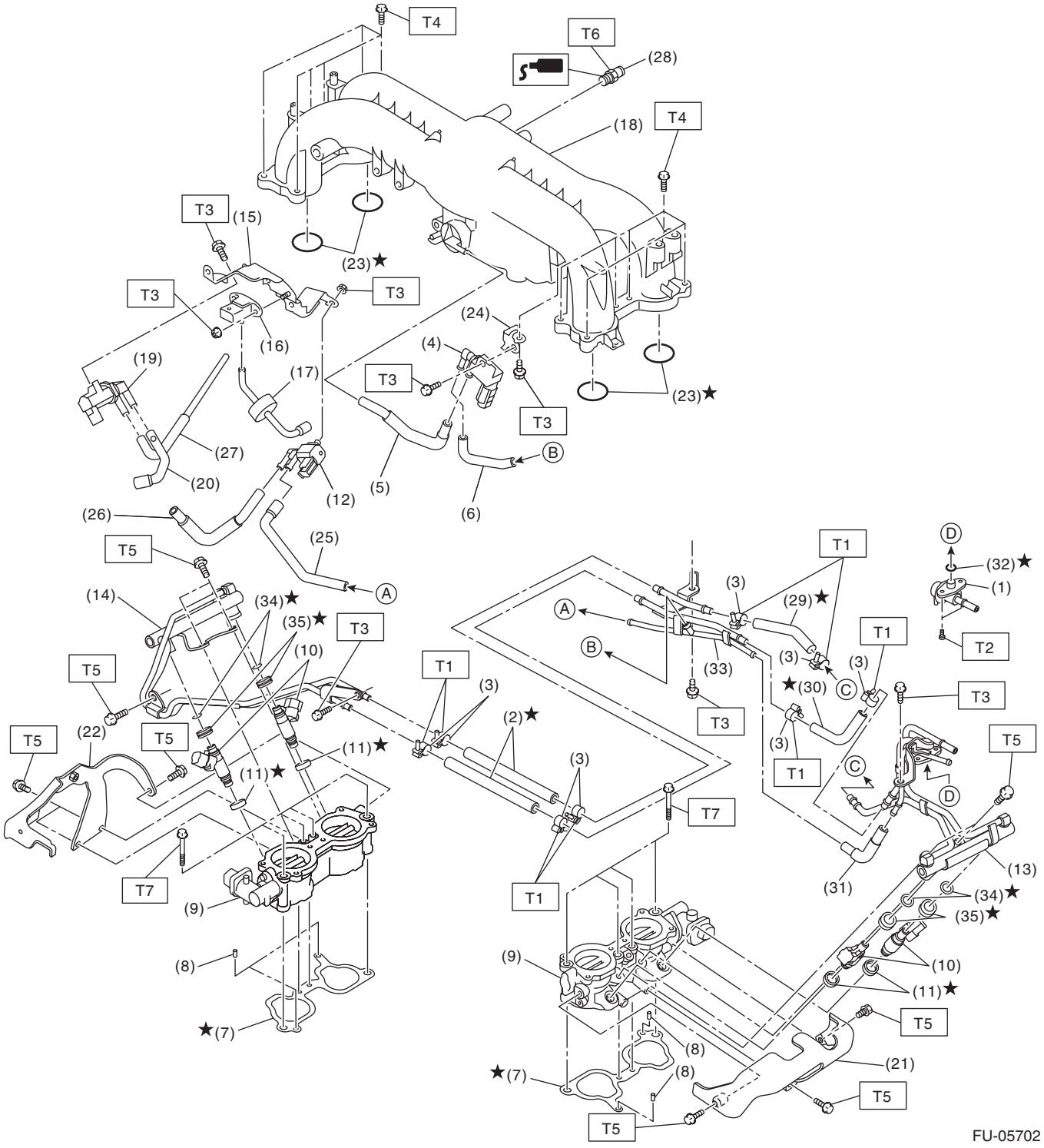
# 1. General Description

## 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<br>[12 V at 300 kPa (3.06 kgf/cm$^2$, 43.5 psi)] |
| Fuel filter | | In-tank type |

