

## General Description

### FUEL INJECTION (FUEL SYSTEMS)

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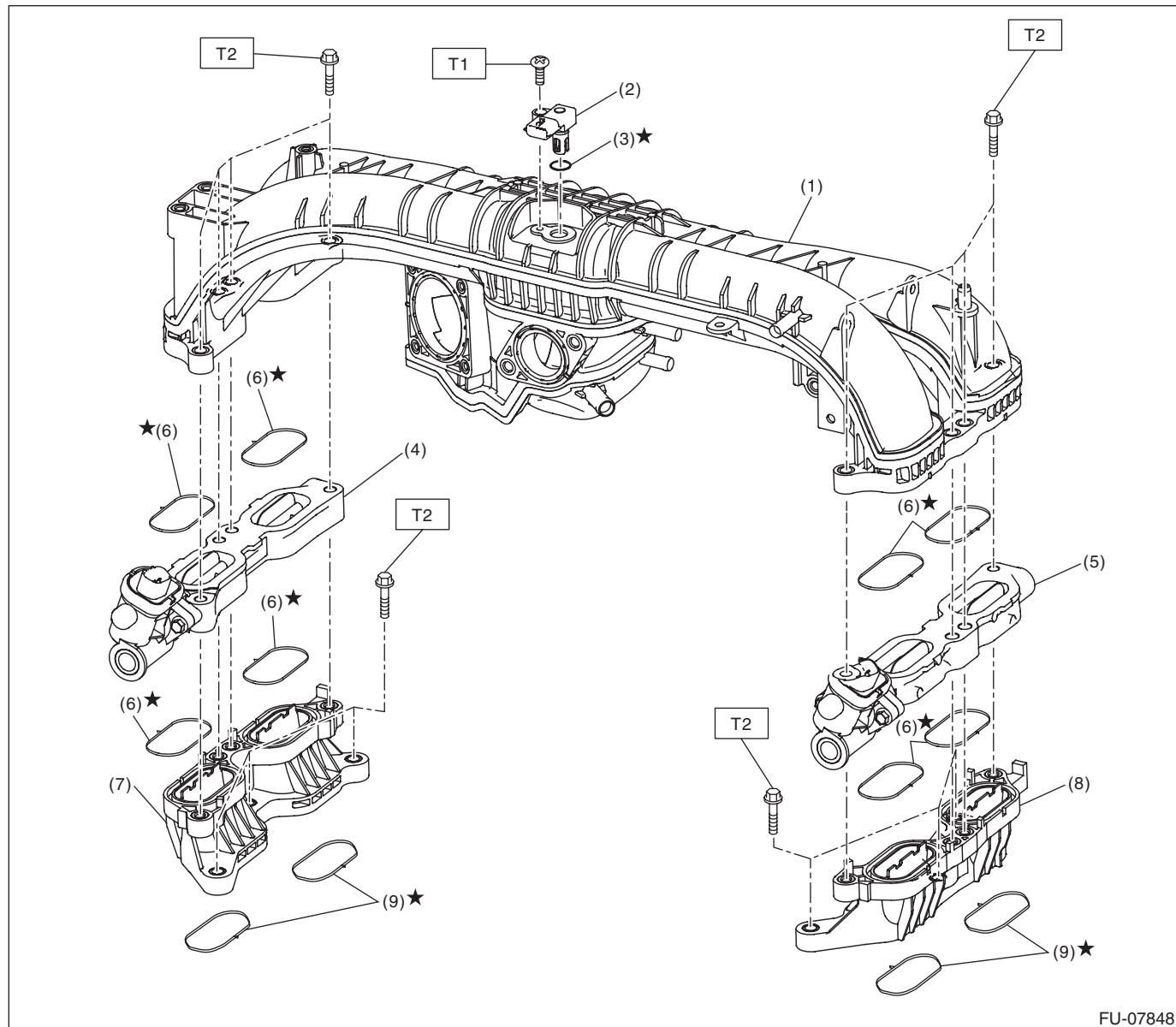
## 1. General Description

### 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	940 kPa (9.6 kg/cm <sup>2</sup> , 123.3 psi), or less
	Discharge rate	153 L (40.4 US gal, 33.7 Imp gal)/h or more [12 V at 343 kPa (3.5 kg/cm <sup>2</sup> , 49.7 psi)]
Fuel filter		In-tank type

### B: COMPONENT

#### 1. INTAKE MANIFOLD



FU-07848

(1) Intake manifold	(6) Gasket
(2) Manifold absolute pressure and intake air temperature sensor	(7) Air intake adapter LH
(3) O-ring	(8) Air intake adapter RH
(4) Tumble generator valve ASSY LH	(9) Gasket
(5) Tumble generator valve ASSY RH	

