

# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

### 1. General Description

#### A: SPECIFICATIONS

##### 1. TORQUE CONVERTER CLUTCH

Model	Non-turbo	Turbo
Type	Symmetric, 3 element, single stage, 2 phase torque converter	
Stall torque ratio	2.05 — 2.35	
Nominal diameter	246 mm (9.69 in)	
Stall speed (at sea level)	2,200 — 2,700 rpm	2,700 — 3,200 rpm
One-way clutch	Sprague type one-way clutch	

##### 2. OIL PUMP

Type	Pracoid constant-displacement pump	
Driving method	Driven by engine	
Number of teeth	Inner rotor	9
	Outer rotor	10

##### 3. TRANSMISSION CONTROL ELEMENT

Type	4-forward, 1-reverse, double-row planetary gears
Multi-plate clutch	3 sets
Multi-plate brake	2 sets
One-way clutch (sprague type)	1 set

##### 4. TRANSMISSION GEAR RATIO

Model	Non-turbo	Turbo
1st	3.027	2.785
2nd	1.619	1.545
3rd	1.000	
4th	0.694	
Rev	2.272	

##### 5. PLANETARY GEAR AND PLATE

Model	Non-turbo	Turbo
Tooth number of front sun gear	33	
Tooth number of front pinion	21	
Tooth number of front internal gear	75	
Tooth number of rear sun gear	37	42
Tooth number of rear pinion	18	17
Tooth number of rear internal gear	75	
Drive & driven plate number of high clutch	4	5
Drive & driven plate number of low clutch	6	7
Drive & driven plate number of reverse clutch	2	
Drive & driven plate number of 2-4 brake	3	4
Drive & driven plate number of low & reverse brake	6	7

# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

## 6. SELECTOR POSITION

P (Park)	Transmission in neutral, output member immovable, and engine start possible
R (Reverse)	Transmission in reverse for backing
N (Neutral)	Transmission in neutral and engine start possible
D (Drive)	Automatic gear change 1st ← → 2nd ← → 3rd ← → 4th
3 (3rd)	Automatic gear change 1st ← → 2nd ← → 3rd ← 4th
2 (2nd)	2nd gear locked (Deceleration possible 2nd ← 3rd ← 4th)
1 (1st)	1st gear locked (Deceleration possible 1st ← 2nd ← 3rd ← 4th)
Control method	Hydraulic remote control

## 9. TRANSFER

Transfer type	Multi-plate transfer (MPT)
Drive & driven plate number of transfer clutch	5 (Non-turbo model) 6 (Turbo model)
Control method	Electronic, hydraulic type
Lubricant	The same Automatic transmission fluid used in automatic transmission
1st reduction gear ratio	1.000 (53/53)

## 7. HYDRAULIC CONTROL AND LUBRICATION

Type	Electronic/hydraulic control [Four forward speed changes by electrical signals of vehicle speed and accelerator (throttle) opening]
Fluid	Dexron III type Automatic transmission fluid
Fluid capacity	9.3 — 9.6 ℓ (9.8 — 10.1 US qt, 8.2 — 8.4 Imp qt)
Lubrication system	Forced feed lubrication with oil pump
Oil	Automatic transmission fluid (above mentioned)

## 8. COOLING AND HARNESS

Cooling system	Liquid-cooled cooler incorporated in radiator
Inhibitor switch	12 poles
Transmission harness	20 poles