# B: COMPONENT

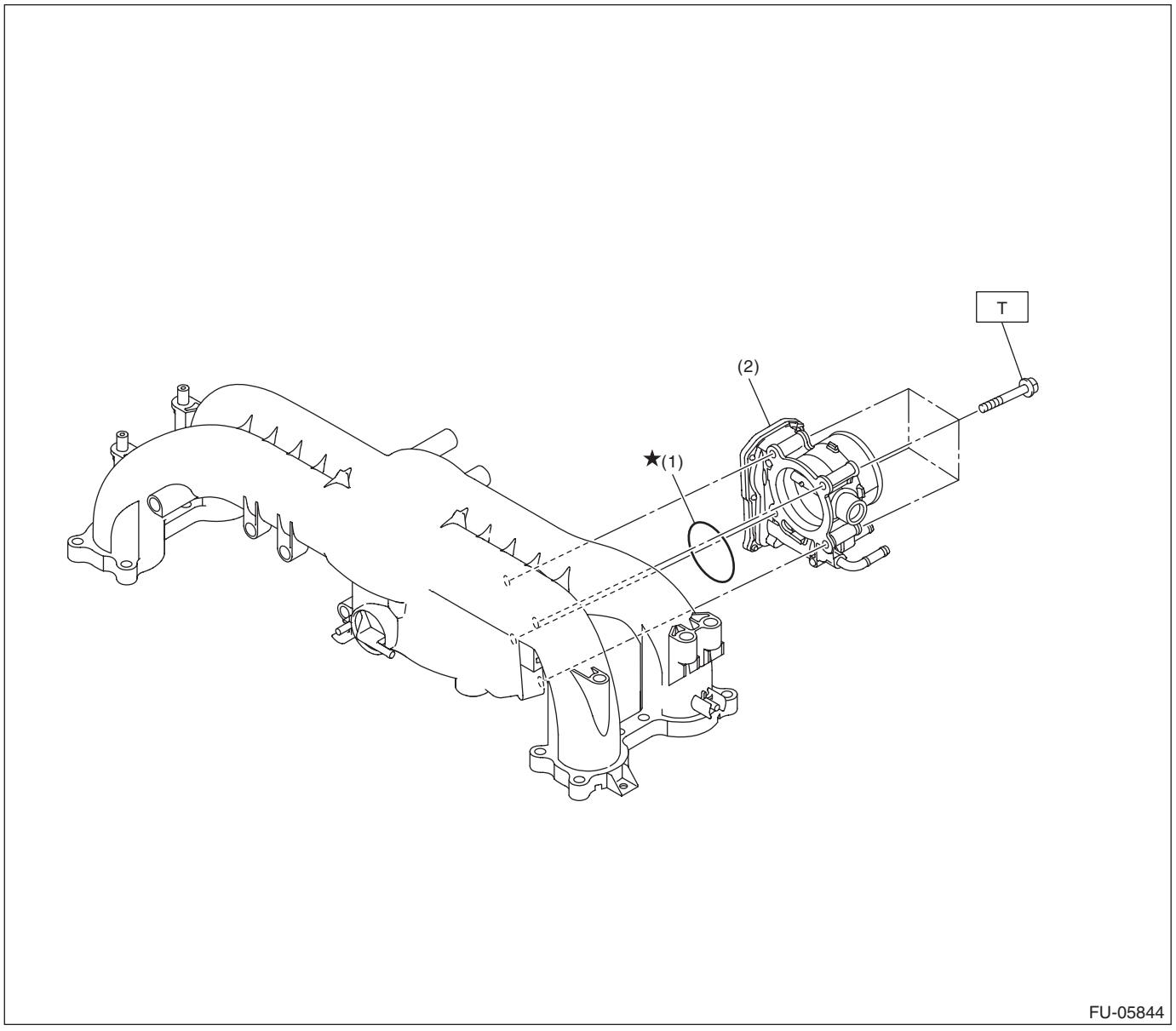
## 1. INTAKE MANIFOLD



(1) Pressure regulator
(2) Fuel hose A
(3) Clamp
(4) Purge control solenoid valve 1
(5) Vacuum hose D
(6) Vacuum hose C
(7) Intake manifold gasket
(8) Guide pin
(9) Tumble generator valve ASSY
(10) Fuel injector
(11) Seal ring
(12) Purge control solenoid valve 2
(13) Fuel injector pipe LH
(14) Fuel injector pipe RH
(15) Solenoid valve bracket
(16) Manifold absolute pressure sensor
(17) Filter
(18) Intake manifold
(19) Wastegate control solenoid valve ASSY
(20) Vacuum hose
(21) Fuel pipe protector LH
(22) Fuel pipe protector RH
(23) O-ring
(24) Solenoid valve bracket
(25) Vacuum hose B
(26) Vacuum hose A
(27) Air control hose
(28) Nipple
(29) Fuel hose B
(30) Fuel hose C
(31) Vacuum hose
(32) O-ring
(33) Fuel pipe
(34) O-ring
(35) Rubber