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

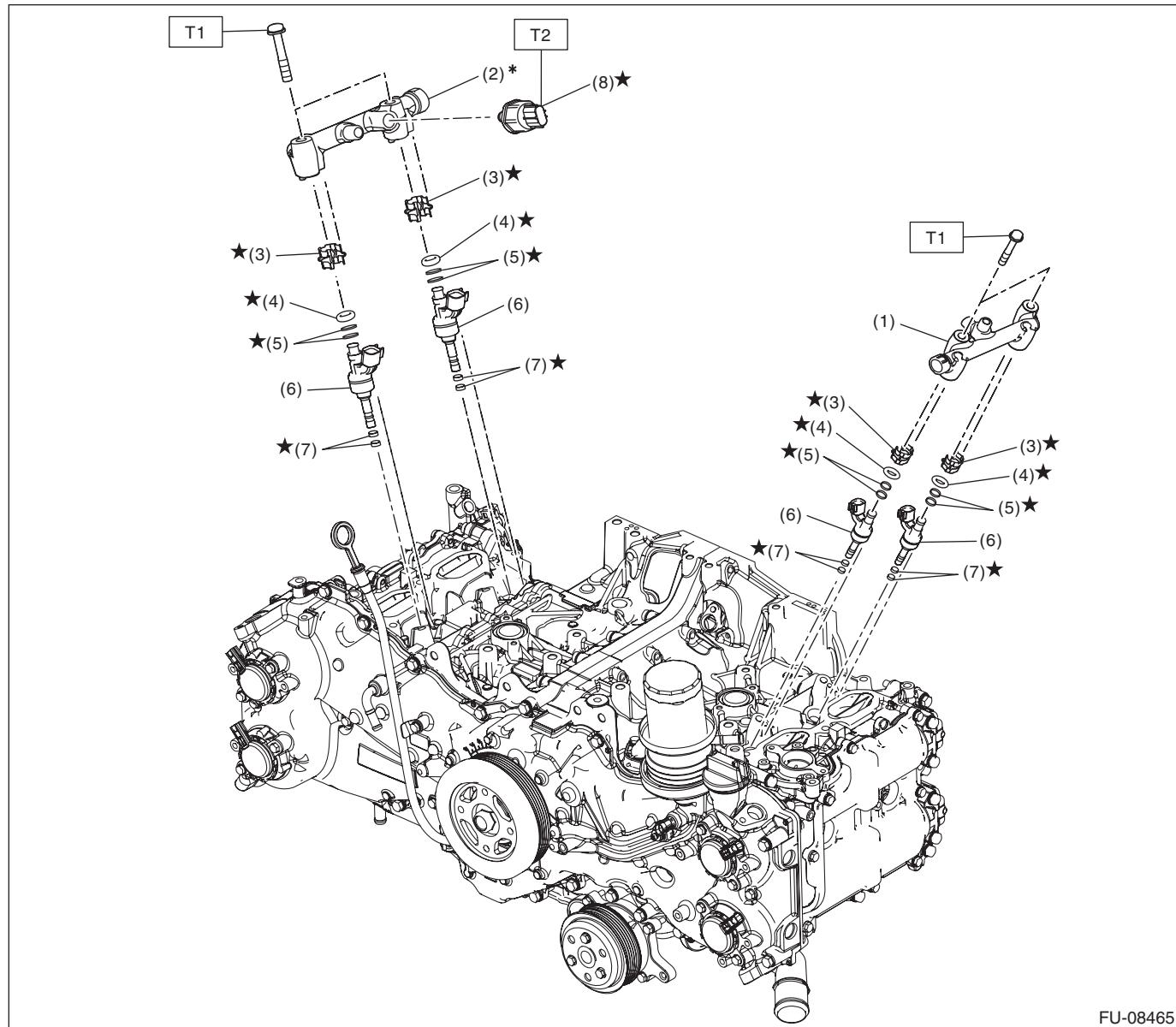
**T1: 3.5 (0.4, 2.6)**

**T2: 25 (2.5, 18.4)**

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

### 2. FUEL INJECTOR 1



(1) Fuel injector pipe LH	(5) Back-up ring
(2) Fuel injector pipe RH	(6) Fuel injector
(3) Holder	(7) Injector seal
(4) O-ring	(8) Fuel pressure sensor

