plate	(23) Cushion
(2) Fuel tank band RH	(13) Fuel sub level sensor gasket	(24) Cushion
(3) Fuel tank band LH	(14) Fuel sub level sensor protector	(25) Cushion
(4) Fuel delivery tube	(15) Fuel sub level sensor filter	(26) Cushion
(5) Tube clamp	(16) Retainer	(27) Cushion
(6) Fuel sub delivery tube	(17) Stopper	
(7) Fuel pump ASSY	(18) Heat shield cover	
(8) Fuel pump upper plate	(19) Fuel tank protector RH	
(9) Fuel pump gasket	(20) Fuel tank protector LH	
(10) Fuel sub level sensor upper plate cushion	(21) Fuel pump upper plate cushion	
(11) Fuel sub level sensor	(22) Self-locking nut	

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**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)**

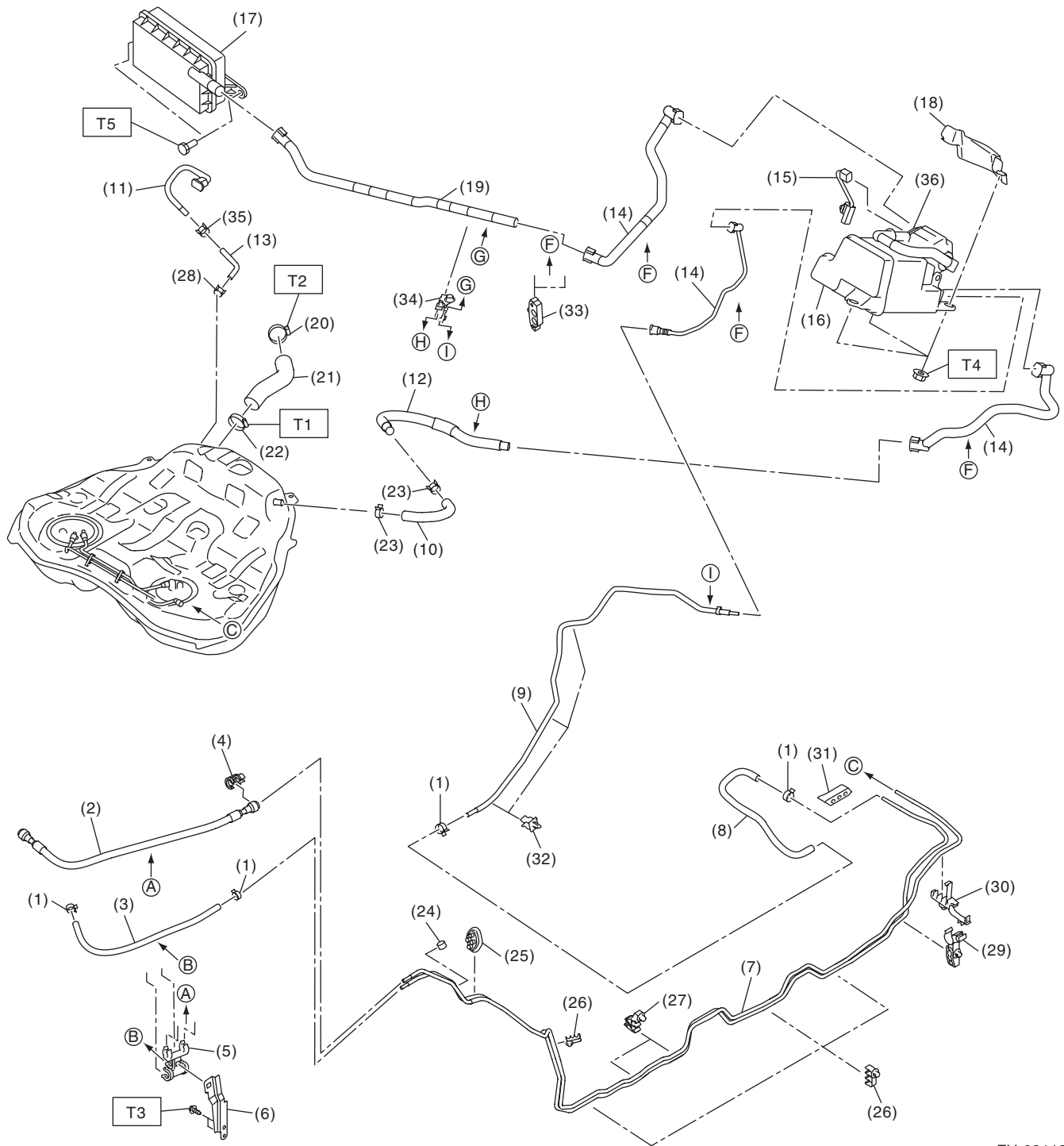
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**T4: 33 (3.4, 24.3)**