***Tightening torque: N·m (kgf-m, ft-lb)***
***T1: 1.25 (0.1, 0.9)***
***T2: 3.5 (0.4, 2.6)***
***T3: 6.4 (0.7, 4.7)***
***T4: 8.3 (0.8, 6.1)***
***T5: 19 (1.9, 14.0)***
***T6: 23 (2.3, 17.0)***
***T7: 25 (2.5, 18.4)***

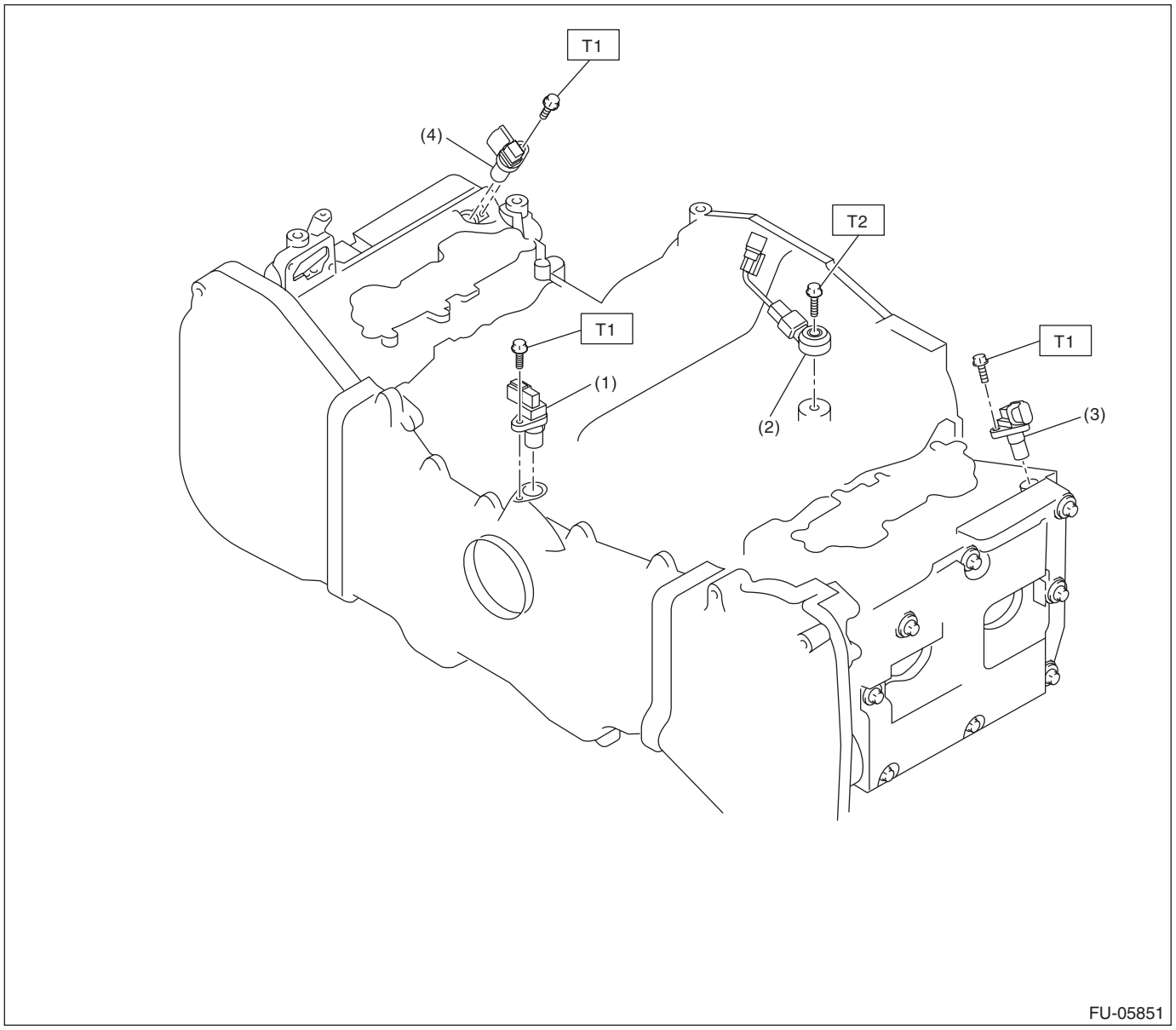
## 2. AIR INTAKE SYSTEM




(1) O-ring