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

**T1: 19 (1.9, 14.0)**

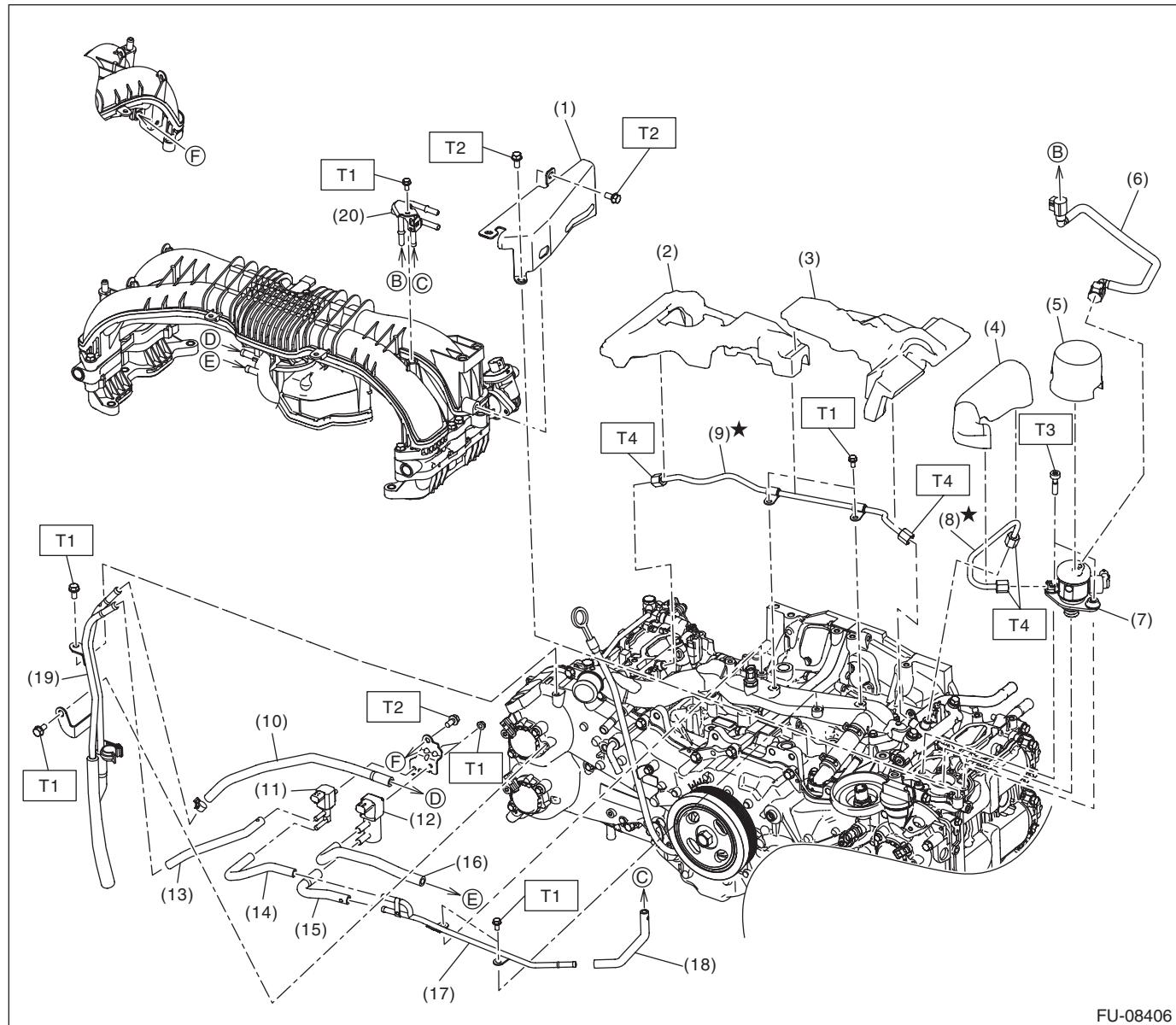
**T2: 46 (4.7, 33.9)**

\* When removing the fuel pressure sensor from the fuel injector pipe RH, replace it with a new one.

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## FUEL INJECTION (FUEL SYSTEMS)

### 3. FUEL INJECTOR 2



FU-08406

(1) Fuel pipe protector	(10) Vacuum control hose	(19) Vacuum pipe ASSY
(2) Fuel pipe insulator No. 3	(11) Purge control solenoid valve A	(20) Fuel pipe ASSY
(3) Fuel pipe insulator No. 2	(12) Purge control solenoid valve B	
(4) Fuel pipe insulator No. 1	(13) Vacuum hose A	
(5) Fuel pump insulator	(14) Vacuum hose B	
(6) Fuel delivery pipe	(15) Vacuum hose C	
(7) High-pressure fuel pump	(16) Vacuum hose D	
(8) High-pressure fuel delivery pipe	(17) Canister pipe	
(9) High-pressure fuel delivery pipe ASSY	(18) Vacuum hose E	