# GENERAL DESCRIPTION

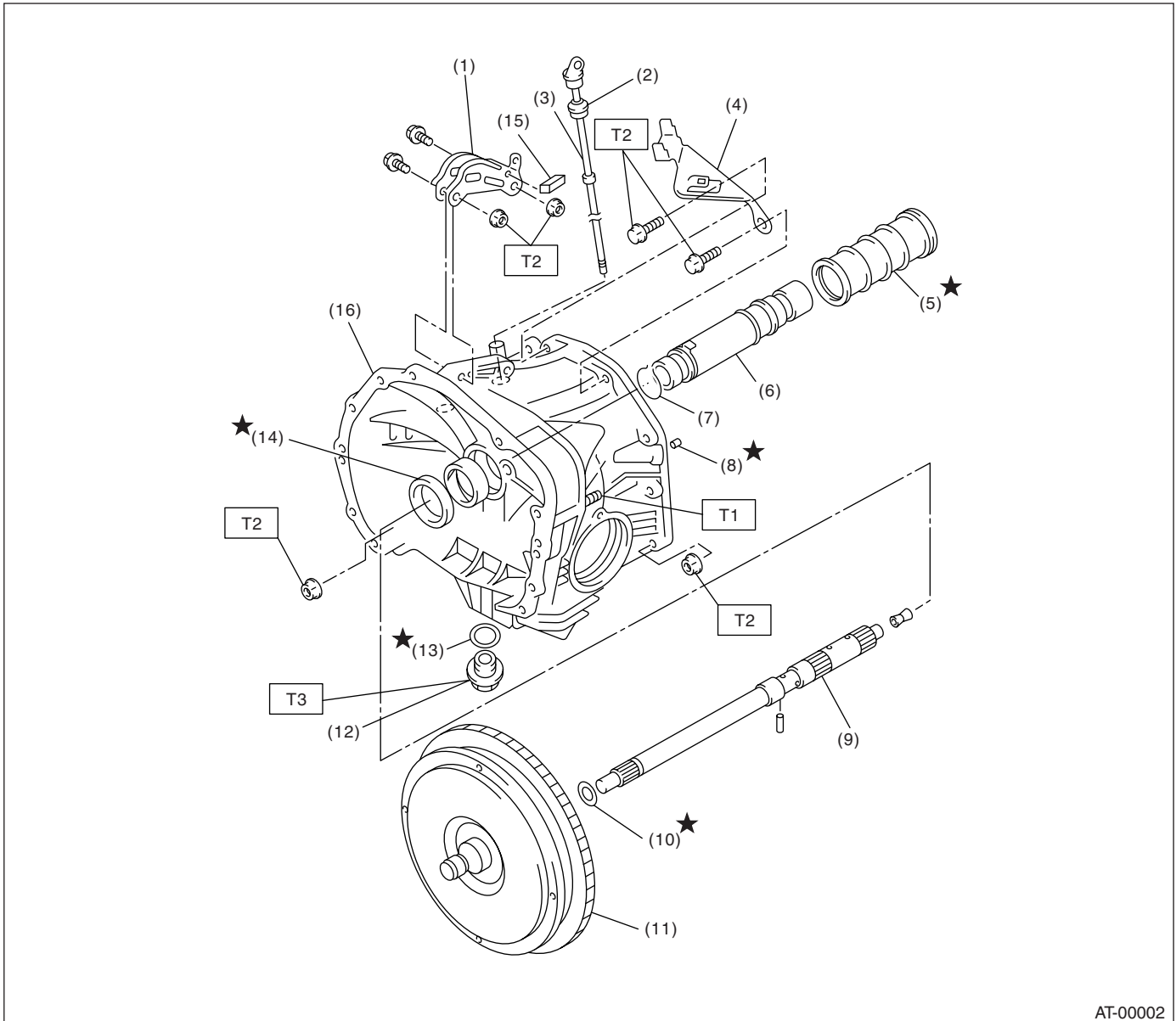
AUTOMATIC TRANSMISSION

## 10.FINAL REDUCTION

Front final gear ratio	4.444 (40/9)											
Lubrication oil	<div style="text-align: center; border: 1px solid black; margin-bottom: 10px;"> <table style="width: 100%; border-collapse: collapse; margin: 0 auto;"> <tr><td style="text-align: center;">(1)</td></tr> <tr><td style="text-align: center;">(2)</td></tr> <tr><td style="text-align: center;">(3)</td></tr> <tr><td style="text-align: center;">GL-5</td></tr> <tr><td style="text-align: center;">(4)</td></tr> <tr><td style="text-align: center;">(°C) -30 -26 -15 -5 0 15 25 30</td></tr> <tr><td style="text-align: center;">(°F) -22 -15 5 23 32 59 77 86</td></tr> </table> </div> <div style="text-align: right; margin-top: 10px;">MT-00001</div> <div style="margin-top: 10px;"> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">(1) Item</td> <td style="width: 50%;">(3) API classification</td> </tr> <tr> <td>(2) Front differential gear oil</td> <td>(4) SAE viscosity No. and applicable temperature</td> </tr> </table> </div>	(1)	(2)	(3)	GL-5	(4)	(°C) -30 -26 -15 -5 0 15 25 30	(°F) -22 -15 5 23 32 59 77 86	(1) Item	(3) API classification	(2) Front differential gear oil	(4) SAE viscosity No. and applicable temperature
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(1) Item	(3) API classification											
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Front differential oil capacity	1.1 — 1.3 ℓ (1.2 — 1.4 US qt, 1.0 — 1.1 Imp qt)											