(2) Throttle body

***Tightening torque: N·m (kgf-m, ft-lb)***
***T: 8 (0.8, 5.9)***

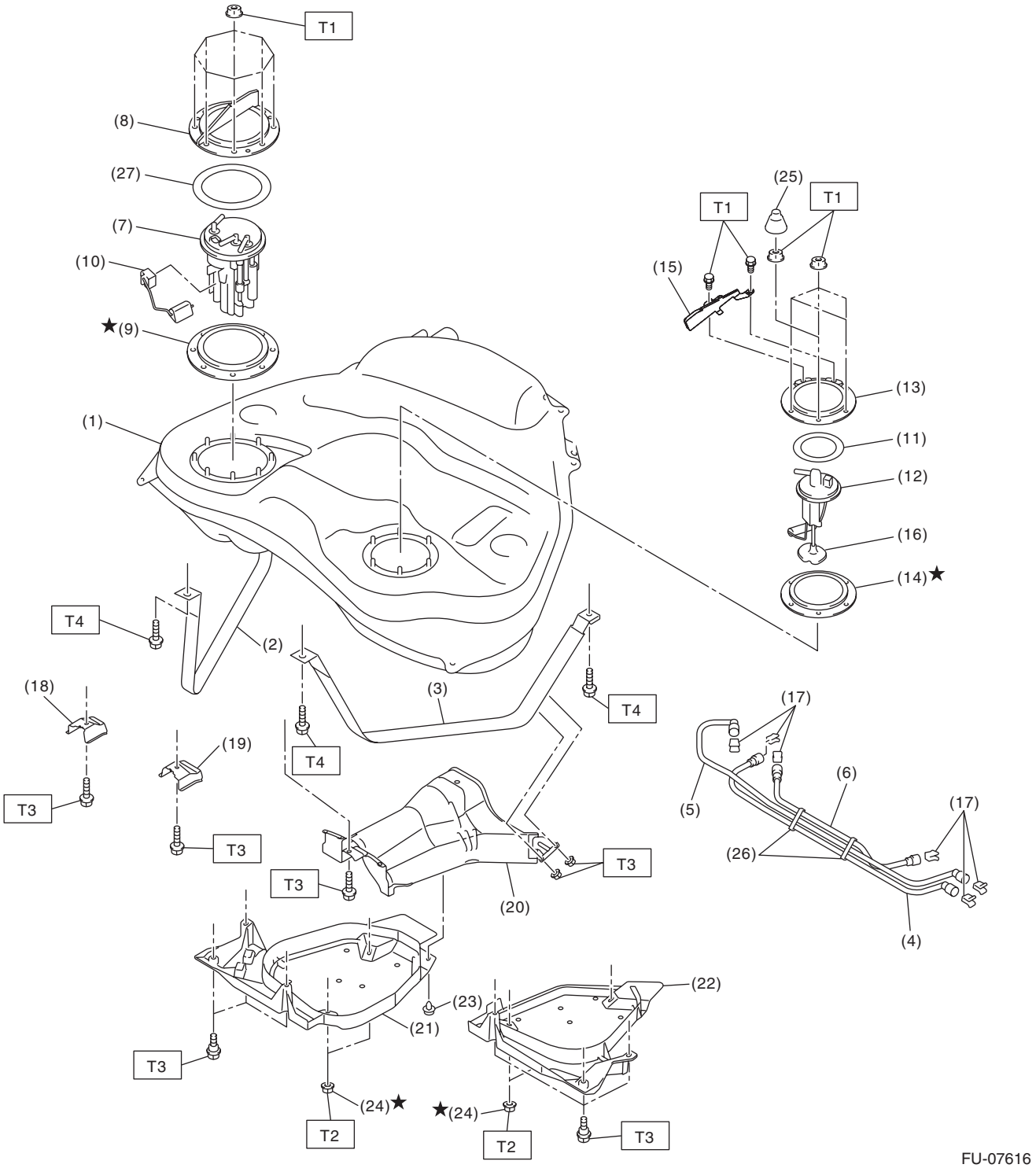
## 3. CRANKSHAFT POSITION, CAMSHAFT POSITION AND KNOCK SENSORS




(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)***

## 4. FUEL TANK


T1