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

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

**T2: 19 (1.9, 14.0)**

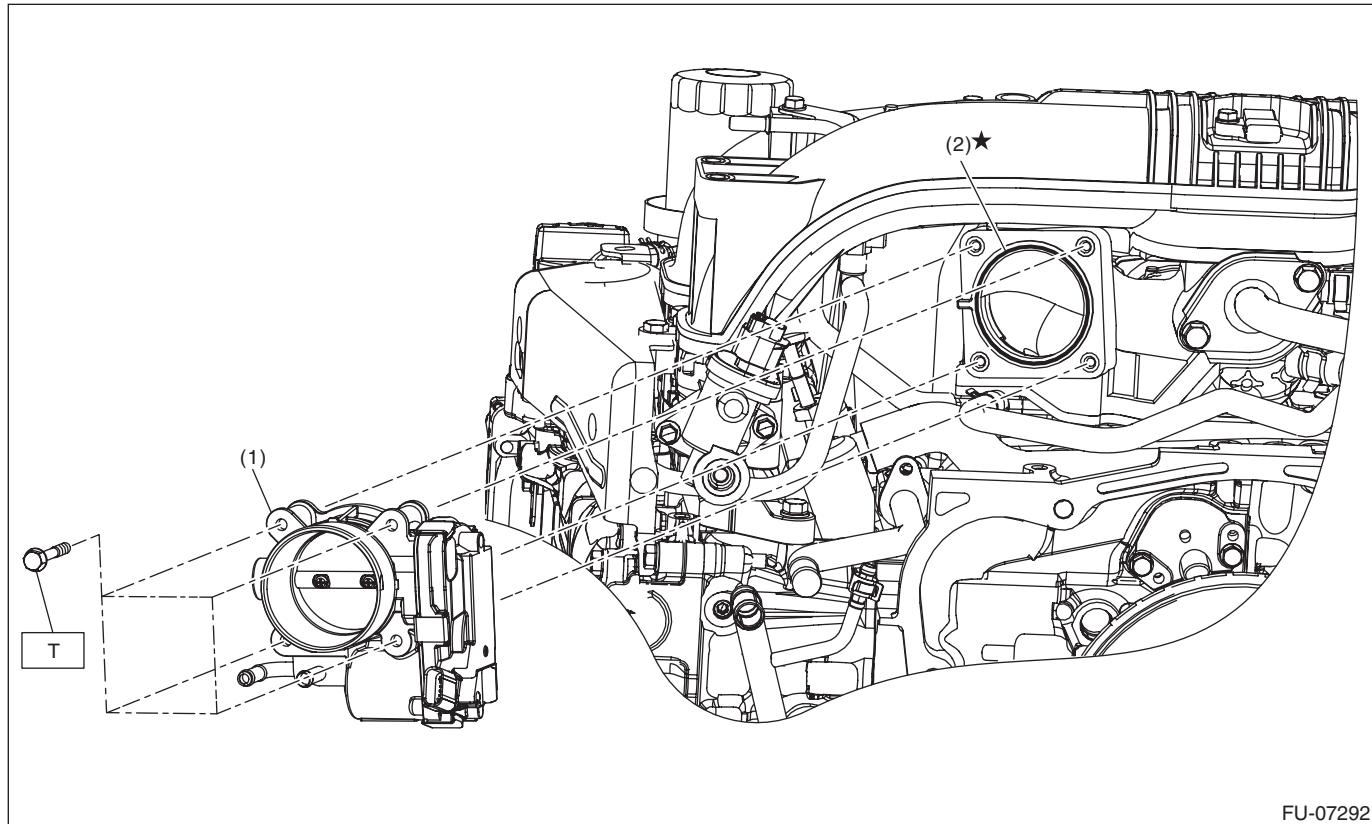
**T3: 21 (2.1, 15.5)**

**T4: 25 (2.5, 4.7)**

# General Description

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### 4. THROTTLE BODY



FU-07292

(1) Throttle body

(2) Gasket

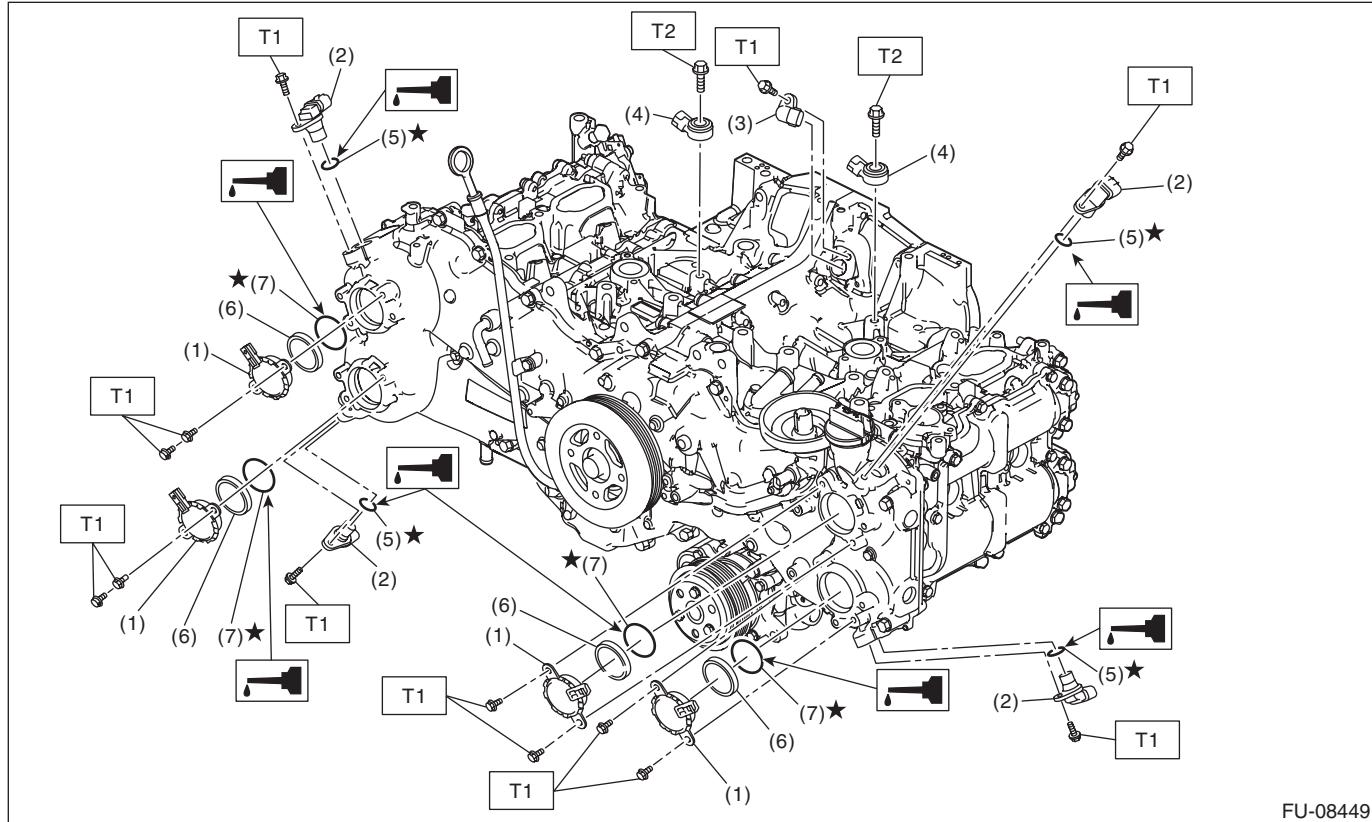
**Tightening torque: N·m (kgf·m, ft·lb)**

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

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

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



(1) Oil control solenoid  
(2) Camshaft position sensor  
(3) Crankshaft position sensor  
(4) Knock sensor