## B: COMPONENT

### 1. TORQUE CONVERTER CLUTCH AND CASE



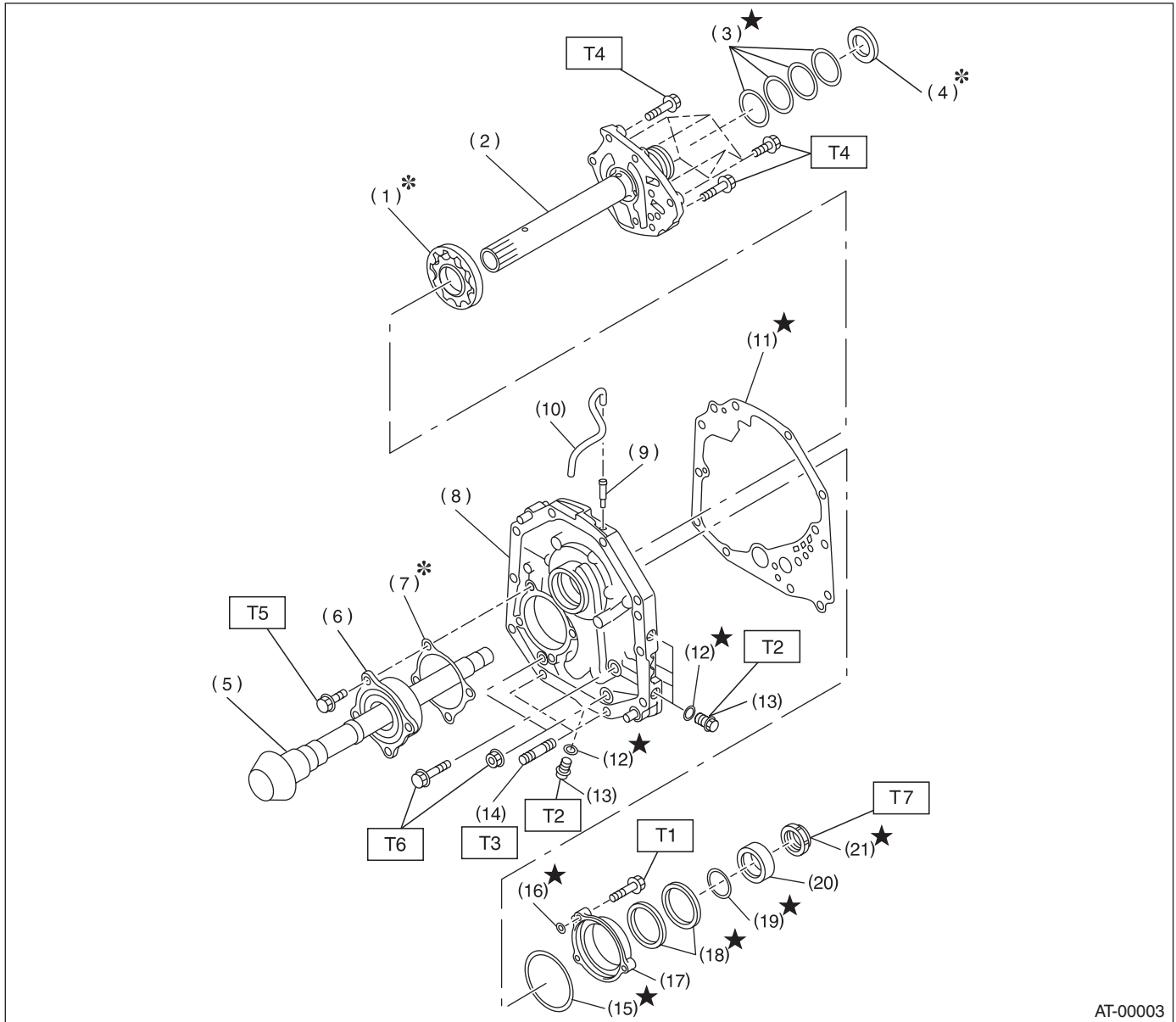
AT-00002

(1) Pitching stopper bracket	(8) Rubber seal	(15) Clip (Turbo model)
(2) O-ring	(9) Input shaft	(16) Torque converter clutch case
(3) Differential oil level gauge	(10) O-ring	
(4) Stay	(11) Torque converter clutch ASSY	
(5) Seal pipe	(12) Differential gear oil drain plug	<b>Tightening torque: N·m (kgf-m, ft-lb)</b>
(6) Oil pump shaft	(13) Gasket	<b>T1: 18 (1.8, 13.0)</b>
(7) Clip	(14) Oil seal	<b>T2: 41 (4.2, 30.4)</b>