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(27)
(7)
(10)
★(9)
(1)
(25)
T1
T1
(15)
(13)
(11)
(12)
(16)
(14)★
T4
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(20)
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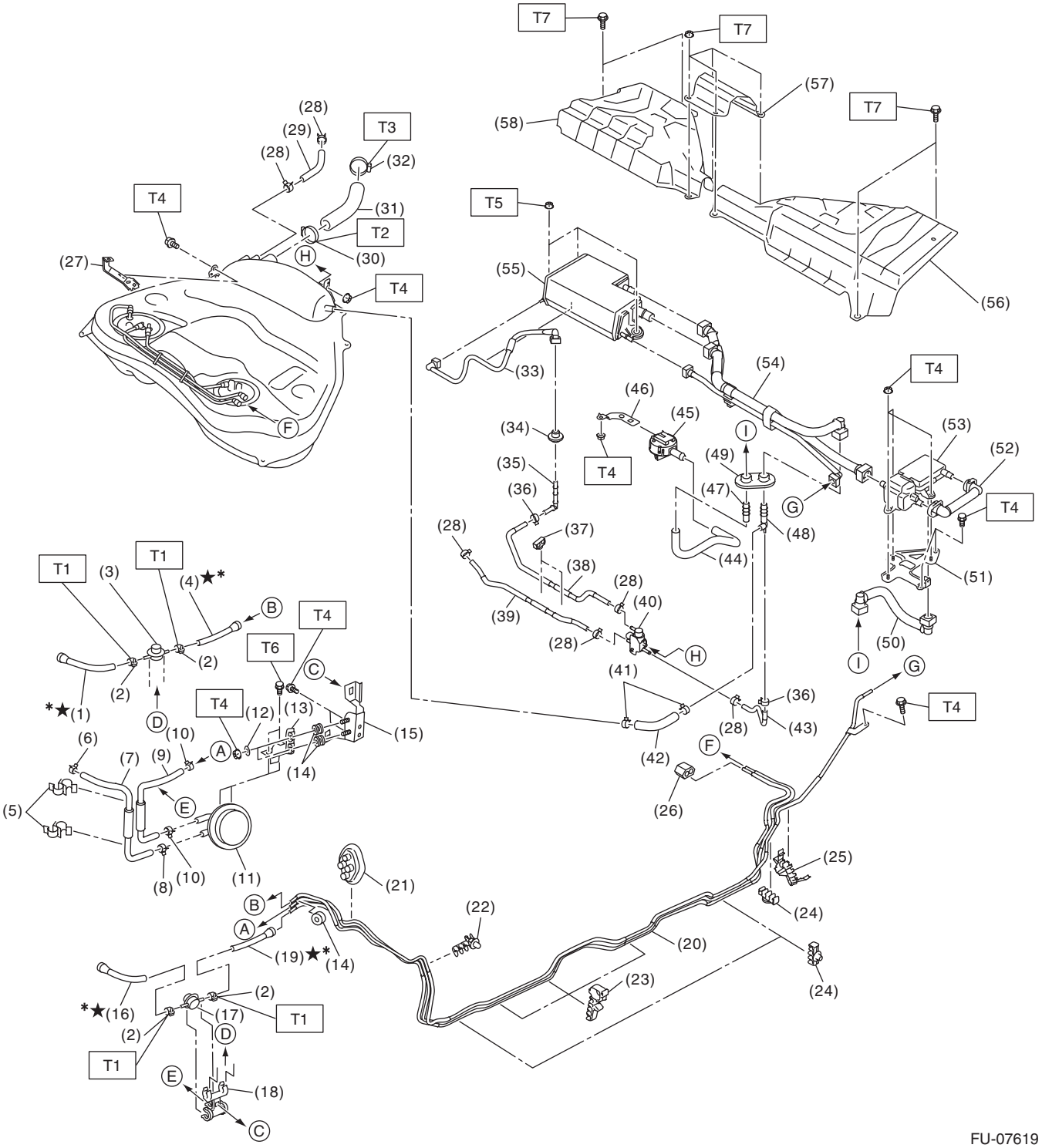
(23)
(21)
T3
(24)★
★(24)
T2
T2
T3
FU-07616