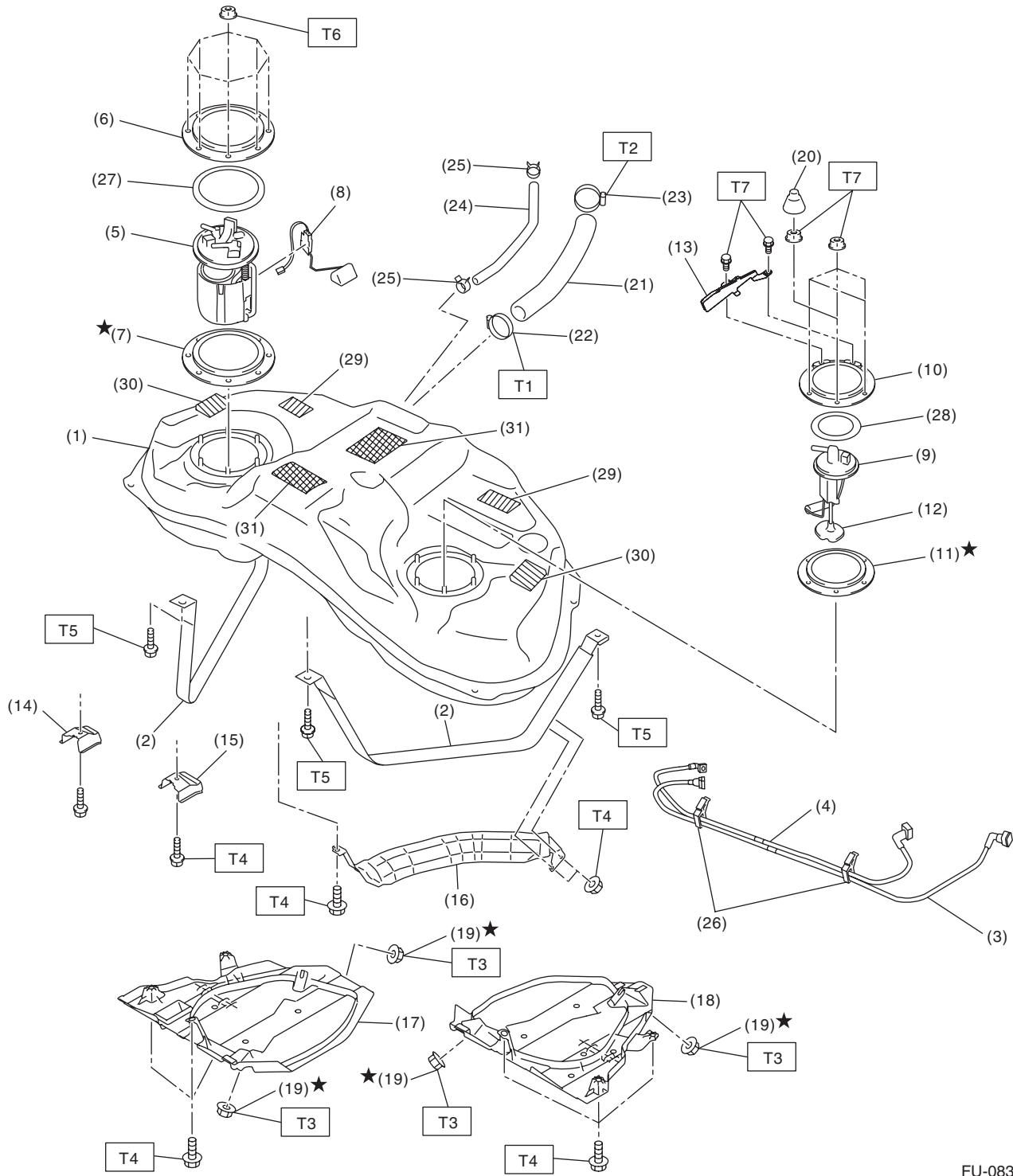
(5) O-ring  
(6) Back-up ring  
(7) O-ring

**Tightening torque: N·m (kgf·m, ft·lb)**  
**T1: 6.4 (0.7, 4.7)**  
**T2: 24 (2.4, 17.7)**

## General Description

## FUEL INJECTION (FUEL SYSTEMS)

## 6. FUEL TANK



FU-08300

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

(1) Fuel tank	(15) Stopper LH	(28) Fuel sub level sensor upper plate cushion
(2) Fuel tank band	(16) Heat shield cover	(29) Cushion
(3) Fuel delivery tube	(17) Fuel tank protector RH	(30) Cushion
(4) Jet pump tube	(18) Fuel tank protector LH	(31) Cushion
(5) Fuel pump ASSY	(19) Self-locking nut	
(6) Fuel pump upper plate	(20) Rubber cap	
(7) Fuel pump gasket	(21) Fuel filler hose	
(8) Fuel level sensor	(22) Clamp	
(9) Fuel sub level sensor	(23) Clamp	
(10) Fuel sub level sensor upper plate	(24) Evaporation hose	
(11) Fuel sub level sensor gasket	(25) Clip	
(12) Fuel sub level sensor filter	(26) Tube clamp	
(13) Fuel sub level sensor protector	(27) Fuel pump upper plate cushion	
(14) Stopper RH		

