

# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

## 1. General Description

### A: SPECIFICATION

#### 1. TORQUE CONVERTER

Model	2.0 L DOHC turbo	
Type	Symmetric, 3-element, single stage, 2-phase torque converter	
Stall torque ratio	2.09	
Nominal	mm (in)	246 (9.69)
Stall speed (at sea level)	2,080 — 2,600	
One-way clutch	Sprag type one-way clutch	

#### 2. OIL PUMP

Type	Internal gear pump	
Driving method	Driven by chain	
Number of teeth	Inner rotor	8
	Outer rotor	9

#### 3. TRANSMISSION CONTROL ELEMENT

Type	Forward continuously variable speed change, 1 reverse, planetary gear	
Multi-plate clutch	1 set	
Multi-plate brake	1 set	

#### 4. TRANSMISSION GEAR RATIO

Forward	3.505 — 0.544
Rev	2.345

#### 5. PLATE

Number of input clutch drive plates	5
Number of forward clutch drive plates	6
Number of reverse brake drive plates	5

# General Description

## CONTINUOUSLY VARIABLE TRANSMISSION

### 6. SELECTOR POSITION

P (Park)	Transmission neutral, output shaft locked, engine start enabled
R (Reverse)	Rev
N (Neutral)	Transmission neutral, engine start enabled
D (Drive)	Forward continuously variable speed change and 8 speed step change <sup>*1</sup>
M (Manual mode) (paddle shift +side)	Manual gear change 1st → 2nd → 3rd → 4th → 5th → 6th → 7th <sup>*1</sup> → 8th <sup>*1</sup>
M (Manual mode) (paddle shift -side)	Manual gear change 1st ← 2nd ← 3rd ← 4th ← 5th ← 6th → 7th <sup>*1</sup> → 8th <sup>*1</sup>

\*1: Only when in S# mode

### 7. HYDRAULIC CONTROL AND LUBRICATION

Type	Electronic hydraulic control (speed changed by signals of vehicle speed and accelerator opening angle)
Fluid	Specified fluid: SUBARU HIGH TORQUE CVT FLUID FOR LINEARTRONIC <b>CAUTION:</b> <b>Always use specified CVTF. Using other fluid will cause malfunction.</b>
Fluid capacity L (US qt, Imp qt)	12.11 — 12.61 (12.8 — 13.3, 10.7 — 11.1)
Lubrication system	Forced feed lubrication with oil pump

### 8. COOLING AND HARNESS

Cooling system	CVTF cooler (with warmer feature)
Inhibitor switch harness	12 poles
Transmission harness	20 poles

### 9. TRANSFER

Transfer type	Multi-plate transfer (MP-T)
Number of transfer clutch drives & driven plates	6
Control method	Electronic hydraulic type
Reduction gear ratio	1.000 (37/37)

### 10. REDUCTION GEAR RATIO

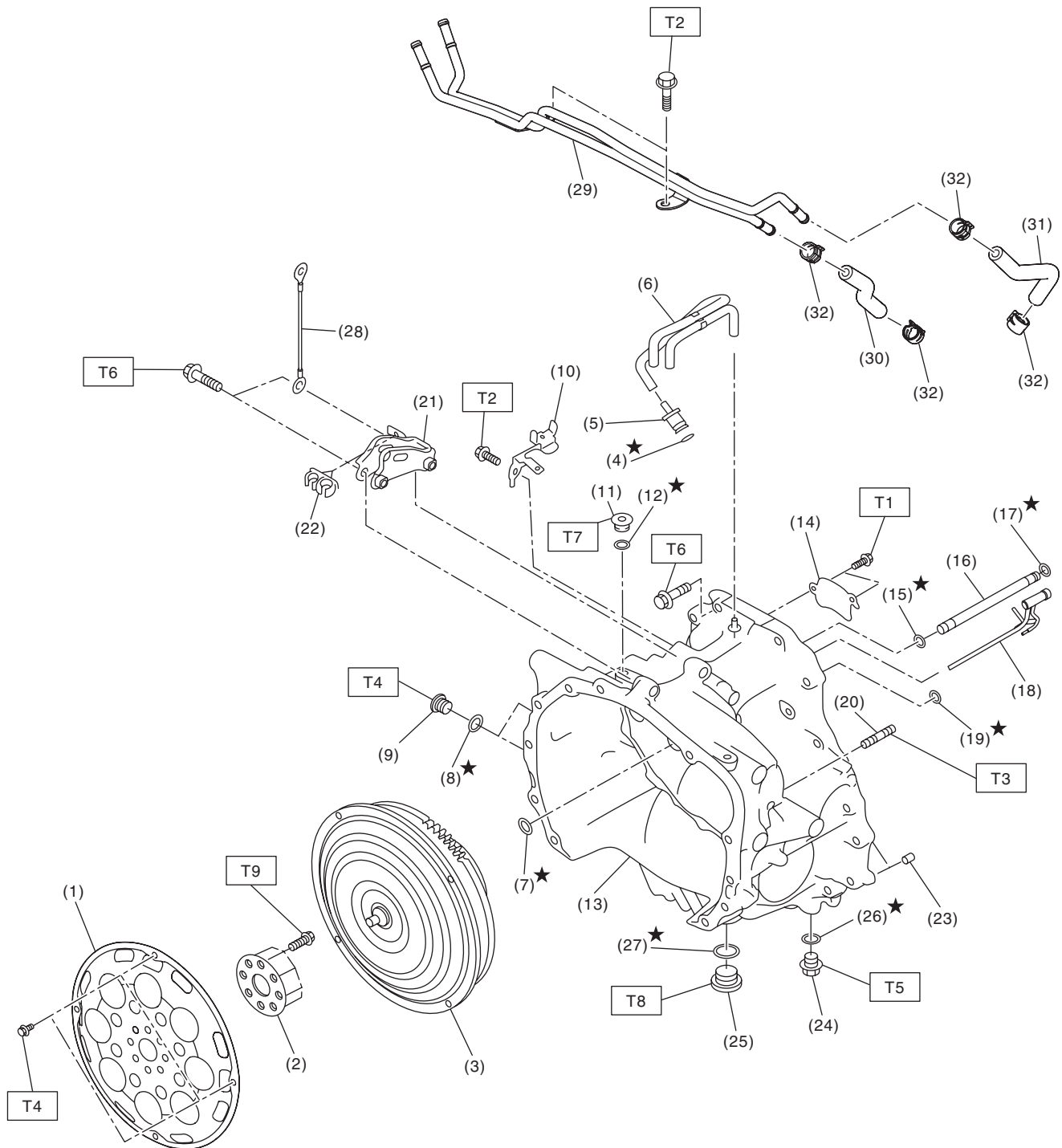
Front final reduction gear ratio	4.111
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### 11. FRONT DIFFERENTIAL GEAR OIL

Fluid	Recommended fluid: SUBARU GEAR OIL EXTRA MT <b>CAUTION:</b> <b>If an alternative transmission oil is used, you may not have expected functionality and performance.</b> Alternative fluid: GL-5 (75W-90)
Fluid capacity L (US qt, Imp qt)	1.3 — 1.5 (1.4 — 1.6, 1.1 — 1.3)

### B: COMPONENT

#### 1. TORQUE CONVERTER ASSEMBLY AND CONVERTER CASE



AT-07858

# General Description

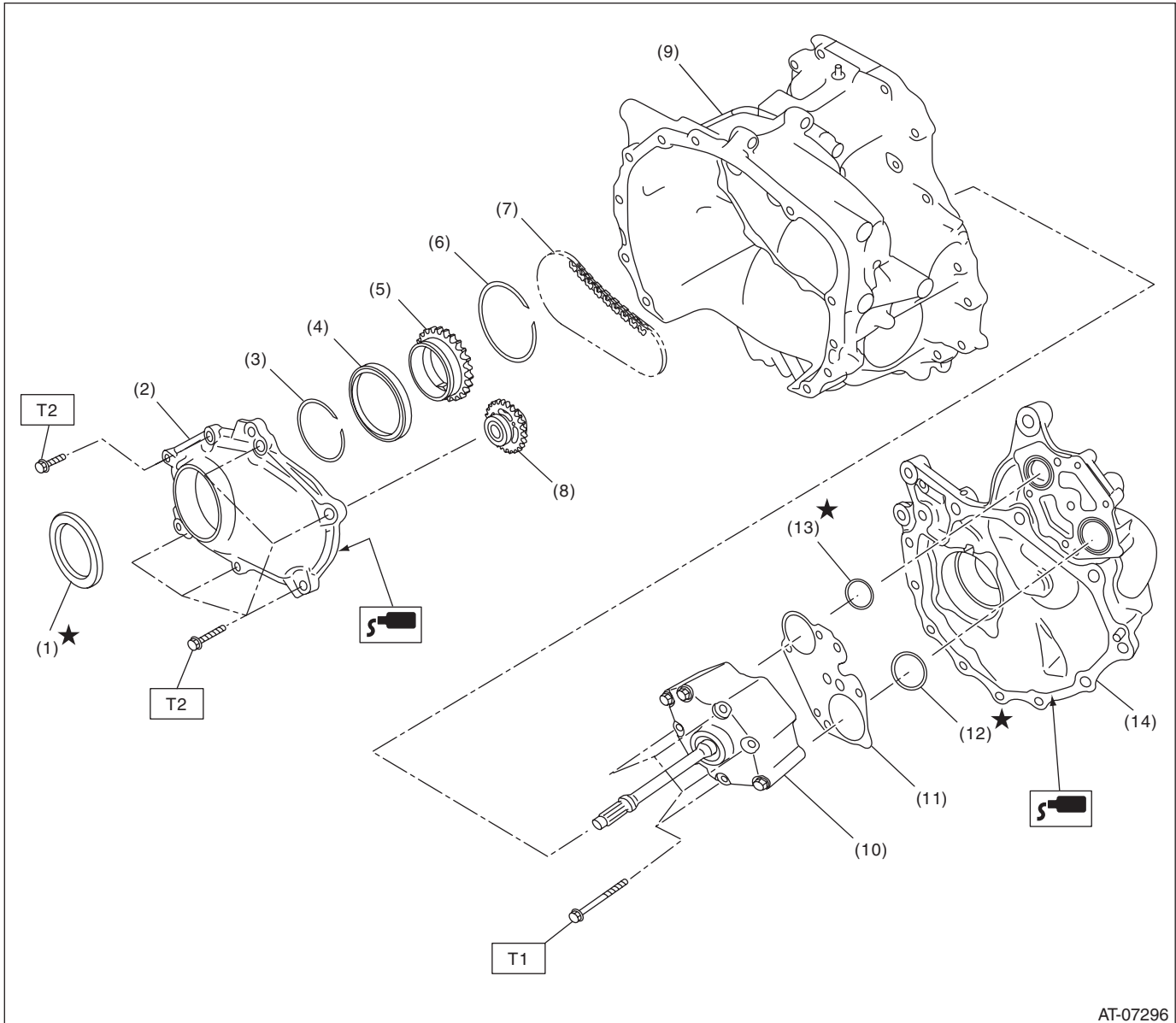
## CONTINUOUSLY VARIABLE TRANSMISSION

(1) Drive plate	(16) Lubrication pipe	(31) CVTF hose
(2) Reinforcement drive plate	(17) O-ring	(32) Clamp
(3) Torque converter ASSY	(18) Lubrication pipe	
(4) O-ring	(19) O-ring	<b><i>Tightening torque: N·m (kgf-m, ft-lb)</i></b>
(5) Oil charge pipe cap	(20) Stud bolt	<b><i>T1: 9 (0.9, 6.6)</i></b>
(6) Air breather hose ASSY	(21) Pitching stopper bracket	<b><i>T2: 16 (1.6, 11.8)</i></b>
(7) O-ring	(22) Clip	<b><i>T3: 18 (1.8, 13.3)</i></b>
(8) O-ring	(23) Straight pin	<b><i>T4: 25 (2.5, 18.4)</i></b>
(9) Plug	(24) Overflow drain plug	<b><i>T5: 35 (3.6, 25.8)</i></b>
(10) Transmission harness stay	(25) Front differential gear oil drain plug	<b><i>T6: 41 (4.2, 30.2)</i></b>
(11) Plug	(26) Gasket	<b><i>T7: 50 (5.1, 36.9)</i></b>
(12) O-ring	(27) Gasket	<b><i>T8: 70 (7.1, 51.6)</i></b>
(13) Converter case	(28) Transmission radio ground cord	<b><i>T9: &lt;Ref. to CVT(TR690)-136, INSTALLATION, Drive Plate.&gt;</i></b>
(14) Oil stopper plate	(29) CVT cooler pipe COMPL	
(15) O-ring	(30) CVTF hose	

# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

## 2. OIL PUMP ASSY



- (1) Oil seal
- (2) Oil pump chain cover
- (3) Snap ring
- (4) Ball bearing
- (5) Drive sprocket
- (6) Snap ring

- (7) Oil pump chain
- (8) Driven sprocket
- (9) Converter case
- (10) Oil pump ASSY
- (11) Plate
- (12) O-ring (large)

- (13) O-ring (small)
- (14) Drive pinion retainer

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

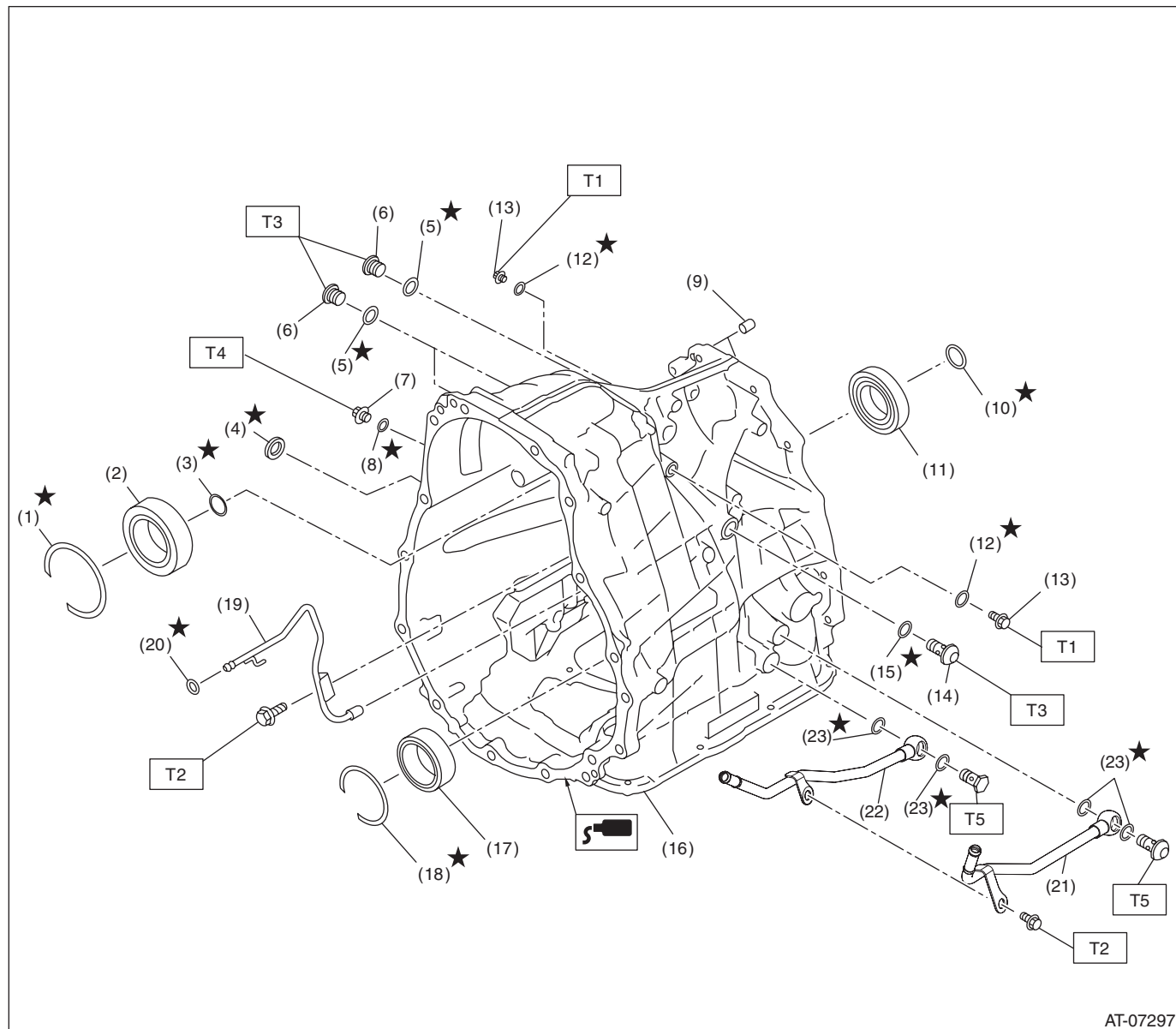
**T1: 8.5 (0.9, 6.3)**

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

# General Description

## CONTINUOUSLY VARIABLE TRANSMISSION

### 3. TRANSMISSION CASE



- (1) Snap ring
- (2) Roller bearing
- (3) Seal ring
- (4) Oil seal
- (5) O-ring
- (6) Plug
- (7) Plug
- (8) Gasket
- (9) Straight pin
- (10) Seal ring

- (11) Ball bearing
- (12) O-ring
- (13) Plug
- (14) Plug
- (15) O-ring
- (16) Transmission case
- (17) Roller bearing
- (18) Snap ring
- (19) Lubrication pipe
- (20) O-ring

- (21) CVTF outlet pipe
- (22) CVTF inlet pipe
- (23) Gasket

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

**T1: 13 (1.3, 9.6)**

**T2: 16 (1.6, 11.8)**

**T3: 25 (2.5, 18.4)**

**T4: 35 (3.6, 25.8)**

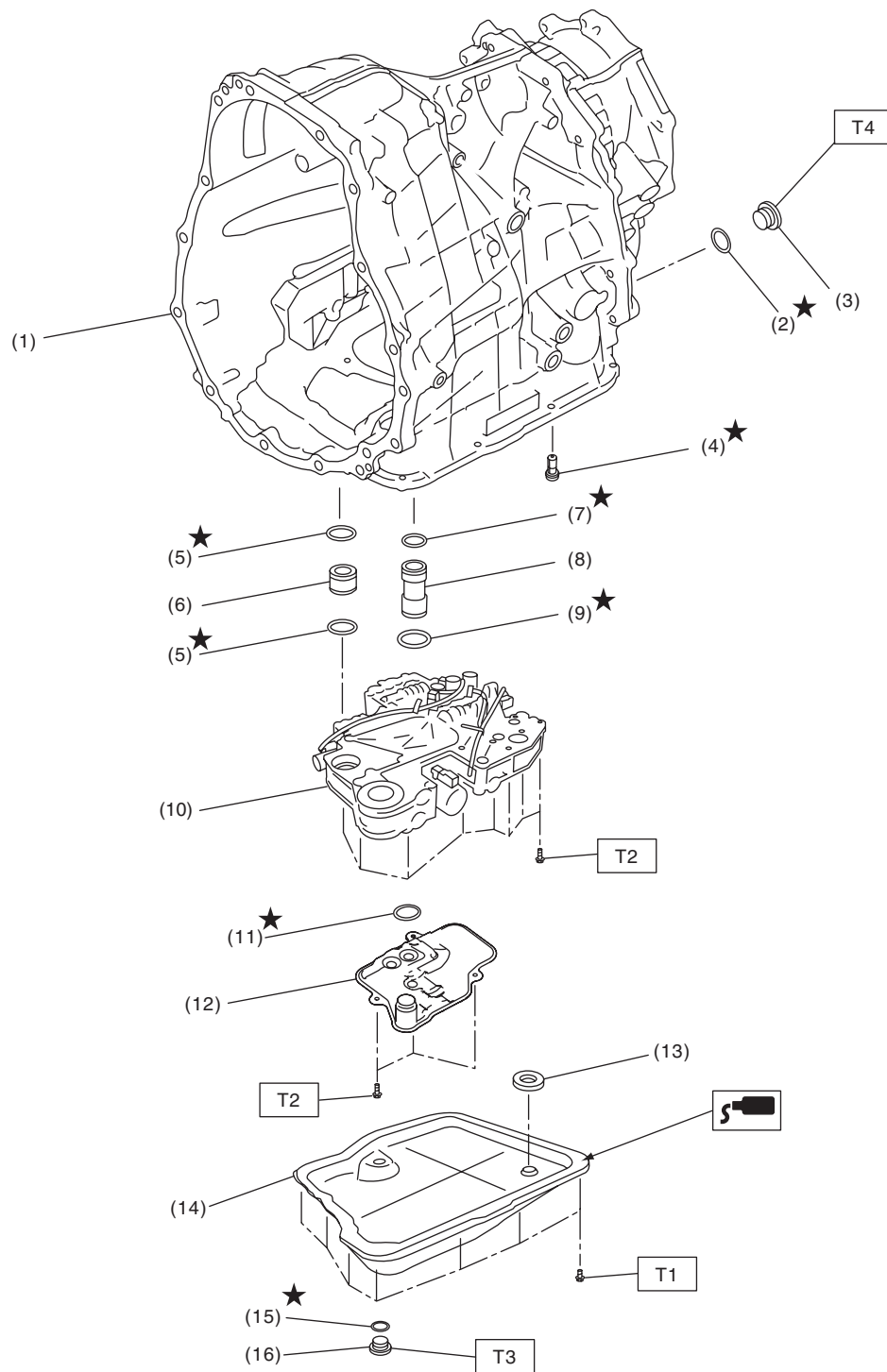
**T5: 40 (4.1, 29.5)**

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# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

## 4. CONTROL VALVE BODY



CVT00580

## General Description

### CONTINUOUSLY VARIABLE TRANSMISSION

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- (1) Transmission case
- (2) Gasket
- (3) Filler plug
- (4) CVTF filter
- (5) O-ring
- (6) Pressure pipe
- (7) O-ring (small)
- (8) CVTF pipe

- (9) O-ring (large)
- (10) Control valve body
- (11) O-ring
- (12) Oil strainer
- (13) Magnet
- (14) Oil pan
- (15) Gasket