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

***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)***

## 5. FUEL LINE


T7
T7
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T7
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T2
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(42)
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(4)★*
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T6
C
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(2)
(1)★*
D
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E
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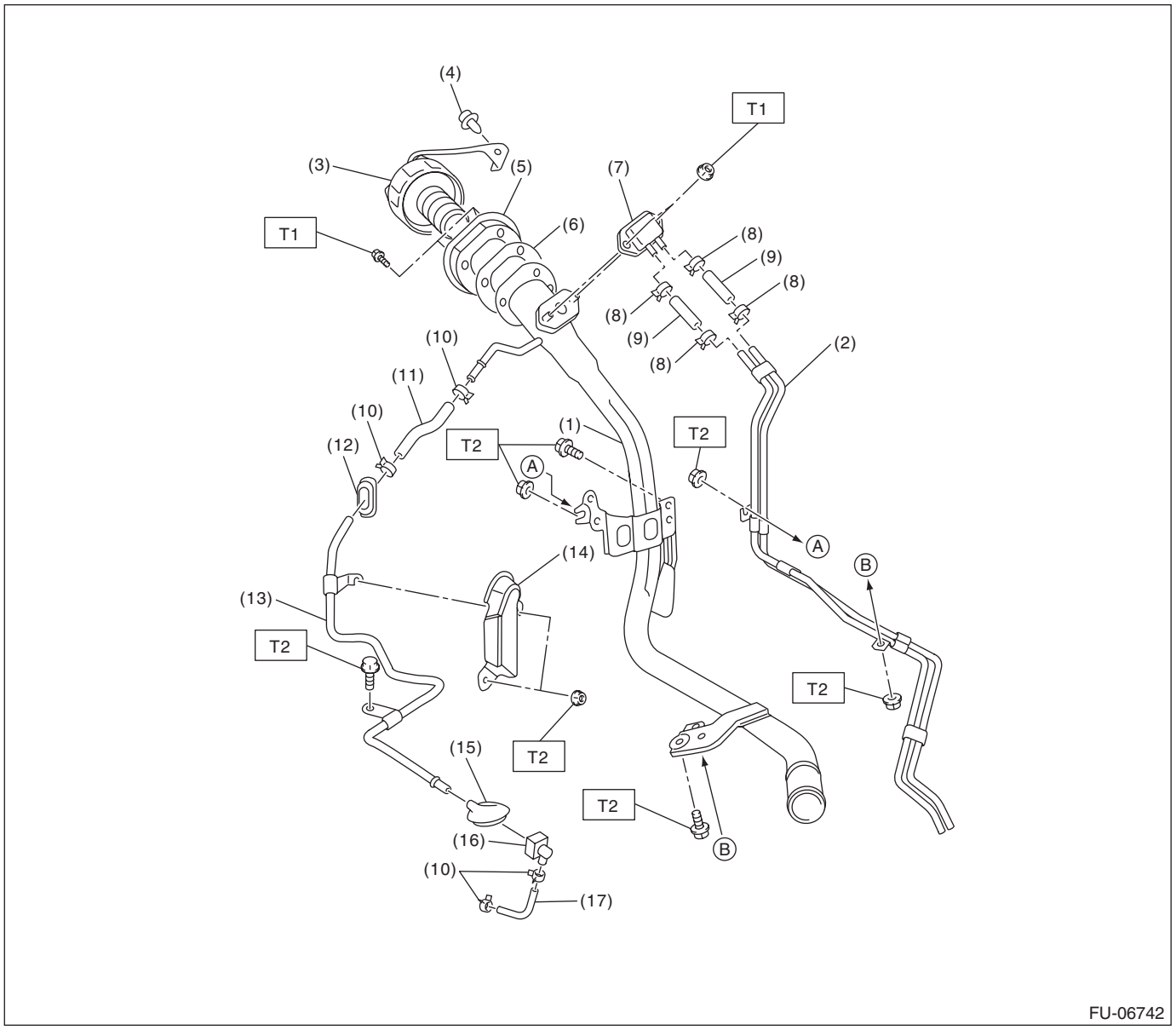
(21)
(25)
B
(22)
(24)
A
(19)★*
(14)
(20)
(23)
(24)
(2)
(16)★*
(17)
T1
(2)
D
T1
E
(18)
C
FU-07619