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

**T1:** 2 (0.2, 1.5)

**T2:** 2.5 (0.3, 1.8)

**T3:** 9 (0.9, 6.6)

**T4:** 18 (1.8, 13.3)

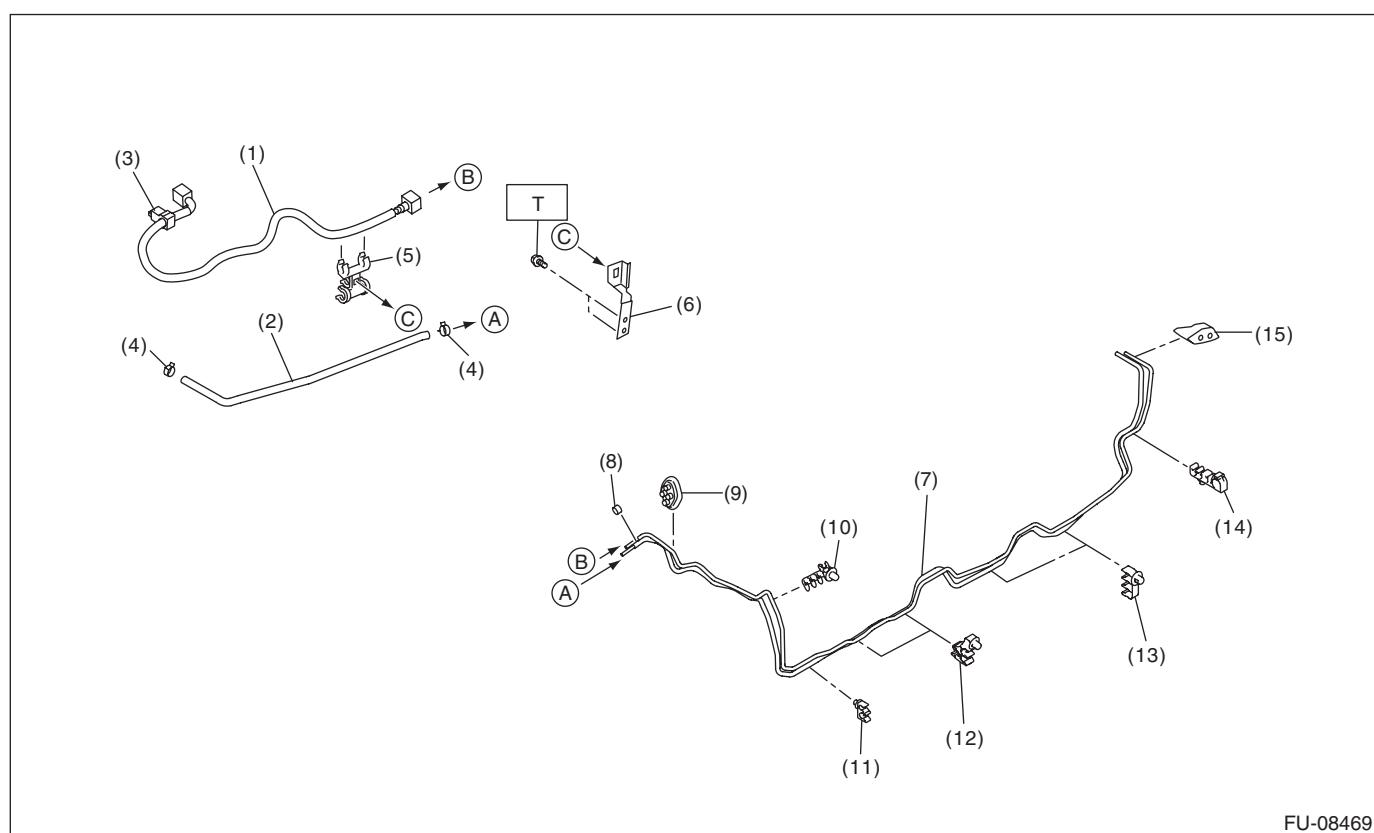
**T5:** <Ref. to FU(w/o STI)-157,  
INSTALLATION, Fuel Tank.>

**T6:** <Ref. to FU(w/o STI)-171,  
INSTALLATION, Fuel Pump.>

**T7:** <Ref. to FU(w/o STI)-180,  
INSTALLATION, Fuel Sub Level  
Sensor.>

## 7. FUEL LINE

### • Fuel line 1



FU-08469

(1) Fuel delivery tube	(7) Fuel pipe ASSY	(13) Pipe clamp
(2) Evaporation hose	(8) Bushing	(14) Pipe clamp
(3) Tube clamp	(9) Fuel pipe front grommet	(15) Fuel pipe rear grommet
(4) Clip	(10) Pipe clamp	
(5) Hose clamp	(11) Pipe clamp	
(6) Hose clamp bracket	(12) Pipe clamp	

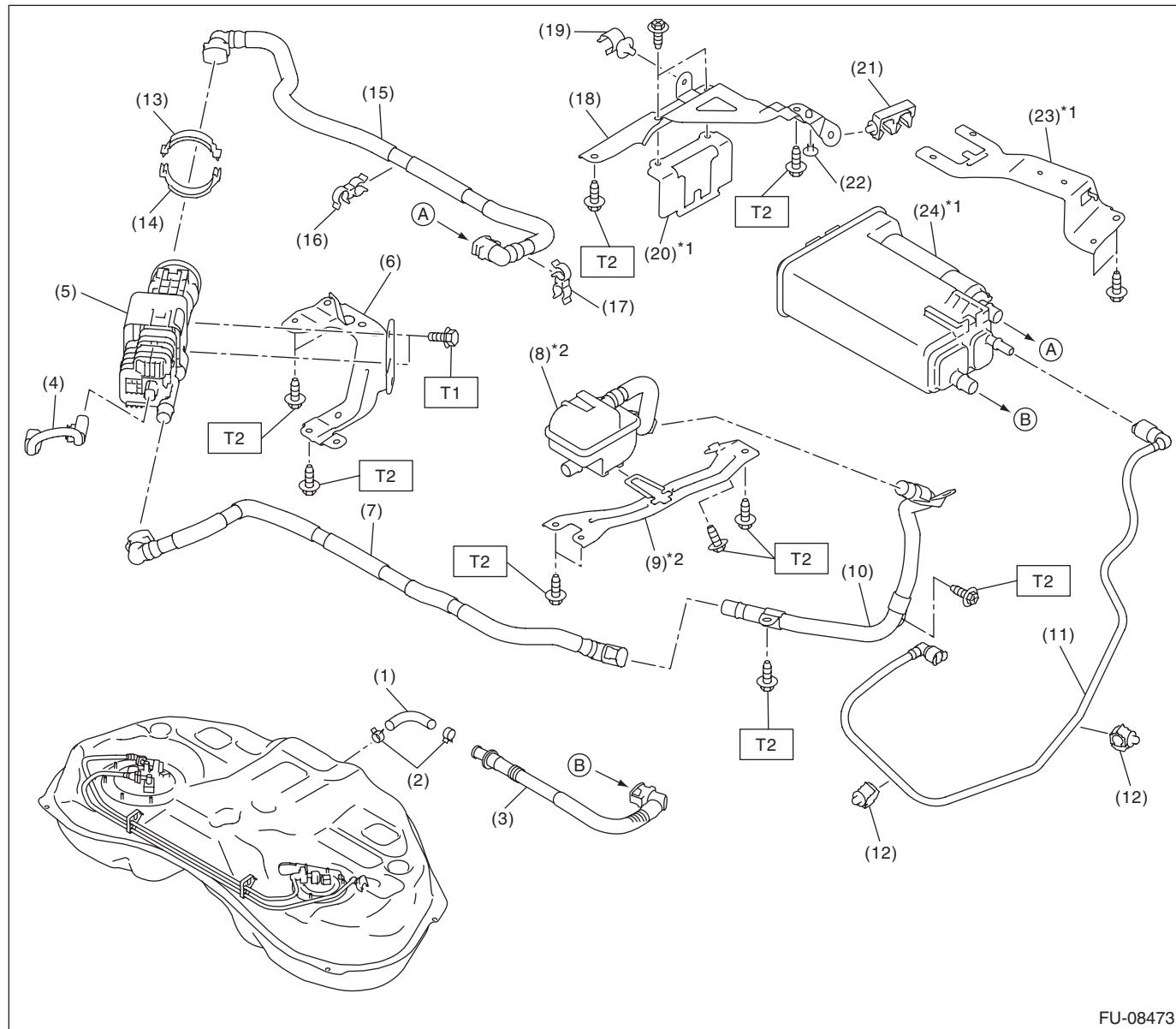
### Tightening torque: N·m (kgf·m, ft-lb)