- (16) CVTF drain plug

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

***T1: 5 (0.5, 3.7)***

***T2: 9 (0.9, 6.6)***

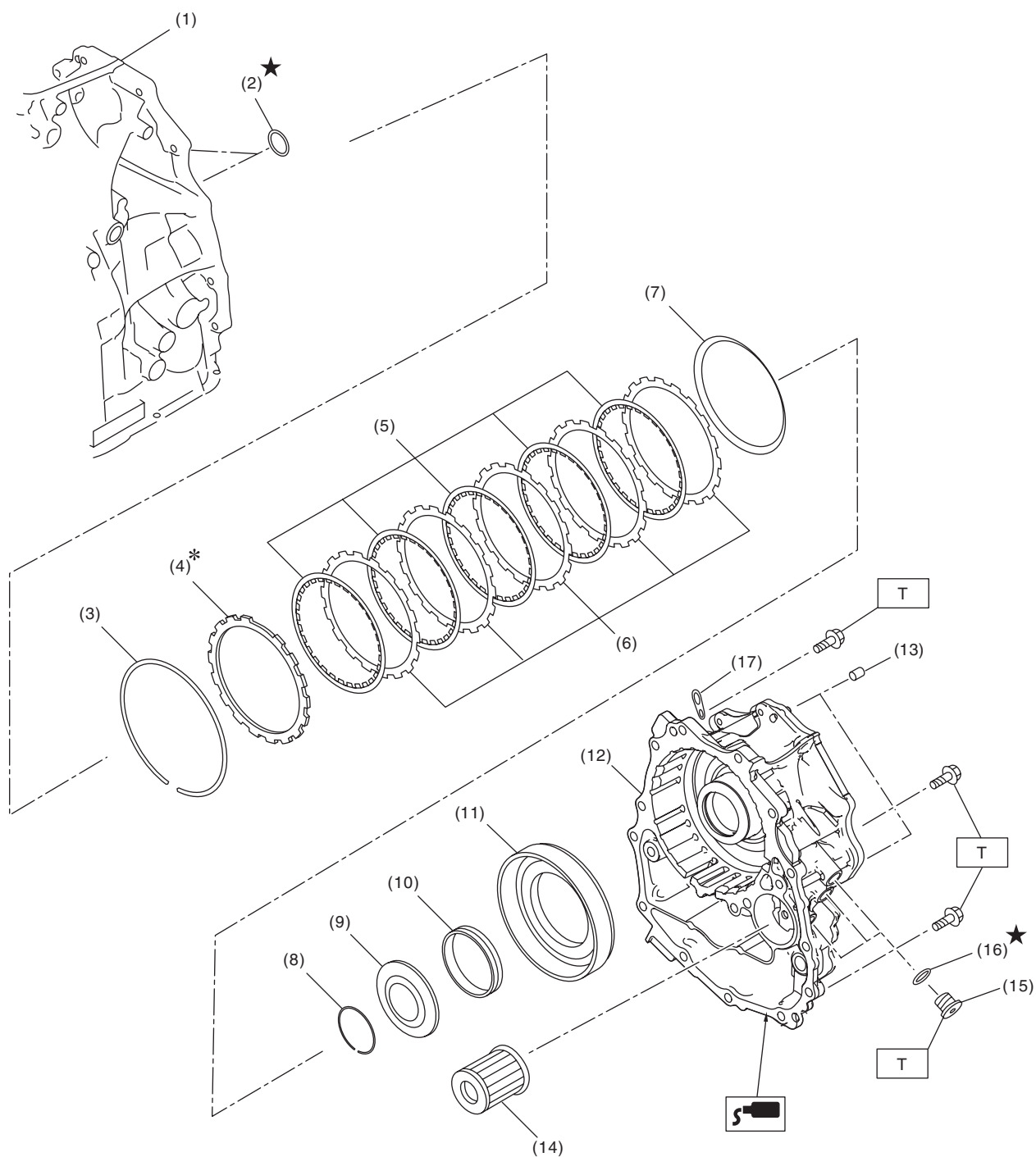
***T3: 39.2 (4.0, 28.9)***

***T4: 50 (5.1, 36.9)***

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## 5. REVERSE BRAKE ASSEMBLY AND INTERMEDIATE CASE



AT-07299

- (1) Transmission case
- (2) O-ring
- (3) Snap ring
- (4) Retaining plate
- (5) Drive plate
- (6) Driven plate
- (7) Dish plate

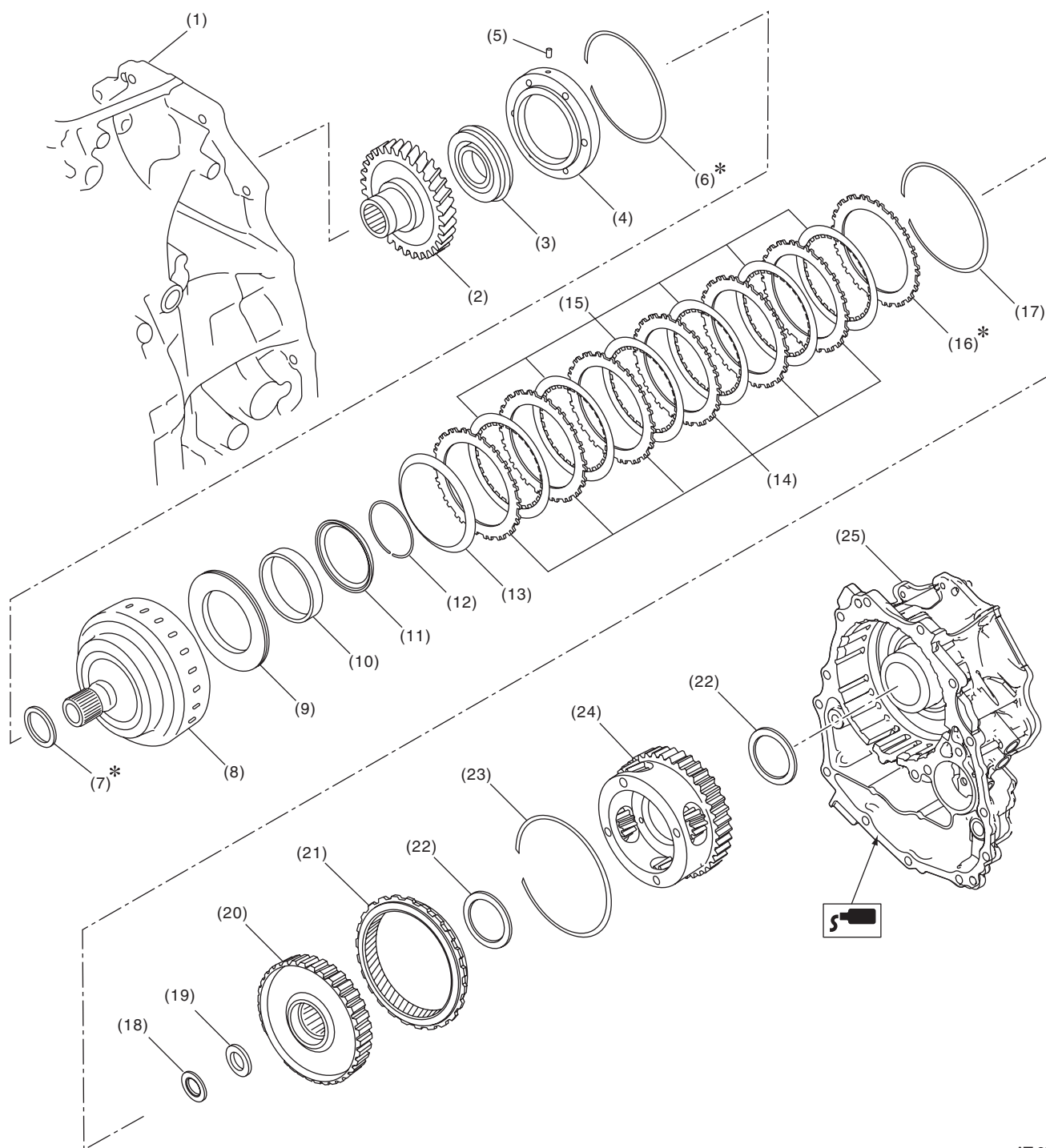
- (8) Snap ring
- (9) Spring retainer
- (10) Return spring
- (11) Reverse brake piston
- (12) Intermediate case
- (13) Straight pin
- (14) CVTF filter

- (15) Plug
- (16) O-ring
- (17) Transmission hanger

**Tightening torque: N-m (kgf-m, ft-lb)**  
**T: 25 (2.5, 18.4)**

## CONTINUOUSLY VARIABLE TRANSMISSION

## 6. FORWARD CLUTCH ASSEMBLY AND REDUCTION DRIVEN GEAR



AT-07300

# General Description

## CONTINUOUSLY VARIABLE TRANSMISSION

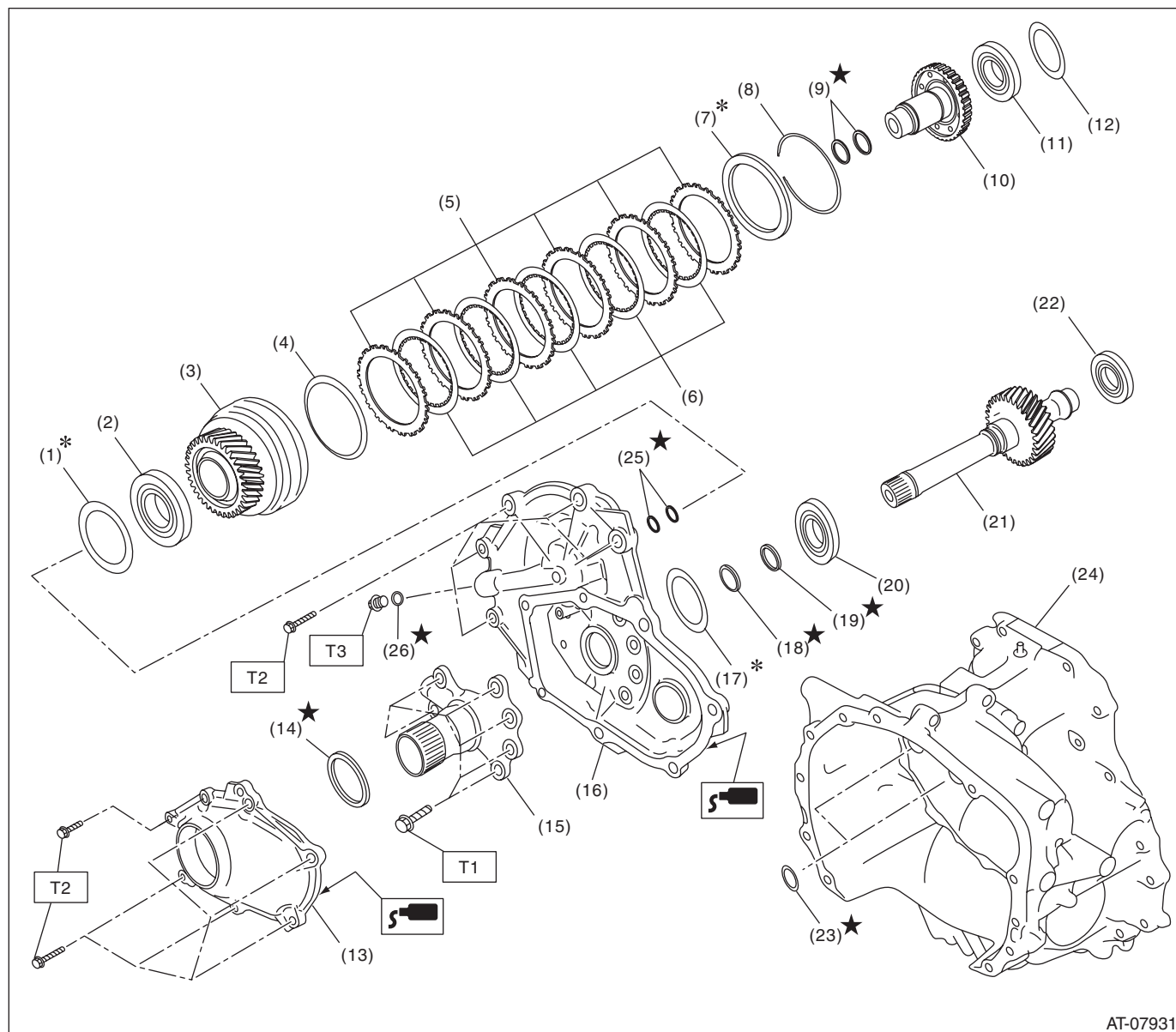
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- |                                    |                                     |                             |
|------------------------------------|-------------------------------------|-----------------------------|
| (1) Transmission case              | (10) Return spring                  | (19) Washer                 |
| (2) Reduction driven gear          | (11) Forward clutch piston retainer | (20) Sun gear ASSY          |
| (3) Ball bearing                   | (12) Snap ring                      | (21) Internal gear          |
| (4) Reduction driven gear retainer | (13) Dish plate                     | (22) Thrust needle bearing  |
| (5) Straight pin                   | (14) Driven plate                   | (23) Snap ring              |
| (6) Snap ring                      | (15) Drive plate                    | (24) Planetary carrier ASSY |
| (7) Washer                         | (16) Retaining plate                | (25) Intermediate case      |
| (8) Forward clutch drum            | (17) Snap ring                      |                             |
| (9) Forward clutch piston          | (18) Thrust needle bearing          |                             |