(1) Fuel delivery hose A
(2) Clamp
(3) Fuel damper A
(4) Fuel delivery hose B
(5) Hose clamp
(6) Clip
(7) Evaporation hose A
(8) Clip
(9) Evaporation hose B
(10) Clip
(11) Purge damper
(12) Collar
(13) Purge damper bracket
(14) Bushing
(15) Damper bracket
(16) Fuel return hose A
(17) Fuel damper B
(18) Fuel damper holder
(19) Fuel return hose B
(20) Fuel pipe ASSY
(21) Fuel pipe front grommet
(22) Pipe clamp
(23) Pipe clamp
(24) Pipe clamp
(25) Pipe clamp
(26) Fuel pipe rear grommet
(27) Bracket
(28) Clip
(29) Evaporation hose C
(30) Clamp
(31) Fuel filler hose
(32) Clamp
(33) PCV drain tube
(34) Grommet
(35) Hose connector
(36) Clip
(37) Hose clamp
(38) Evaporation hose D
(39) Evaporation hose E
(40) Pressure control solenoid valve ASSY
(41) Clip
(42) Evaporation hose F
(43) Evaporation hose G
(44) Drain hose
(45) Drain separator
(46) Drain separator bracket
(47) Hose connector
(48) Hose connector
(49) Grommet
(50) Drain tube A
(51) Leak check valve ASSY bracket
(52) Drain tube B
(53) Leak check valve ASSY
(54) Canister tube ASSY
(55) Canister
(56) Canister cover LH
(57) Center canister cover
(58) Canister cover RH

***Tightening torque: N·m (kgf-m, ft-lb)***
***T1: 1.25 (0.1, 0.9)***
***T2: 2 (0.2, 1.5)***
***T3: 2.5 (0.3, 1.8)***
***T4: 7.5 (0.8, 5.5)***
***T5: 8 (0.8, 5.9)***
***T6: 13 (1.3, 9.6)***
***T7: 18 (1.8, 13.3)***

* It can be reused if the quick connector side is disconnected.