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

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

- Fuel line 2



FU-08473

(1) Vent hose	(11) Purge tube	(20) Canister bracket B
(2) Clip	(12) Tube clamp	(21) Tube clamp
(3) Vent tube	(13) Clamp B	(22) Clip
(4) Harness	(14) Clamp A	(23) Canister bracket C
(5) Leak check valve ASSY	(15) Drain tube B	(24) Canister
(6) Leak check valve bracket	(16) Tube clamp	
(7) Drain tube A	(17) Tube clamp	
(8) Drain filter	(18) Canister bracket A	
(9) Drain bracket	(19) Tube clamp	
(10) Drain pipe		

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

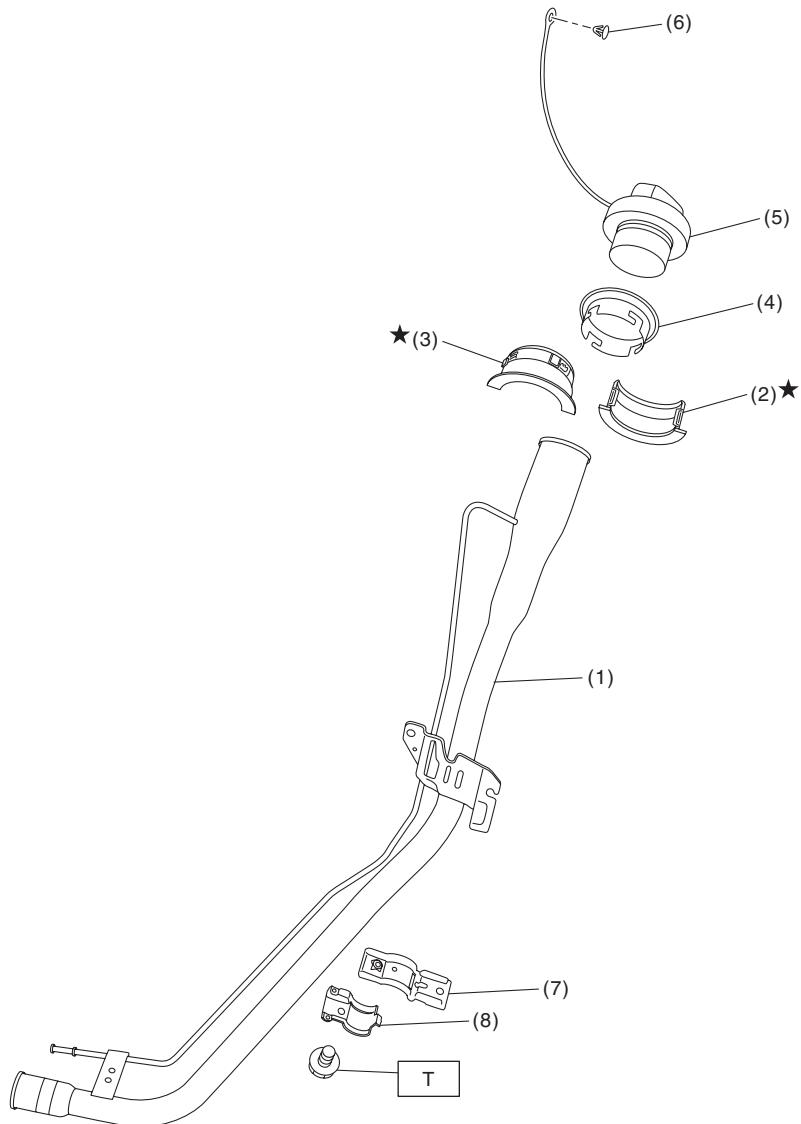
**T1: 5.4 (0.6, 4.0)**

**T2: 7.5 (0.8, 5.5)**

\*1 The canister bracket cannot be separated from the canister. Therefore, be sure to replace both of them with new ones when replacing the canister or canister bracket.

\*2 The drain filter cannot be separated from the drain bracket. Therefore, be sure to replace both of them with new ones when replacing the drain bracket or drain filter.