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# General Description

## 6. FUEL LINE



FU-08113



# General Description

## FUEL INJECTION (FUEL SYSTEMS)

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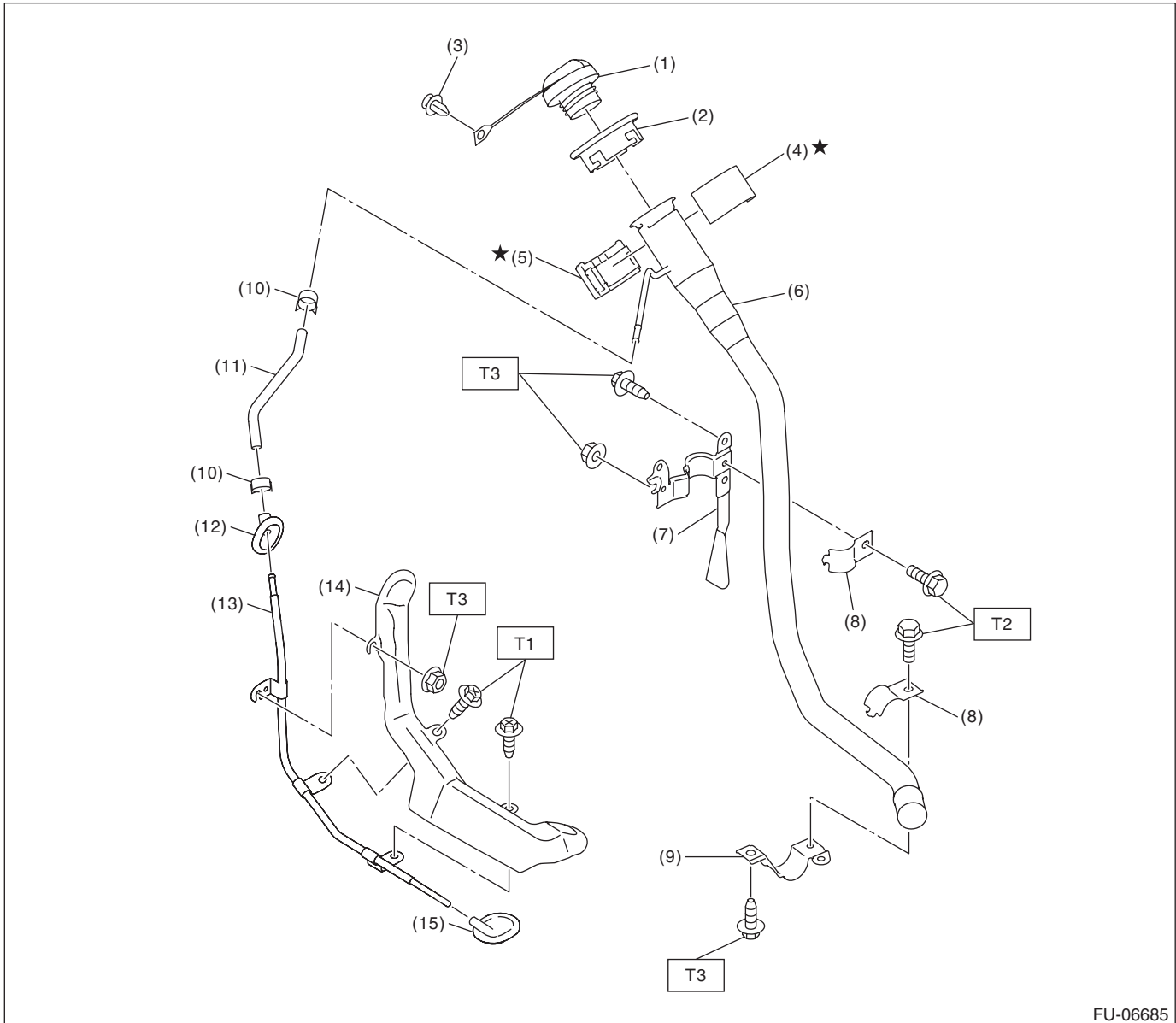
(1) Clip	(16) Canister	(30) Pipe clamp
(2) Fuel delivery hose	(17) Drain filter	(31) Fuel pipe rear grommet
(3) Evaporation hose	(18) Canister protector	(32) Pipe clamp
(4) Connect check cover	(19) Drain tube ASSY	(33) Tube clamp
(5) Hose clamp	(20) Clamp	(34) Tube clamp
(6) Hose clamp bracket	(21) Fuel filler hose	(35) Clip
(7) Fuel pipe ASSY	(22) Clamp	(36) Leak check valve ASSY
(8) Purge hose	(23) Clip	
(9) Purge pipe	(24) Bushing	
(10) Air vent hose A	(25) Fuel pipe front grommet	<hr/> <b>Tightening torque: N·m (kgf-m, ft-lb)</b>
(11) Circulate tube	(26) Pipe clamp	<b>T1: 2 (0.2, 1.5)</b>
(12) Air vent tube	(27) Pipe clamp	<b>T2: 2.5 (0.3, 1.8)</b>
(13) Circulate hose	(28) Clip	<b>T3: 7.5 (0.8, 5.5)</b>
(14) Canister tube ASSY	(29) Pipe clamp	<b>T4: 8 (0.8, 5.9)</b>
(15) Connector ASSY		<b>T5: 7.5 (0.8, 5.5)</b>