		<b>T3: 44 (4.5, 32.5)</b>

# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

### 2. OIL PUMP



AT-00003

- (1) Oil pump rotor
- (2) Oil pump cover
- (3) Seal ring
- (4) Thrust needle bearing
- (5) Drive pinion shaft
- (6) Roller bearing
- (7) Drive pinion shim
- (8) Oil pump housing
- (9) Nipple
- (10) Air breather hose

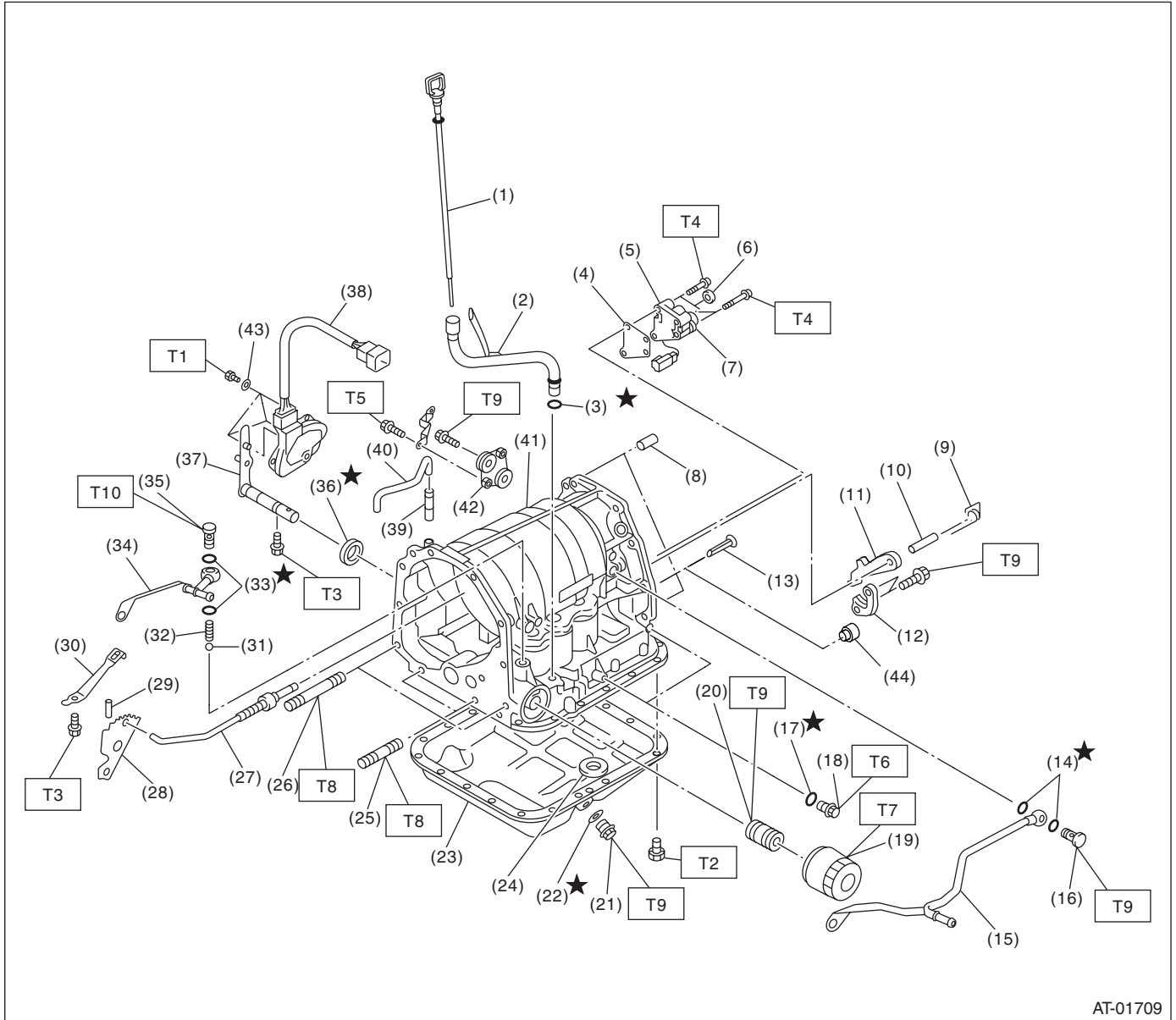
- (11) Gasket
- (12) O-ring
- (13) Test plug
- (14) Stud bolt
- (15) O-ring
- (16) O-ring
- (17) Oil seal retainer
- (18) Oil seal
- (19) O-ring
- (20) Drive pinion collar