# General Description

## CONTINUOUSLY VARIABLE TRANSMISSION

### 7. FRONT REDUCTION DRIVE GEAR AND FRONT REDUCTION DRIVEN GEAR



- |                                   |                                 |
|-----------------------------------|---------------------------------|
| (1) Shim                          | (12) Shim                       |
| (2) Ball bearing                  | (13) Oil pump chain cover       |
| (3) Front reduction driven gear   | (14) Seal ring                  |
| (4) Dish plate                    | (15) Center support COMPL       |
| (5) Driven plate                  | (16) Converter case cover       |
| (6) Drive plate                   | (17) Shim                       |
| (7) Retaining plate               | (18) O-ring                     |
| (8) Snap ring                     | (19) Seal ring                  |
| (9) Seal ring                     | (20) Ball bearing               |
| (10) Front reduction driven shaft | (21) Front reduction drive gear |
| (11) Ball bearing                 | (22) Ball bearing               |

- |                     |
|---------------------|
| (23) O-ring         |
| (24) Converter case |
| (25) Seal ring      |
| (26) O-ring         |

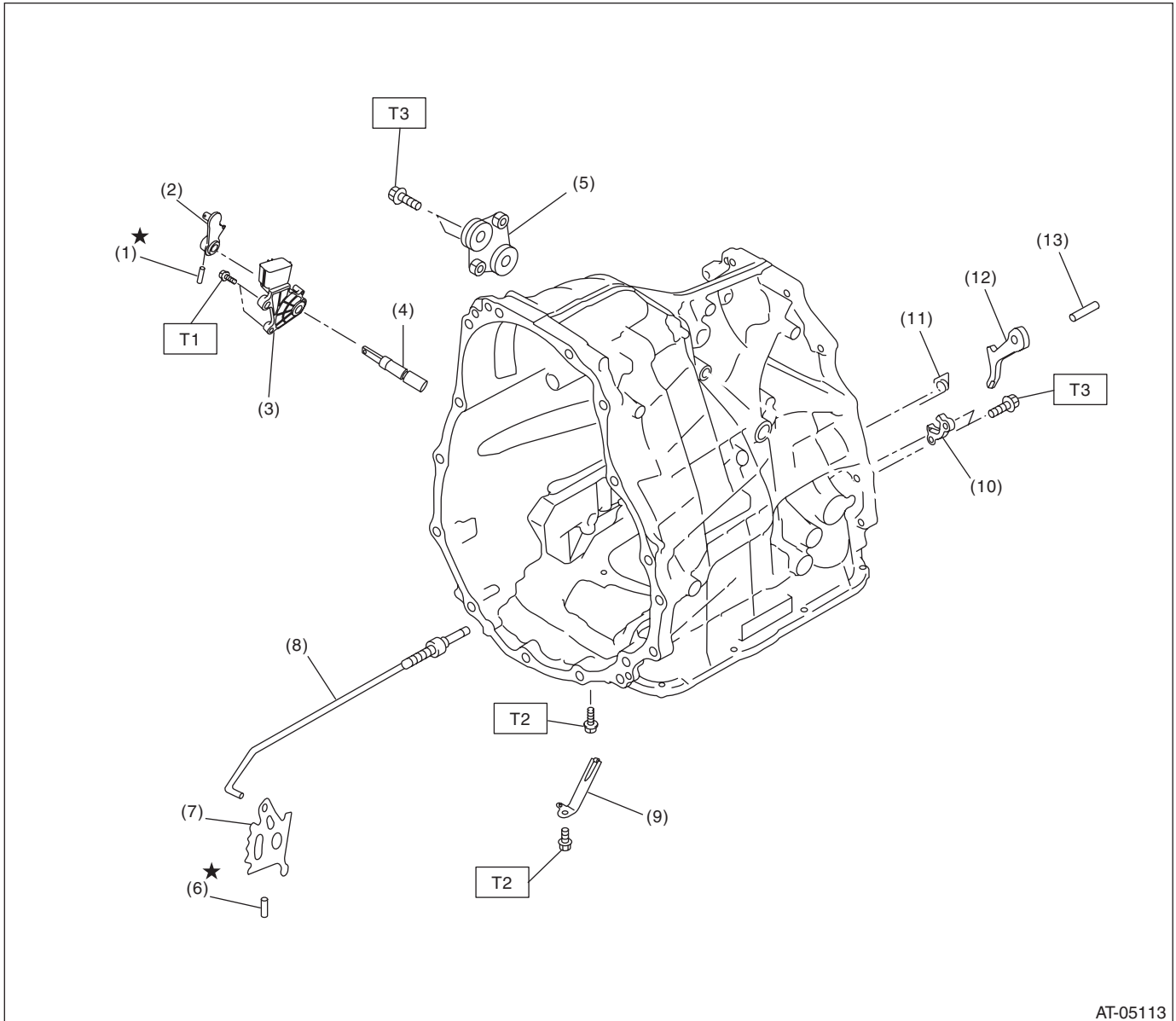
**Tightening torque: N·m (kgf·m, ft·lb)**

**T1: 21.5 (2.2, 15.9)**

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

**T3: 25 (2.5, 18.4)**

## 8. TRANSMISSION CONTROL DEVICE



AT-05113

- |                       |                      |
|-----------------------|----------------------|
| (1) Spring pin        | (8) Parking rod      |
| (2) Shifter arm       | (9) Detent spring    |
| (3) Inhibitor switch  | (10) Parking support |
| (4) Shifter arm shaft | (11) Return spring   |
| (5) Plate ASSY        | (12) Parking pawl    |
| (6) Spring pin        | (13) Shaft           |
| (7) Manual plate      |                      |

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

**T1: 5 (0.5, 3.7)**

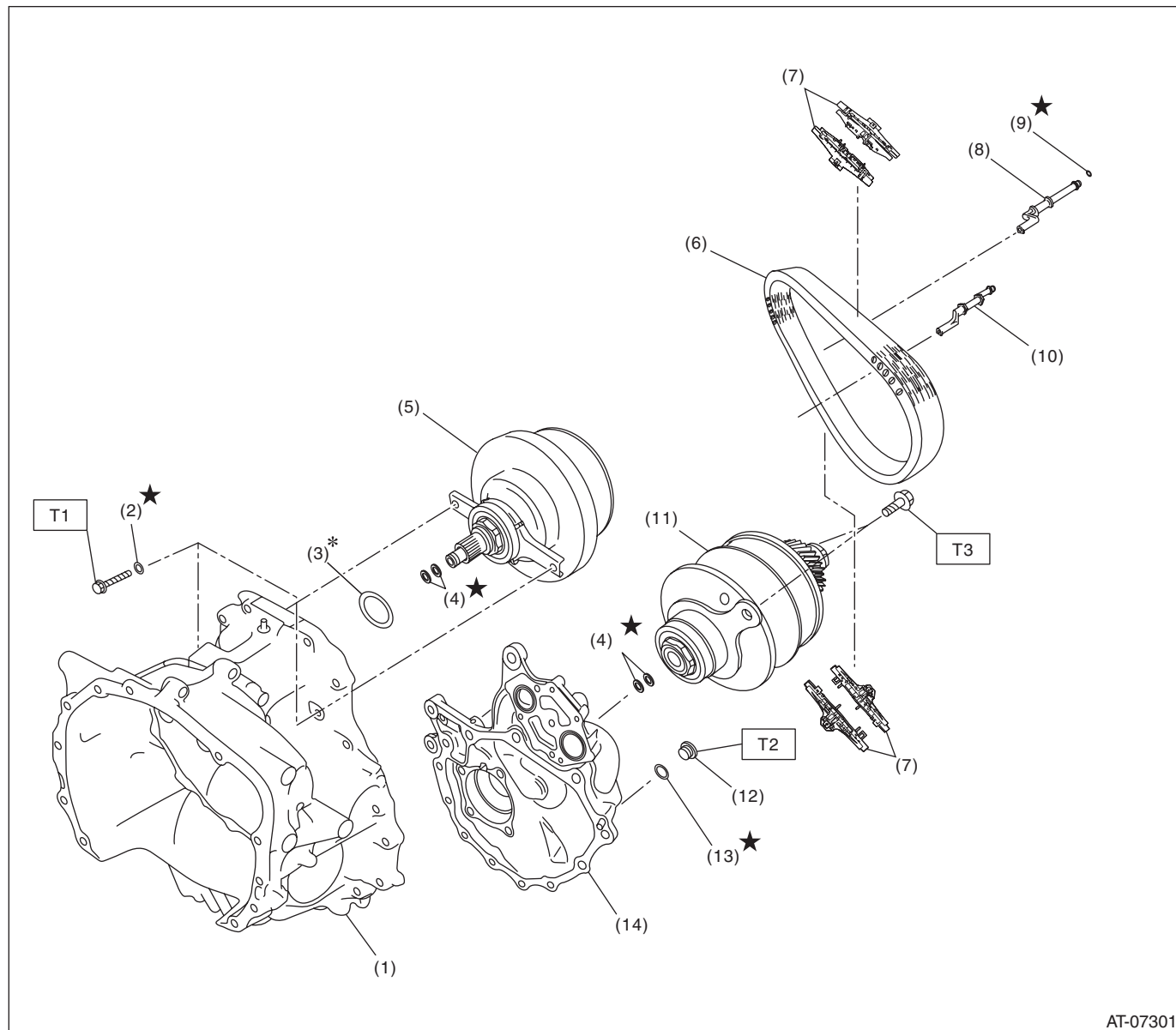
**T2: 7 (0.7, 5.2)**

**T3: 25 (2.5, 18.4)**

# General Description

## CONTINUOUSLY VARIABLE TRANSMISSION

### 9. PRIMARY PULLEY, SECONDARY PULLEY AND VARIATOR CHAIN



AT-07301

- |                         |                            |
|-------------------------|----------------------------|
| (1) Converter case      | (8) Lubrication pipe       |
| (2) Seal washer         | (9) O-ring                 |
| (3) Shim                | (10) Support rod           |
| (4) Seal ring           | (11) Secondary pulley ASSY |
| (5) Primary pulley ASSY | (12) Plug                  |
| (6) Variator chain      | (13) O-ring                |
| (7) Chain guide         | (14) Drive pinion retainer |