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# General Description

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## 7. FUEL FILLER PIPE



FU-06685

- |                                |                                 |              |
|--------------------------------|---------------------------------|--------------|
| (1) Fuel filler cap            | (8) Fuel filler pipe bracket B  | (15) Grommet |
| (2) Fuel filler pipe protector | (9) Fuel filler pipe bracket C  |              |
| (3) Clip                       | (10) Clip                       |              |
| (4) Neck holder A              | (11) Evaporation hose           |              |
| (5) Neck holder B              | (12) Grommet                    |              |
| (6) Fuel filler pipe           | (13) Evaporation pipe           |              |
| (7) Fuel filler pipe bracket A | (14) Evaporation pipe protector |              |

**Tightening torque: N-m (kgf-m, ft-lb)**

**T1: 1 (0.1, 0.7)**

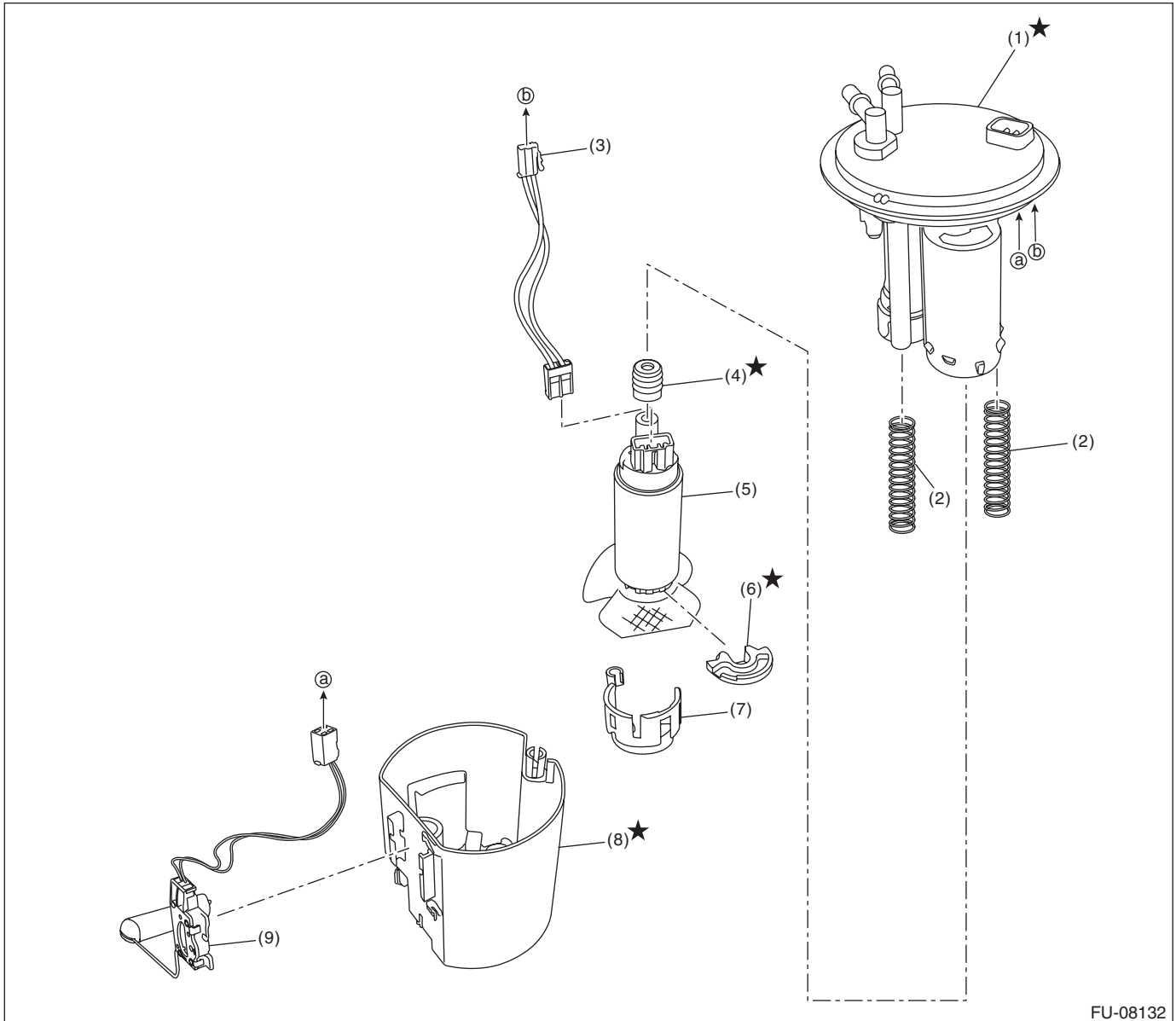
**T2: 7.35 (0.7, 5.4)**

**T3: 7.5 (0.8, 5.5)**

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

### 8. FUEL PUMP



FU-08132

- |                        |                            |                       |