- (21) Lock nut

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

- T1: 7 (0.7, 5.1)**
- T2: 13 (1.3, 9.4)**
- T3: 18 (1.8, 13.0)**
- T4: 25 (2.5, 18.1)**
- T5: 40 (4.1, 29.5)**
- T6: 42 (4.3, 31)**
- T7: 116 (11.8, 85)**

### 3. TRANSMISSION CASE AND CONTROL DEVICE



# GENERAL DESCRIPTION

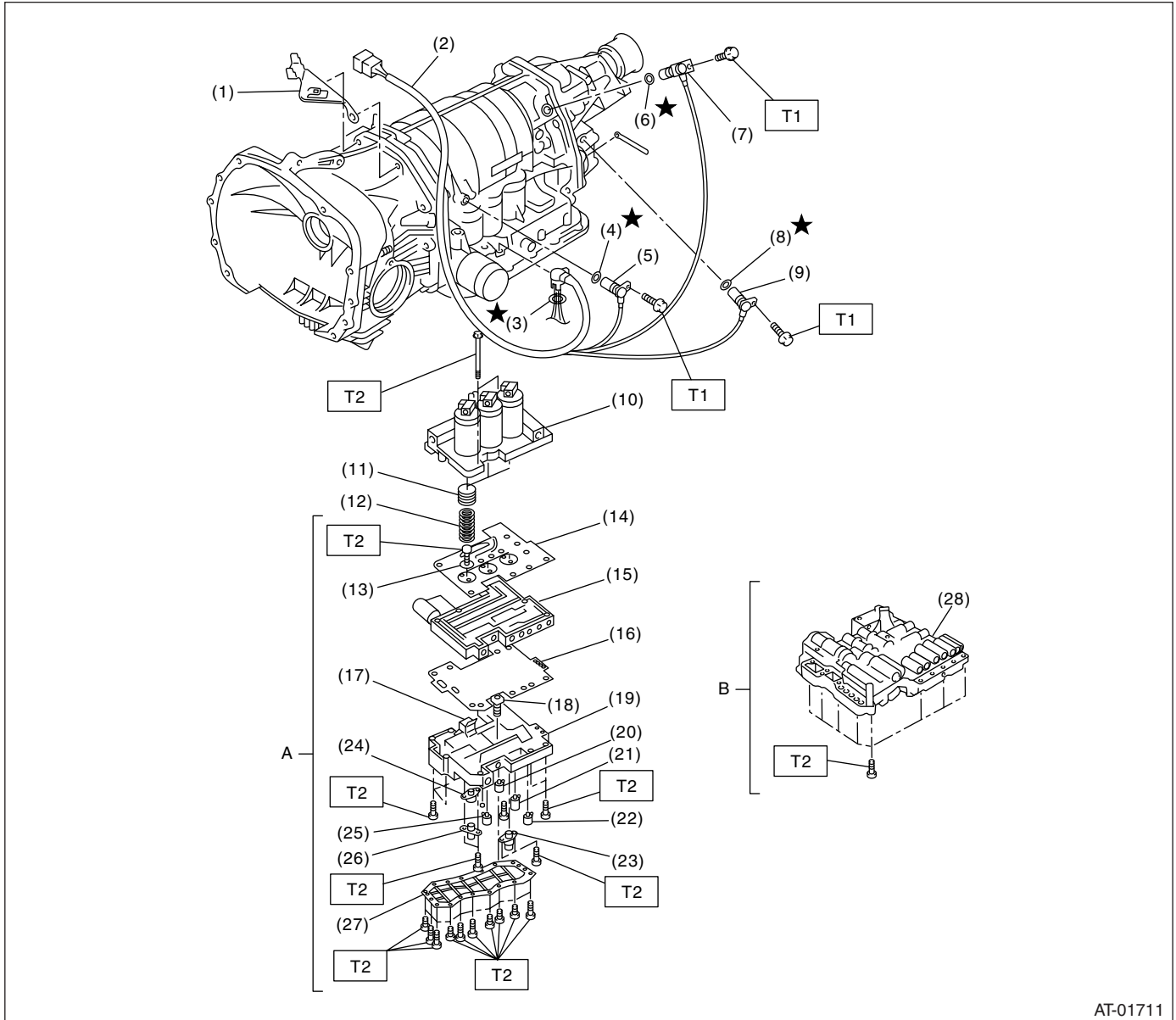
## AUTOMATIC TRANSMISSION

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(1) ATF level gauge	(17) O-ring	(37) Range select lever
(2) ATF charger pipe	(18) Test plug	(38) Inhibitor switch ASSY
(3) O-ring	(19) Oil filter	(39) Nipple
(4) Transfer valve plate (Non-turbo model)	(20) Oil filter stud bolt	(40) Air breather hose
(5) Transfer valve ASSY (Non-turbo model)	(21) Drain plug (ATF)	(41) Transmission case
(6) Transfer clutch seal (Non-turbo model)	(22) Gasket	(42) Plate ASSY
(7) Transfer duty solenoid (Non-turbo model)	(23) Oil pan	(43) Washer
(8) Straight pin	(24) Magnet	(44) Bushing (Turbo model)
(9) Return spring	(25) Stud bolt (Short)	
(10) Shaft	(26) Stud bolt (Long)	
(11) Parking pawl	(27) Parking rod	<hr/> <b>Tightening torque: N·m (kgf-m, ft-lb)</b>
(12) Parking support	(28) Manual plate	<b>T1: 3.4 (0.35, 2.6)</b>
(13) Inlet filter (Non-turbo model)	(29) Spring pin	<b>T2: 5 (0.5, 3.6)</b>
(14) Gasket	(30) Detention spring	<b>T3: 6 (0.6, 4.4)</b>
(15) ATF cooler inlet pipe	(31) Ball	<b>T4: 8 (0.8, 6)</b>
(16) Union screw	(32) Spring	<b>T5: 12 (1.2, 8.7)</b>
	(33) Gasket	<b>T6: 13 (1.3, 10)</b>
	(34) ATF cooler outlet pipe	<b>T7: 14 (1.4, 10)</b>
	(35) Union screw	<b>T8: 18 (1.8, 13)</b>