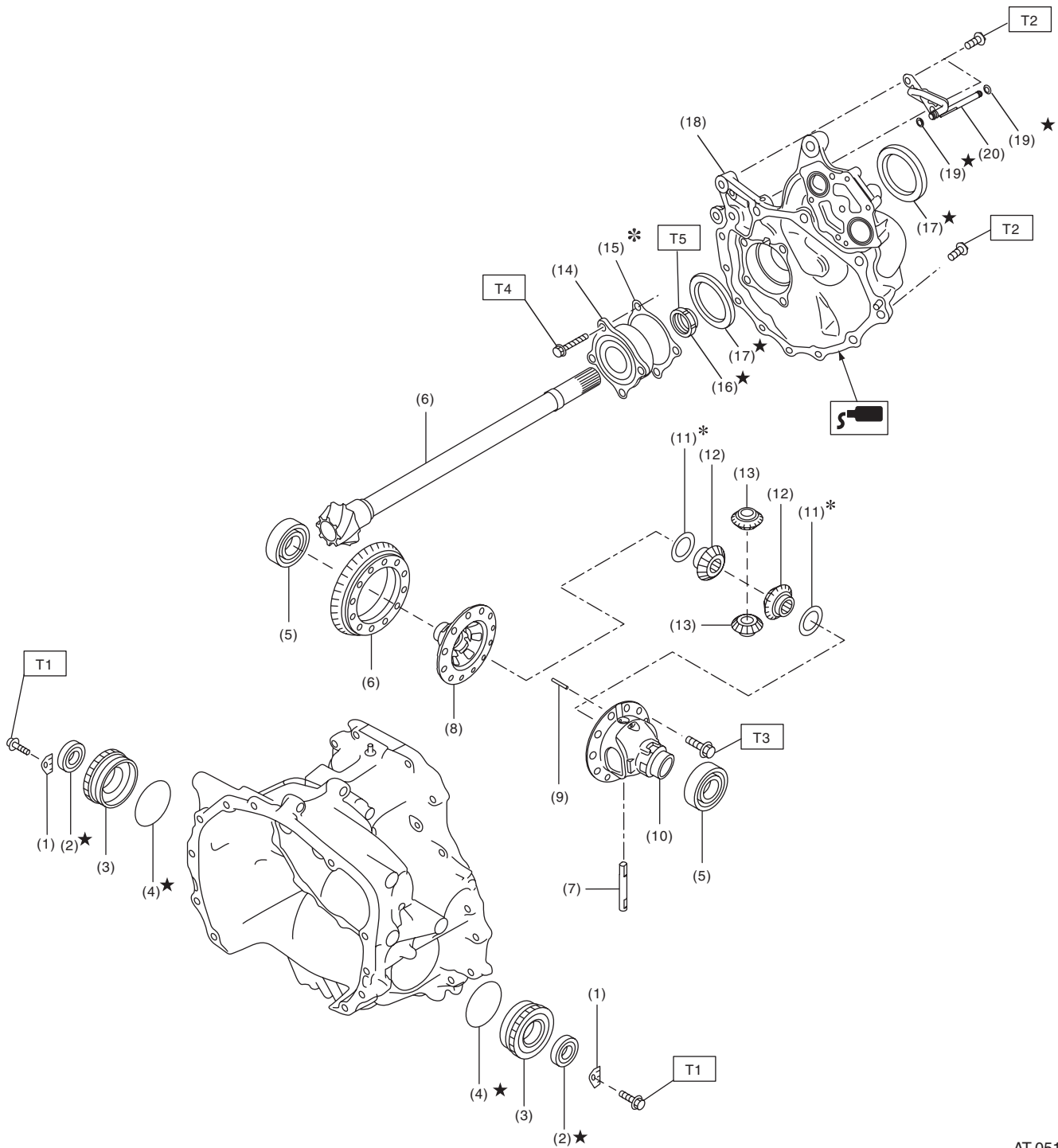
**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 21 (2.1, 15.5)**

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

**T3: 33 (3.4, 24.3)**

### 10.FRONT DIFFERENTIAL GEAR



AT-05115

## General Description

### CONTINUOUSLY VARIABLE TRANSMISSION

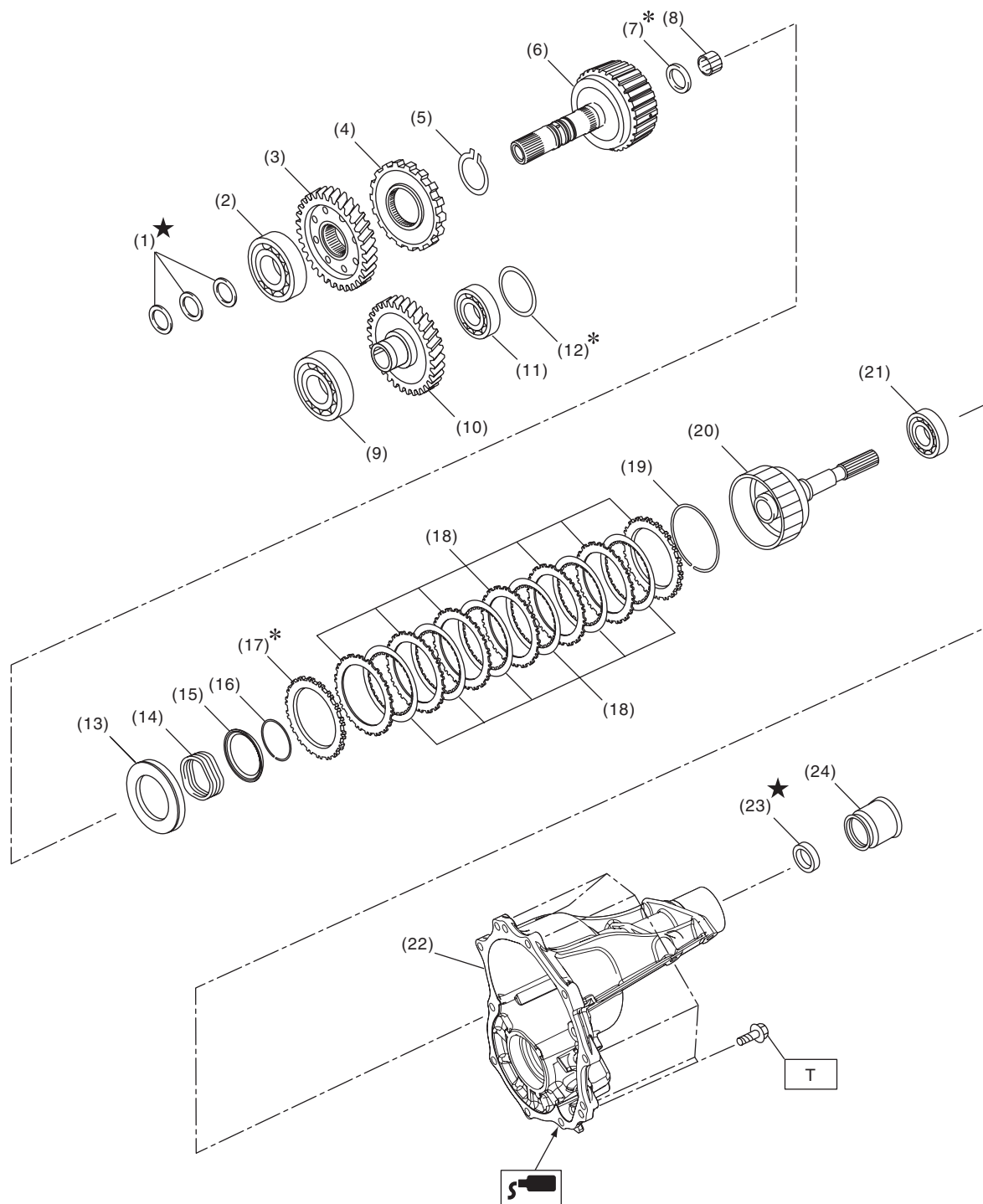
(1) Lock plate	(10) Differential case LH	(19) O-ring
(2) Oil seal	(11) Washer	(20) Lubrication pipe
(3) Differential side retainer	(12) Differential bevel gear	
(4) O-ring	(13) Differential bevel pinion	<hr/>
(5) Taper roller bearing	(14) Taper roller bearing	<b>Tightening torque: N·m (kgf-m, ft-lb)</b>
(6) Drive pinion gear set	(15) Shim	<b>T1: 25 (2.5, 18.4)</b>
(7) Pinion shaft	(16) Lock nut	<b>T2: 43 (4.4, 31.7)</b>
		<b>T3: &lt;Ref. to CVT(TR690)-277, DIF- FERENTIAL CASE ASSEMBLY, ASSEMBLY, Front Differential Assembly.&gt;</b>
(8) Differential case RH	(17) Oil seal	<b>T4: 70 (7.1, 51.6)</b>
(9) Straight pin	(18) Drive pinion retainer	<b>T5: 130 (13.3, 95.9)</b> <hr/>



# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

## 11. TRANSFER AND EXTENSION CASE



AT-07860

## General Description

### CONTINUOUSLY VARIABLE TRANSMISSION

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(1) Seal ring	(10) Transfer reduction driven gear	(19) Snap ring
(2) Ball bearing	(11) Ball bearing	(20) Rear drive shaft
(3) Transfer drive gear	(12) Shim	(21) Ball bearing
(4) Parking gear	(13) Transfer piston	(22) Extension case
(5) Snap ring	(14) Return spring	(23) Oil seal
(6) Reduction drive gear shaft	(15) Transfer piston seal	(24) Dust cover
(7) Thrust needle bearing	(16) Snap ring	
(8) Needle bearing	(17) Pressure plate	
(9) Ball bearing	(18) Transfer clutch plate set	