### 8. FUEL FILLER PIPE



FU-08448

(1) Fuel filler pipe ASSY	(5) Fuel filler cap
(2) Neck holder A	(6) Clip
(3) Neck holder B	(7) Upper bracket
(4) Fuel filler pipe protector	(8) Lower bracket

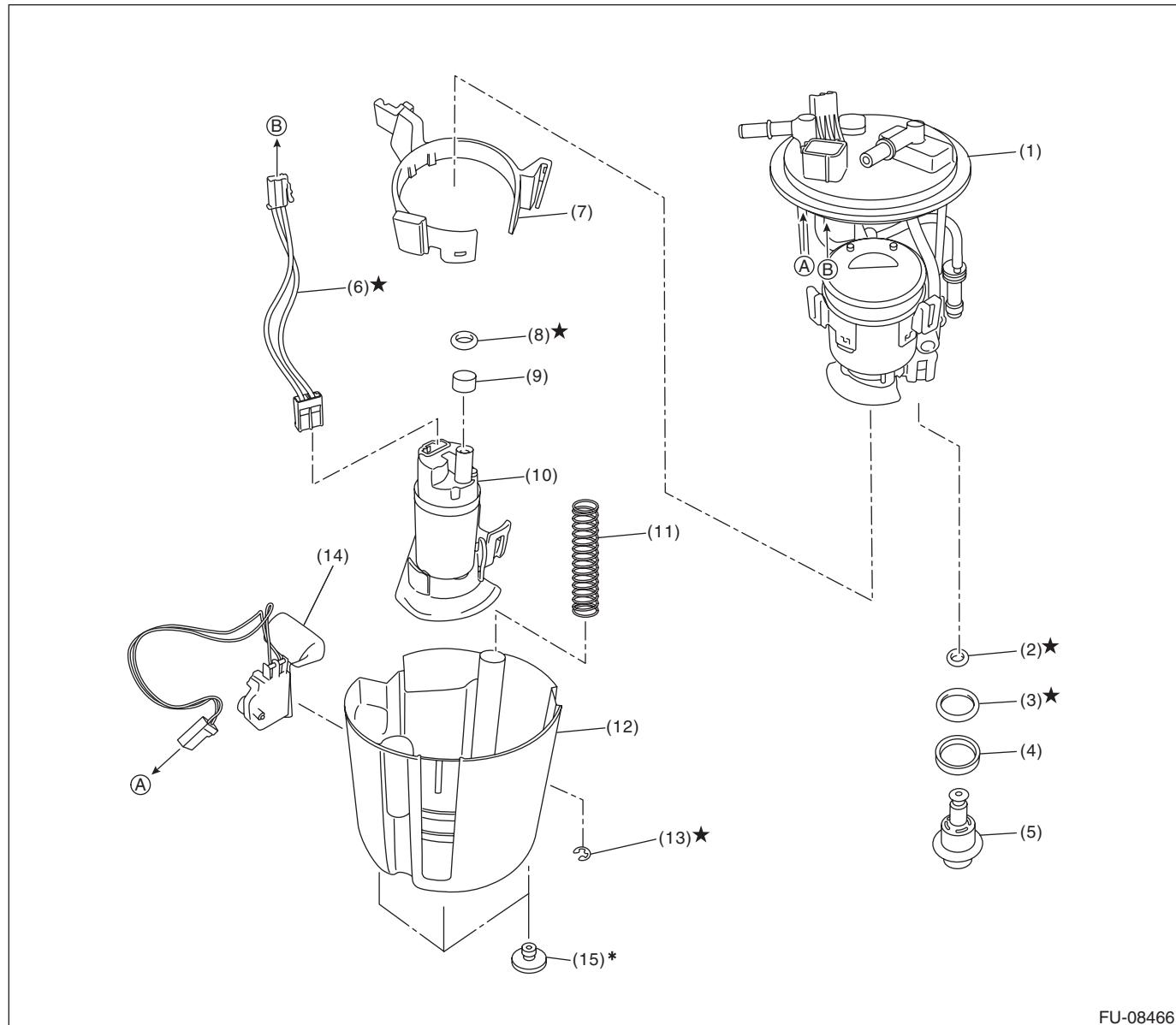
***Tightening torque: N·m (kgf·m, ft·lb)***

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

# General Description

## FUEL INJECTION (FUEL SYSTEMS)

### 9. FUEL PUMP



FU-08466

(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

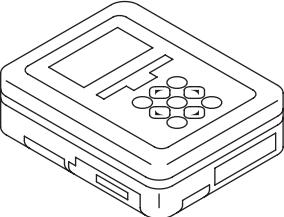
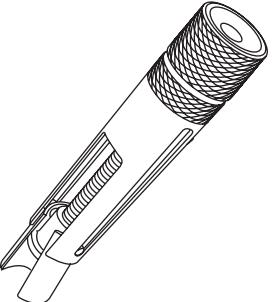
\* When removing the cushion from the fuel chamber assembly, replace it with a new part.

### 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.

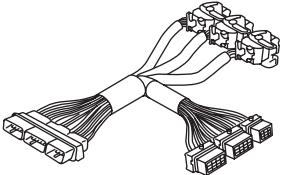
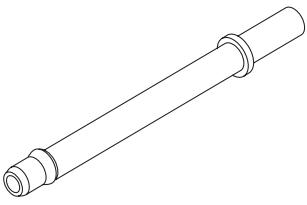
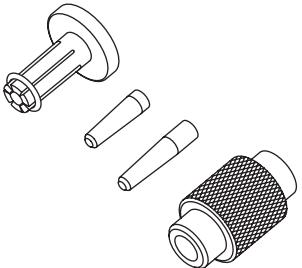
### D: PREPARATION TOOL

#### 1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for draining fuel and each inspection.
 ST18356AA000	18356AA000	INJECTOR REMOVER	Used for removing the injector.

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ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18460AA030	18460AA030	CHECK BOARD	Used for inspecting the fuel system.
 ST18471AA000	18471AA000	FUEL PIPE ADAPTER	Used for draining fuel.
 ST18683AA000	18683AA000	INJECTOR SEAL INSTALLER	Used for installing the injector seal.

## 2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Oscilloscope	Used for inspecting the waveform of each sensor.
TORX PLUS® bit 40IP	Used for removing and installing high-pressure fuel pump.
Mighty Vac	Used for inspecting the manifold absolute pressure and intake air temperature sensor.