|------------------------|----------------------------|-----------------------|
| (1) Fuel filter ASSY   | (4) Packing spacer         | (7) Fuel pump holder  |
| (2) Pump module spring | (5) Fuel pump              | (8) Fuel chamber ASSY |
| (3) Fuel pump harness  | (6) Support rubber cushion | (9) Fuel level sensor |

### **C: CAUTION**

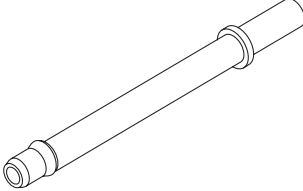
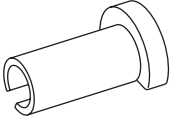
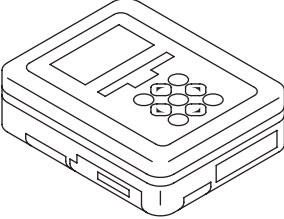
- Prior to starting work, pay special attention to the following:
  1. Always wear work clothes, a work cap, and protective shoes. Additionally, wear a helmet, protective goggles, etc. if necessary.
  2. Protect the vehicle using a seat cover, fender cover, etc.
  3. Prepare the service tools, clean 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.

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## D: PREPARATION TOOL

### 1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST18471AA000</p>	18471AA000	FUEL PIPE ADAPTER	Used for draining fuel.
 <p style="text-align: center;">ST42099AE000</p>	42099AE000	QUICK CONNECTOR RELEASE	Used for removing the quick connector.
 <p style="text-align: center;">ST1B022XU0</p>	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.