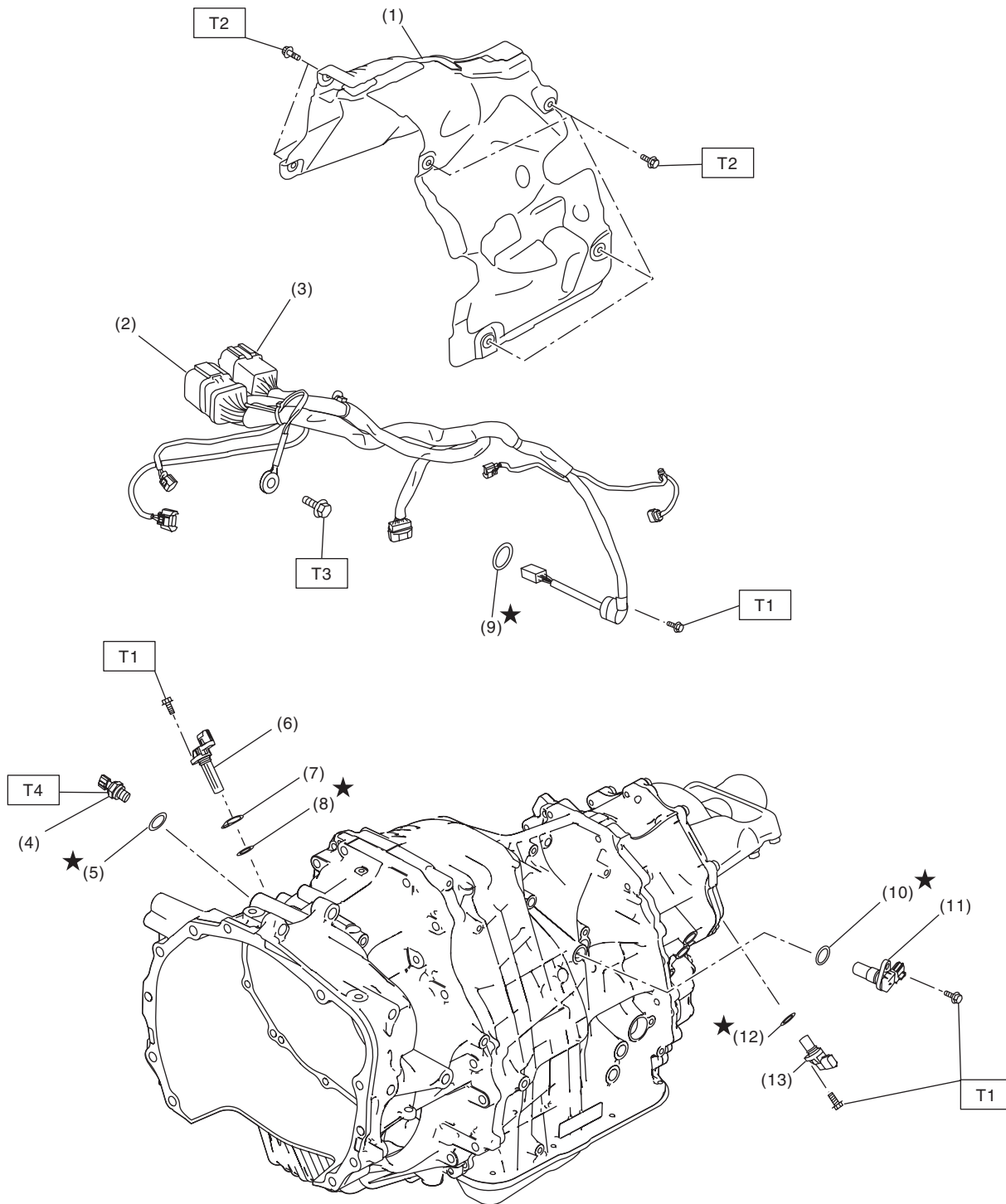
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***Tightening torque: N·m (kgf-m, ft-lb)***

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

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## 12.TRANSMISSION HARNESS AND SENSOR



AT-07861

- |                               |                               |
|-------------------------------|-------------------------------|
| (1) Transmission cover        | (8) O-ring                    |
| (2) Transmission harness      | (9) O-ring                    |
| (3) Inhibitor harness         | (10) O-ring                   |
| (4) Secondary pressure sensor | (11) Secondary speed sensor   |
| (5) O-ring                    | (12) O-ring                   |
| (6) Primary speed sensor      | (13) Front wheel speed sensor |
| (7) Spacer                    |                               |

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

**T1: 5 (0.5, 3.7)**

**T2: 8 (0.8, 5.9)**

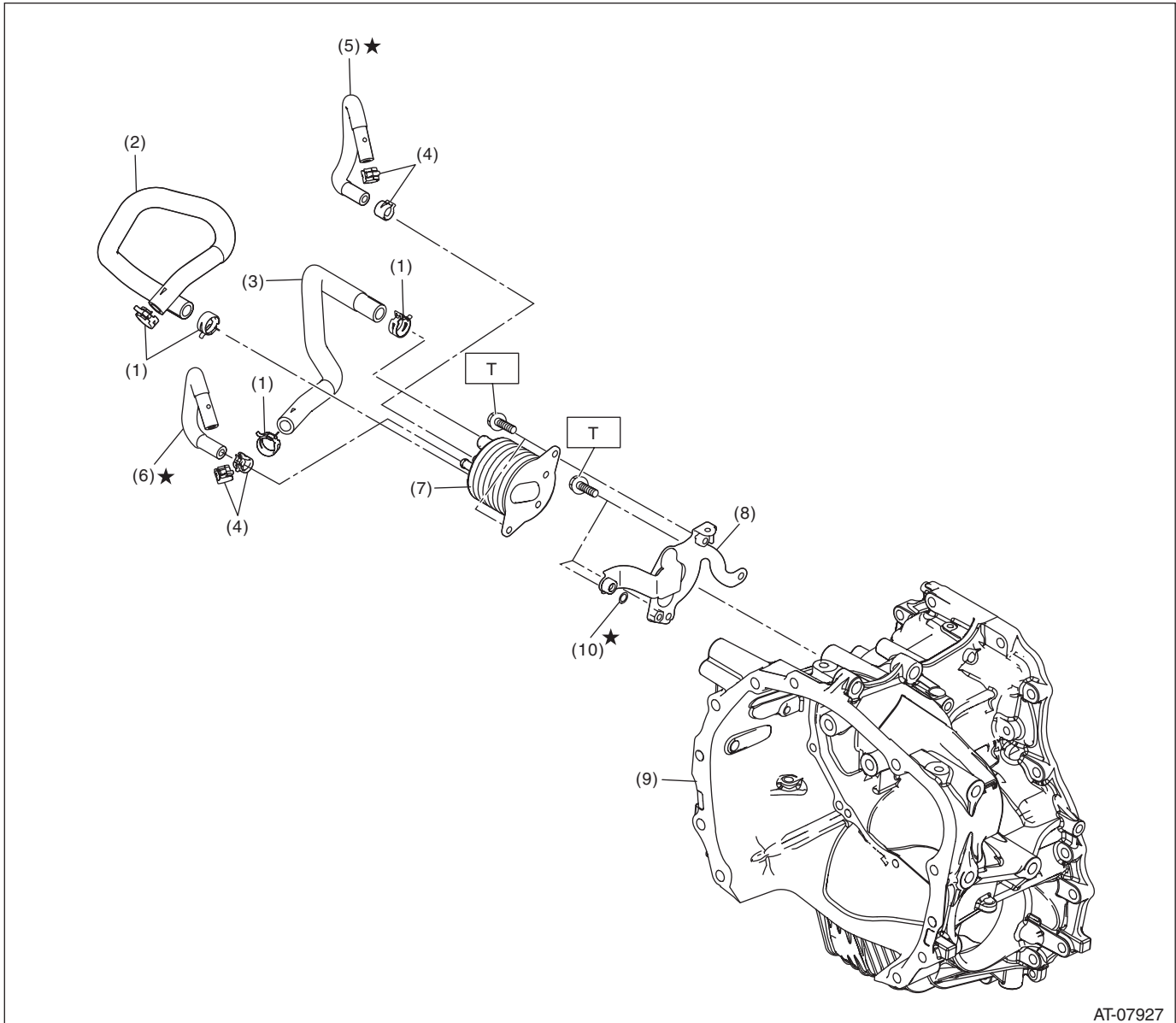
**T3: 16 (1.6, 11.8)**

**T4: 39 (4.0, 28.8)**

# General Description

## CONTINUOUSLY VARIABLE TRANSMISSION

### 13.CVTF COOLER (WITH WARMER FEATURE)



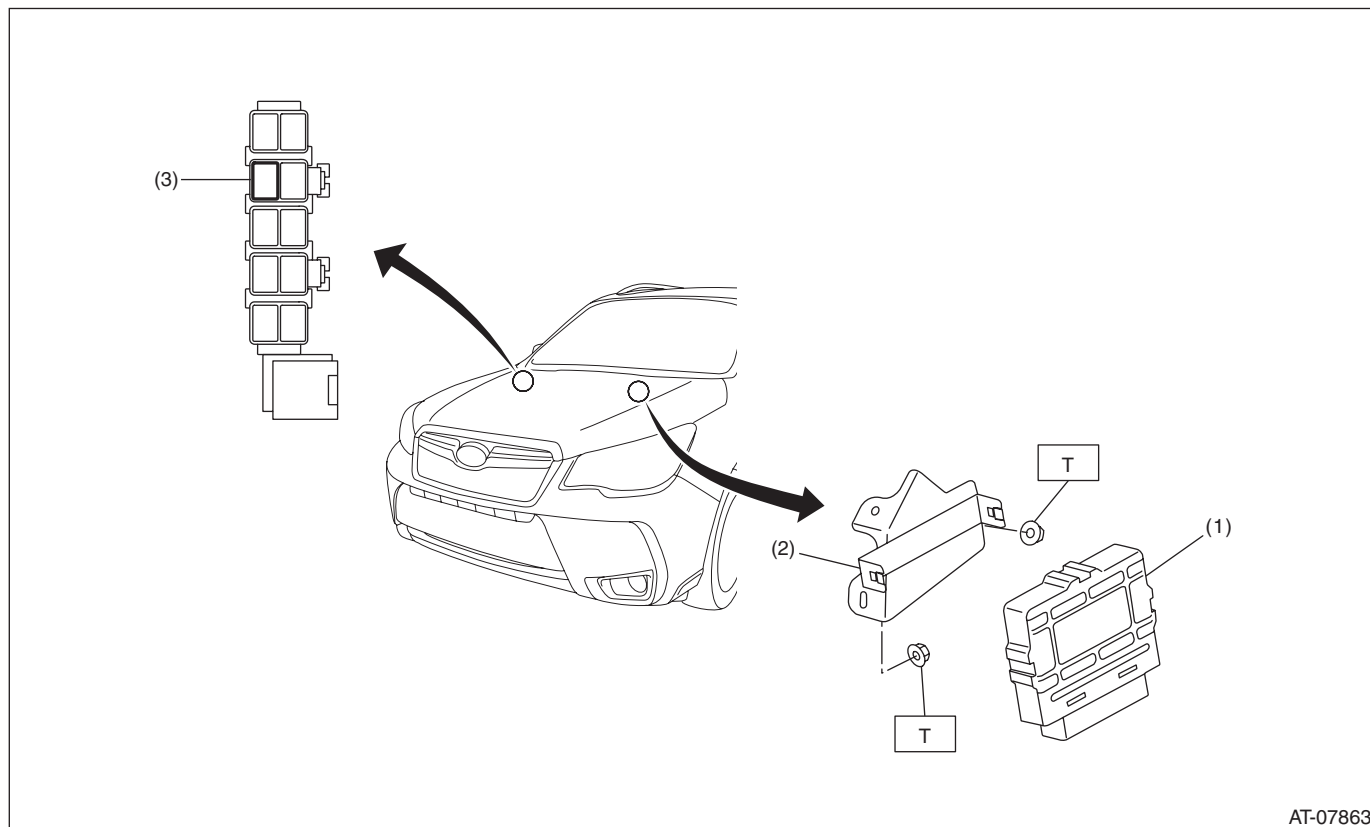
AT-07927

- |                                |                                       |
|--------------------------------|---------------------------------------|
| (1) Hose clamp                 | (6) CVTF cooler outlet hose           |
| (2) Engine coolant outlet hose | (7) CVTF cooler (with warmer feature) |
| (3) Engine coolant inlet hose  | (8) CVTF cooler bracket               |
| (4) Hose clamp                 | (9) Converter case                    |
| (5) CVTF cooler inlet hose     | (10) O-ring                           |

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

**T: 23 (2.3, 17.0)**

## 14.TRANSMISSION CONTROL MODULE



AT-07863

(1) Transmission control module (TCM)