	(36) Oil seal	<b>T9: 25 (2.5, 18.1)</b>
		<b>T10: 45 (4.6, 33.2)</b>

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### 4. CONTROL VALVE AND HARNESS ROUTING



AT-01711

A : Non-turbo model

B : Turbo model

- |   |                                |                                  |
|---|--------------------------------|----------------------------------|
| (1) Stay                                  | (11) Accumulator piston        | (22) 2-4 brake timing solenoid   |
| (2) Transmission harness                  | (12) Accumulator spring        | (23) 2-4 brake duty solenoid     |
| (3) O-ring                                | (13) Side plate                | (24) Line pressure duty solenoid |
| (4) O-ring                                | (14) Upper separate plate      | (25) Low clutch timing solenoid  |
| (5) Torque converter turbine speed sensor | (15) Middle control valve body | (26) Lock-up duty solenoid       |
| (6) O-ring                                | (16) Separate plate            | (27) Oil strainer                |
| (7) Front vehicle speed sensor            | (17) Fluid filter              | (28) Control valve ASSY          |
| (8) O-ring                                | (18) Fluid filter              |                                  |
| (9) Rear vehicle speed sensor             | (19) Lower control valve body  |                                  |
| (10) Upper control valve body             | (20) Shift solenoid 2          |                                  |
|   | (21) Shift solenoid 1          |                                  |