## 6. FUEL FILLER PIPE

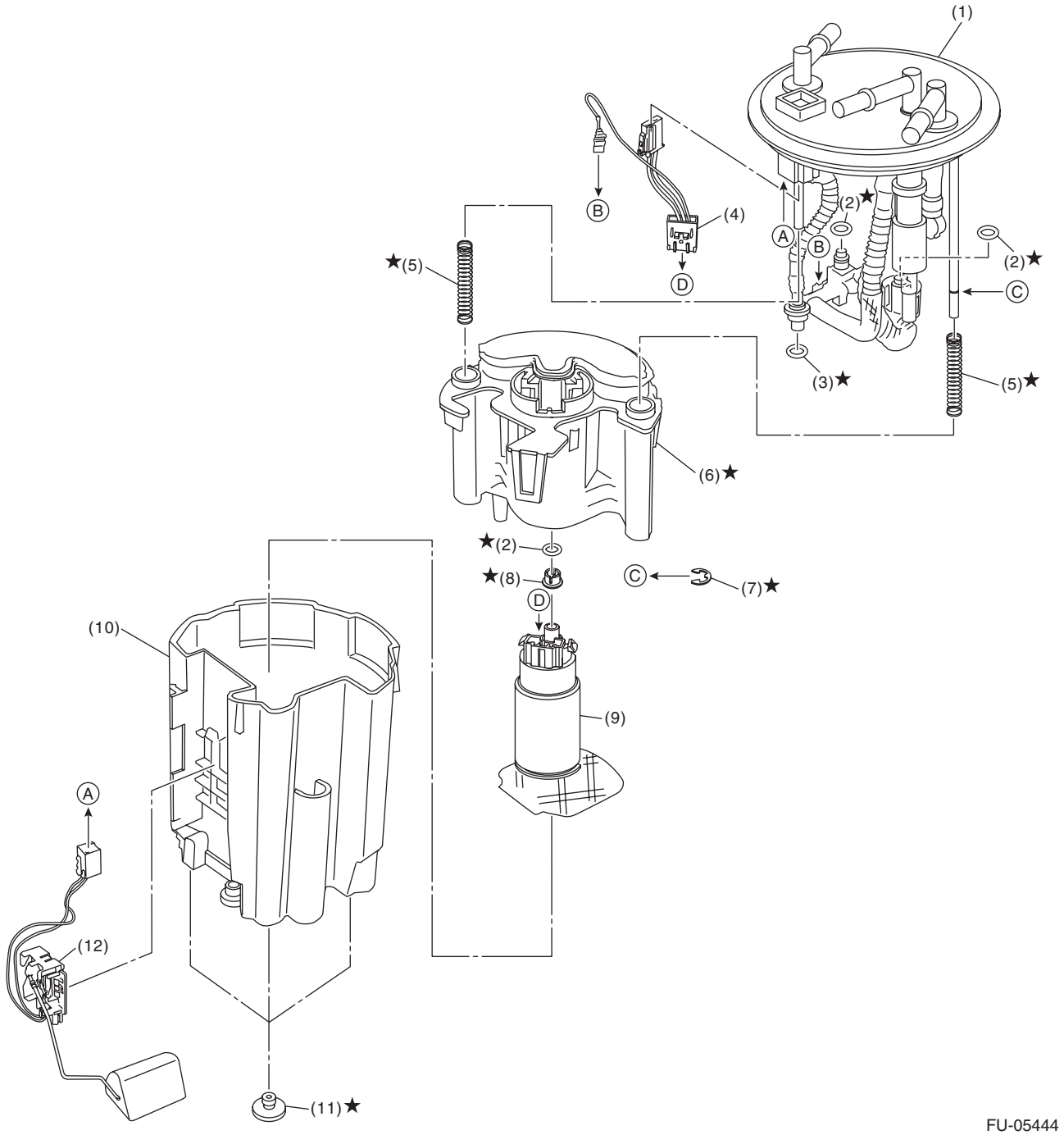



FU-06742

(1) Fuel filler pipe
(2) Evaporation pipe A
(3) Fuel filler cap
(4) Clip
(5) Filler ring
(6) Filler pipe gasket
(7) Shut valve
(8) Clip
(9) Evaporation hose A
(10) Clip
(11) Evaporation hose B
(12) Grommet
(13) Evaporation pipe B
(14) Evaporation pipe protector
(15) Grommet
(16) Quick connector
(17) 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-05444

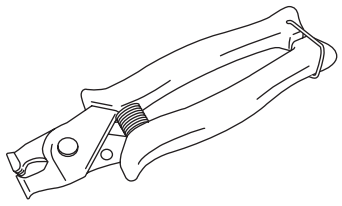
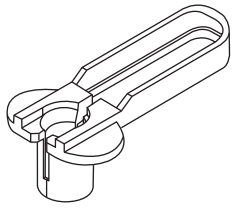
(1) Sub tank bracket ASSY
(2) O-ring
(3) O-ring
(4) Fuel pump harness
(5) Spring
(6) Fuel filter
(7) Clip
(8) Spacer
(9) Pump ASSY
(10) Sub tank
(11) Cushion
(12) Fuel level sensor

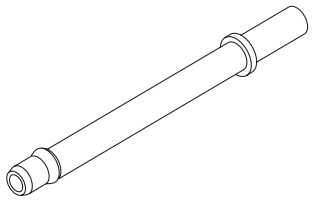
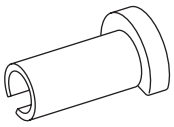
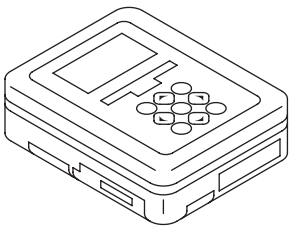
## C: CAUTION

- 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.
- When the suspension-related components have been removed and installed, be sure to adjust the steering angle sensor. <Ref. to VDC-13, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDC-CM&H/U).>

## D: PREPARATION TOOL

### 1. SPECIAL TOOL

| ILLUSTRATION | TOOL NUMBER | DESCRIPTION | REMARKS |
|---|---|---|---|
|  ST18353AA000 | 18353AA000 | CLAMP PLIERS | • Used for removing and installing the PCV hose.<br>• This tool is made by the French company CAILLAU. (code) 54.0.000.205<br>To make it easier to obtain, it has been provided with a tool number. |
|  ST18371AA000 | 18371AA000 | CONNECTOR REMOVER | Used for disconnecting the quick connector on the fuel return hose side of the engine compartment (intake manifold). |

| ILLUSTRATION | TOOL NUMBER | DESCRIPTION | REMARKS |
|---|---|---|---|
|  ST18471AA000 | 18471AA000 | FUEL PIPE ADAPTER | Used for draining fuel. |
|  ST42099AE000 | 42099AE000 | QUICK CONNECTOR RELEASE | Used for removing the quick connector. |
|  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. |