(2) TCM bracket

(3) Relay

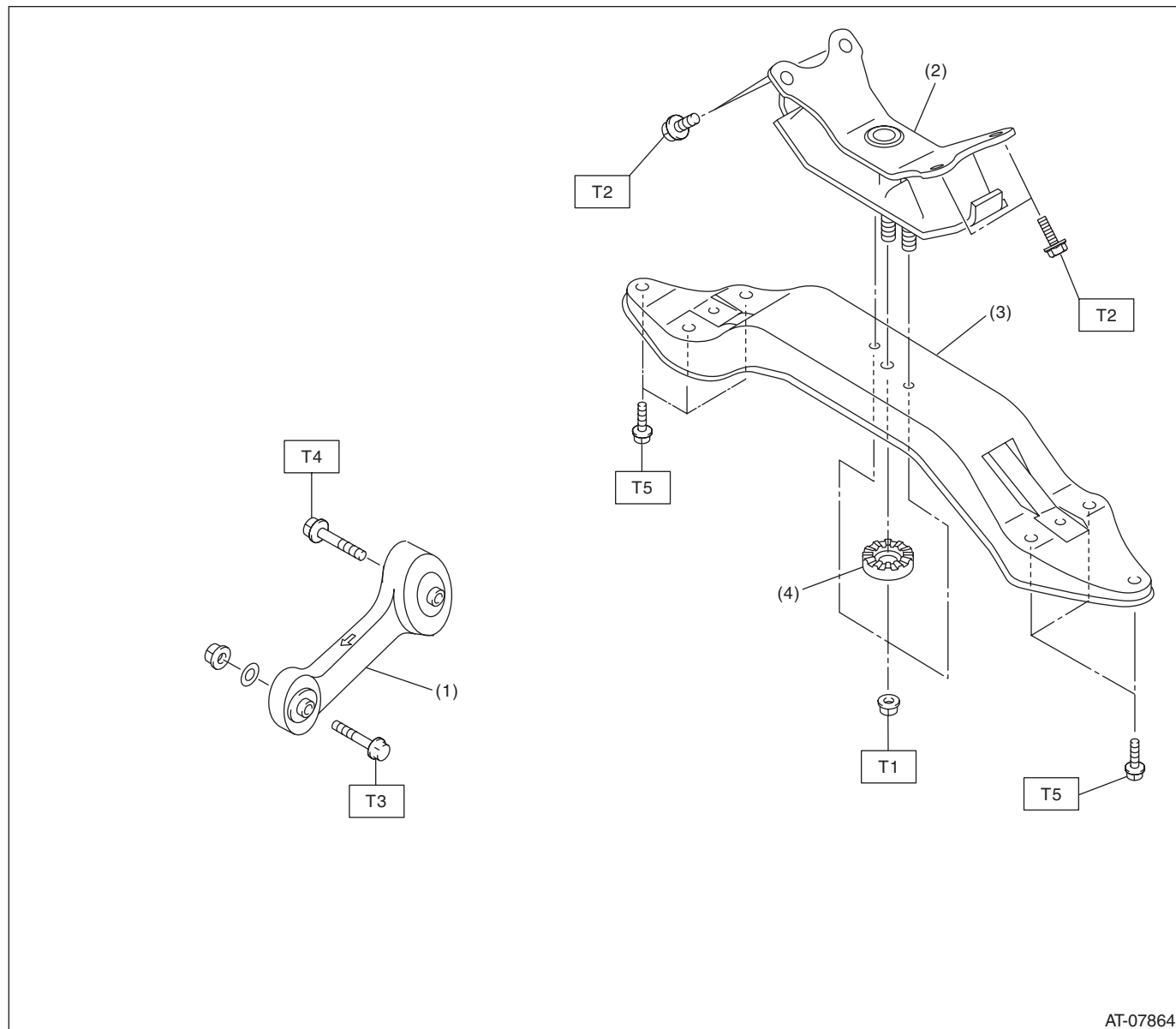
**Tightening torque: N·m (kgf-m, ft-lb)**

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

# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

## 15.TRANSMISSION MOUNTING



AT-07864

- |                         |                                   |
|-------------------------|-----------------------------------|
| (1) Pitching stopper    | (3) Transmission rear crossmember |
| (2) Rear cushion rubber | (4) Stopper                       |

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

**T1: 35 (3.6, 25.8)**

**T2: 40 (4.1, 29.5)**

**T3: 50 (5.1, 36.9)**

**T4: 58 (5.9, 42.8)**

**T5: 70 (7.1, 51.6)**

# General Description

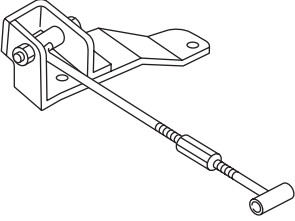
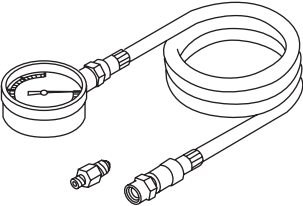
CONTINUOUSLY VARIABLE TRANSMISSION

## 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.
- Do not place the oil pan with its inner side facing up until it is installed, to prevent intrusion of foreign matter into the control valve body.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.
- When disassembling the case and other light alloy parts, use a plastic hammer to force it apart. Do not pry apart with screwdrivers or other tools.
- Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.
- Use SUBARU genuine CVTF and recommended grease. Do not mix CVTF, grease etc. of different grades or manufacturers.
- Be sure to tighten bolts and nuts to the specified torque.
- Place lifts, shop jacks or rigid racks at specified locations.
- Apply CVTF onto sliding or revolving surfaces before installation.
- Apply CVTF onto the press-fitting surface of the part before press-fitting the part using a press.
- Replace deformed or damaged snap rings with new parts.
- Before installing O-rings or oil seals, apply sufficient amount of CVTF to avoid damage and deformation.
- Be careful not to incorrectly install or fail to install O-rings, snap rings and other such parts.
- Before securing a part on a vise, place cushioning material such as wood blocks, aluminum plate, or cloth between the part and the vise.
- Avoid damaging the mating surface of the case.
- Before applying liquid gasket, completely remove the old liquid gasket.
- After removing the sensors, breather hose and plugs, plug the holes to avoid foreign materials intruding as necessary.
- During disassembly or assembly, be sure to use nylon gloves or paper towels. Do not use cloth gloves or waste cloth.

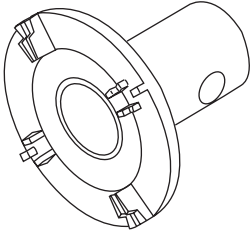
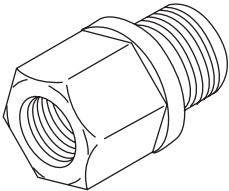
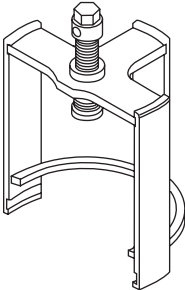
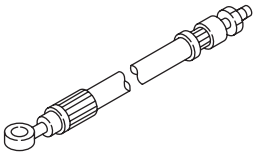
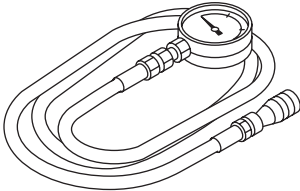
## D: PREPARATION TOOL

### 1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST41099AC000	41099AC000	ENGINE SUPPORT ASSY	Used for supporting engine.
 ST18801AA000	18801AA000	OIL PRESSURE GAUGE ASSY	Used for measuring the secondary pressure (line pressure).

# General Description

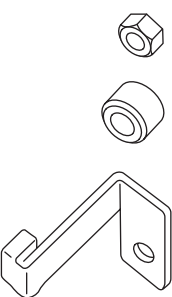
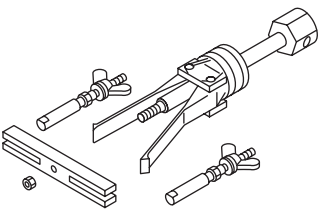
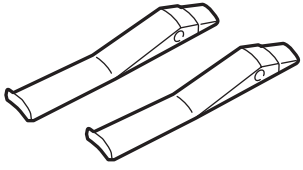
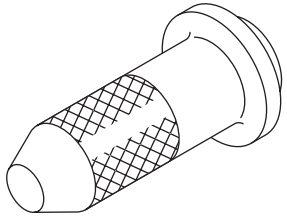
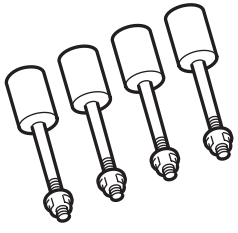
## CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18658AA020	18658AA020	WRENCH COMPL RETAINER	Used for removing and installing the differential side retainer.
 ST18681AA000	18681AA000	PRESSURE GAUGE ADAPTER	Used for measuring oil pressure. NOTE: Used together with the genuine O-ring (part No. 806911080).
 ST18769AA000	18769AA000	EXPANDER PULLEY	Used for removing and installing the secondary pulley assembly.
 ST-498897700	498897700	OIL PRESSURE ADAPTER SET	Used for measuring the secondary pressure (line pressure) and transfer clutch hydraulic pressure.
 ST-498575400	498575400	OIL PRESSURE GAUGE ASSY	Used for measuring the transfer clutch hydraulic pressure.



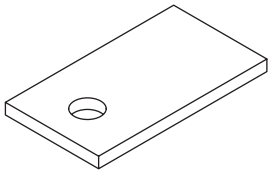
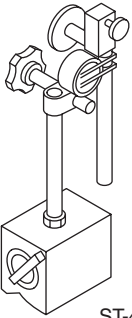
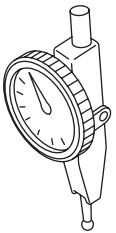
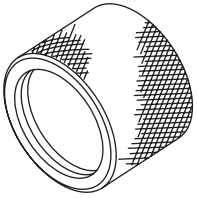
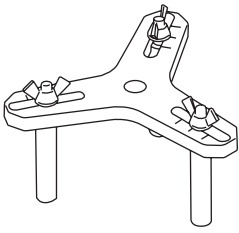
# General Description

## CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-498277200</p>	498277200	STOPPER SET	<ul style="list-style-type: none"> <li>Used for removing and installing automatic transmission assembly to engine.</li> <li>Used for preventing the torque converter from dropping off.</li> </ul>
 <p>ST-398527700</p>	398527700	PULLER ASSY	<ul style="list-style-type: none"> <li>Used for removing the extension case oil seal.</li> <li>Used for removing the roller bearing of the primary pulley and secondary pulley.</li> <li>Used for removing the bearing of reduction driven gear.</li> <li>Used for removing the differential side retainer bearing outer race.</li> </ul>
 <p>ST18760AA000</p>	18760AA000	CLAW	<ul style="list-style-type: none"> <li>Used for removing ball bearing of front reduction driven gear.</li> <li>Used together with PULLER ASSY (398527700).</li> </ul>
 <p>ST-498057300</p>	498057300	INSTALLER	Used for installing the extension case oil seal.
 <p>ST18632AA000</p>	18632AA000	TRANSMISSION STAND	Used for disassembling and assembling the transmission.

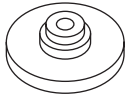
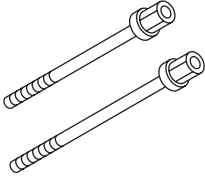
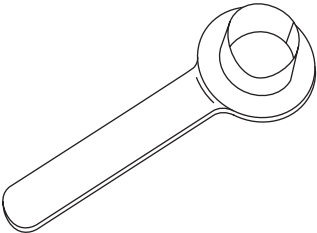
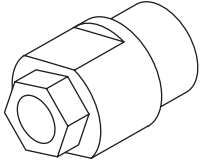
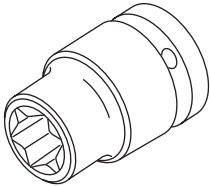
# General Description

## CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-498255400</p>	498255400	PLATE	Used for measuring the backlash of hypoid gear.
 <p>ST-498247001</p>	498247001	MAGNET BASE	<ul style="list-style-type: none"> <li>• Used for measuring the backlash of differential bevel pinion.</li> <li>• Used for measuring the backlash of hypoid gear.</li> <li>• Used together with DIAL GAUGE (498247100).</li> </ul>
 <p>ST-498247100</p>	498247100	DIAL GAUGE	<ul style="list-style-type: none"> <li>• Used for measuring the backlash of differential bevel pinion.</li> <li>• Used for measuring the backlash of hypoid gear.</li> <li>• Used together with DIAL GAUGE (498247101).</li> </ul>
 <p>ST18675AA000</p>	18675AA000	DIFFERENTIAL SIDE OIL SEAL INSTALLER	Used for installing the differential side retainer oil seal.
 <p>ST18762AA001</p>	18762AA001	COMPRESSOR SPECIAL TOOL	<ul style="list-style-type: none"> <li>• Used for disassembling and installing the multi-plate clutch piston for shifting.</li> <li>• COMPRESSOR SPECIAL TOOL (18762AA000) can also be used.</li> </ul>

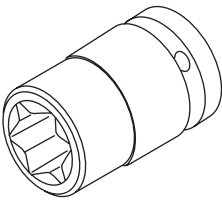
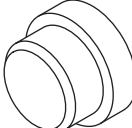
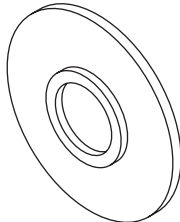
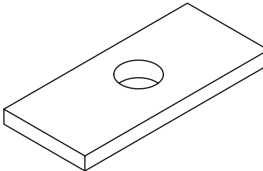
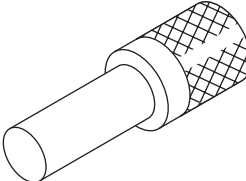
# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST18765AA000</p>	18765AA000	COMPRESSOR SUPPORT	Used for disassembling and installing the multi-plate clutch for shifting.
 <p>ST18763AA000</p>	18763AA000	COMPRESSOR SHAFT	Used for disassembling and installing the multi-plate clutch for shifting.
 <p>ST28399SA010</p>	28399SA010	OIL SEAL PROTECTOR	Used for protecting oil seal when installing front drive shaft.
 <p>ST18667AA010</p>	18667AA010	HOLDER	<ul style="list-style-type: none"> <li>• Used for removing and installing the drive pinion lock nut.</li> <li>• Used as a holder to rotate gear when checking tooth contact.</li> </ul>
 <p>ST18270KA010</p>	18270KA010	SOCKET (E16)	Used for removing and installing the center support COMPL.

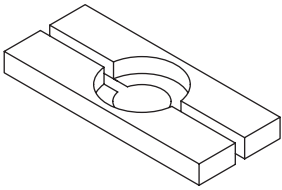
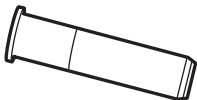
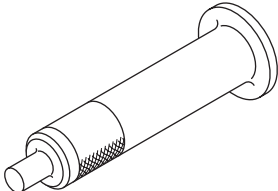
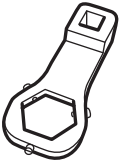
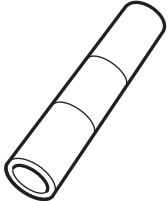
## General Description

### CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST18270KA020</p>	18270KA020	SOCKET (E20)	<ul style="list-style-type: none"> <li>• Used for removing and installing the hypoid driven gear.</li> <li>• Used for removing and installing the drive pinion shaft retainer.</li> </ul>
 <p style="text-align: center;">ST-398497701</p>	398497701	SEAT	Used for removing and installing the ball bearing.
 <p style="text-align: center;">ST-398177700</p>	398177700	INSTALLER	<ul style="list-style-type: none"> <li>• Used for removing and installing the ball bearing and tapered roller bearing.</li> <li>• Used for installing the parking gear.</li> </ul>
 <p style="text-align: center;">ST-398643600</p>	398643600	GAUGE	Used for measuring the total end play, extension end play and drive pinion height.
 <p style="text-align: center;">ST-899864100</p>	899864100	REMOVER	Used for removing and installing the ball bearing.

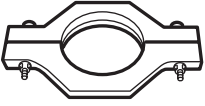
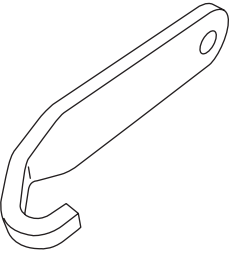
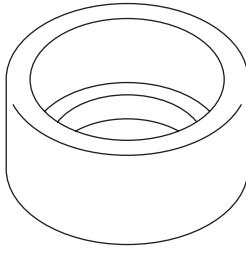
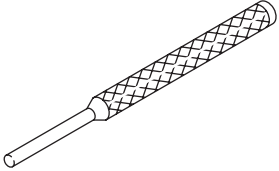
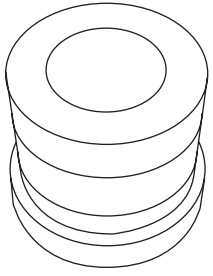
# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-498077000</p>	498077000	REMOVER	<ul style="list-style-type: none"> <li>Used for removing ball bearing of front reduction drive gear.</li> <li>Used for removing the inner bearing inner race of the drive pinion shaft.</li> <li>Used for removing the differential taper roller bearing.</li> </ul>
 <p>ST18657AA010</p>	18657AA010	INSTALLER	Used for installing the oil seal of inhibitor switch.
 <p>ST18657AA020</p>	18657AA020	OIL SEAL INSTALLER	Used for installing the oil seal.
 <p>ST18621AA000</p>	18621AA000	ADAPTER WRENCH	Used for removing and installing the drive pinion shaft lock nut.
 <p>ST18651AA000</p>	18651AA000	INSTALLER	Used for installing the bearing of front reduction drive gear.

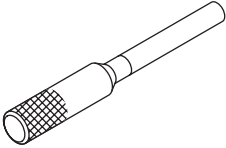
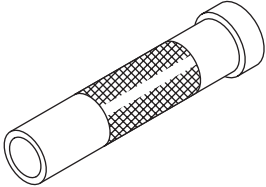
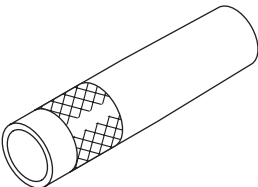
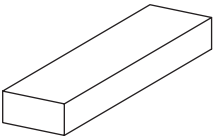
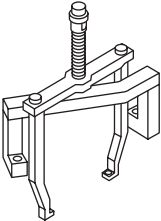
## General Description

### CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18720AA000	18720AA000	REMOVER	Used for removing ball bearing of reduction driven gear.
 ST-498497300	498497300	CRANKSHAFT STOPPER	Used for stopping the drive plate rotation when removing and installing the drive plate.
 ST20299AG010	20299AG010	PRESS SNAP RING	Used for installing the bearing on primary pulley side.
 ST-398791600	398791600	REMOVER	Used for removing and installing the shifter arm spring pin.
 ST-399513600	399513600	INSTALLER	<ul style="list-style-type: none"> <li>• Used to install the rear drive shaft ball bearing.</li> <li>• Used for removing the bearing of the oil pump chain sprocket.</li> </ul>

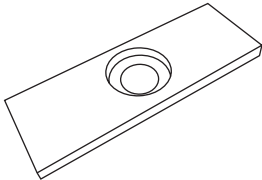
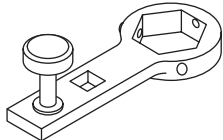
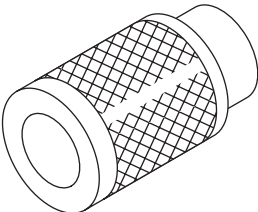
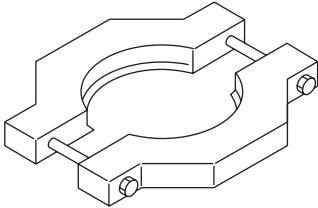
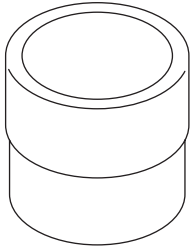
# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-499267300</p>	499267300	STOPPER PIN	Used for adjusting the inhibitor switch.
 <p>ST-499277100</p>	499277100	BUSHING 1-2 INSTALLER	<ul style="list-style-type: none"> <li>• Used for installing the front differential taper roller bearing.</li> <li>• Used for removing and installing the transfer reduction drive gear.</li> <li>• Used for installing the ball bearing of the transfer reduction drive gear.</li> <li>• Used for installing the oil seal.</li> <li>• Used for installing the ball bearing of the transfer reduction driven gear.</li> </ul>
 <p>ST-499277200</p>	499277200	INSTALLER	<ul style="list-style-type: none"> <li>• Used for installing the inner bearing inner race of drive pinion shaft.</li> <li>• Used for installing the reduction driven gear.</li> </ul>
 <p>ST-499575400</p>	499575400	GAUGE	Used for measuring height of end play.
 <p>ST-499737100</p>	499737100	PULLER SET	<ul style="list-style-type: none"> <li>• Used for measuring the transfer end play.</li> <li>• Use the rack only.</li> </ul>

# General Description

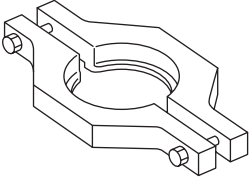
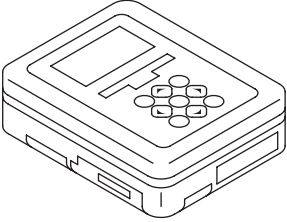
## CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-499575600</p>	499575600	GAUGE	Used for measuring height of end play.
 <p>ST-499787700</p>	499787700	WRENCH	Used for measuring the differential pinion shaft backlash.
 <p>ST-499757002</p>	499757002	INSTALLER	Used for removing the bearing of front reduction driven gear.
 <p>ST18767AA000</p>	18767AA000	BEARING REMOVER	<ul style="list-style-type: none"> <li>• Used for removing the transfer reduction drive gear.</li> <li>• Used for removing the reduction driven gear bearing retainer.</li> </ul>
 <p>ST-499755602</p>	499755602	PRESS SNAP RING	<ul style="list-style-type: none"> <li>• Used for installing the oil seal.</li> <li>• Used for installing the ball bearing and roller bearing.</li> <li>• Used for installing the ball bearing of the front reduction driven gear.</li> </ul>



# General Description

CONTINUOUSLY VARIABLE TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-498077600	498077600	REMOVER	<ul style="list-style-type: none"> <li>• Used for removing the ball bearing of the rear drive shaft.</li> <li>• Used for removing the ball bearing of transfer reduction driven gear.</li> <li>• Used for removing ball bearing of reduction driven gear.</li> <li>• Used for removing the ball bearing of drive sprocket.</li> </ul>
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

## 2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Thickness gauge	Used for the clearance in reverse brake, forward clutch, transfer clutch and input clutch.
Caliper	Used for measuring the clearance at the parts.
Spring scale	Used for measuring the starting torque of the drive pinion.
TORX® bit T70	Used for removing and installing differential gear oil drain plug.
Straight pin remover	Used for removing and installing the spring pin.
Deep socket	Used for removing and installing the secondary pressure sensor. NOTE: Use Ko-ken 3/8 12-point 27 mm (manufacturer product No. 3305M-27).
Push/pull gauge	Used for measuring clutch clearance.
Angle gauge	<ul style="list-style-type: none"> <li>• Used for installing the hypoid driven gear.</li> <li>• Used for installing the drive plate.</li> </ul>