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

**T1: 7 (0.7, 5.1)**

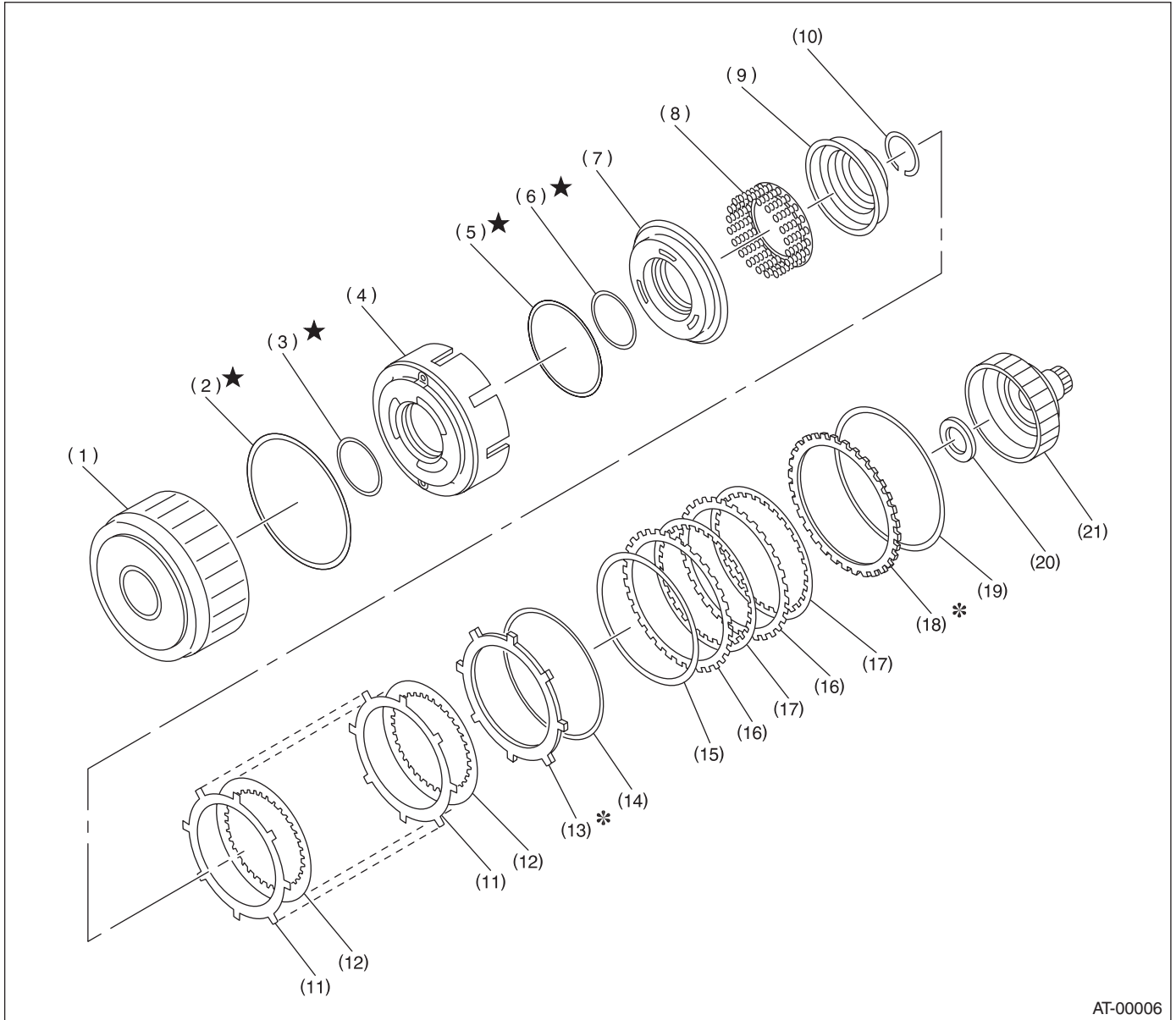
**T2: 8 (0.8, 5.8)**



# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

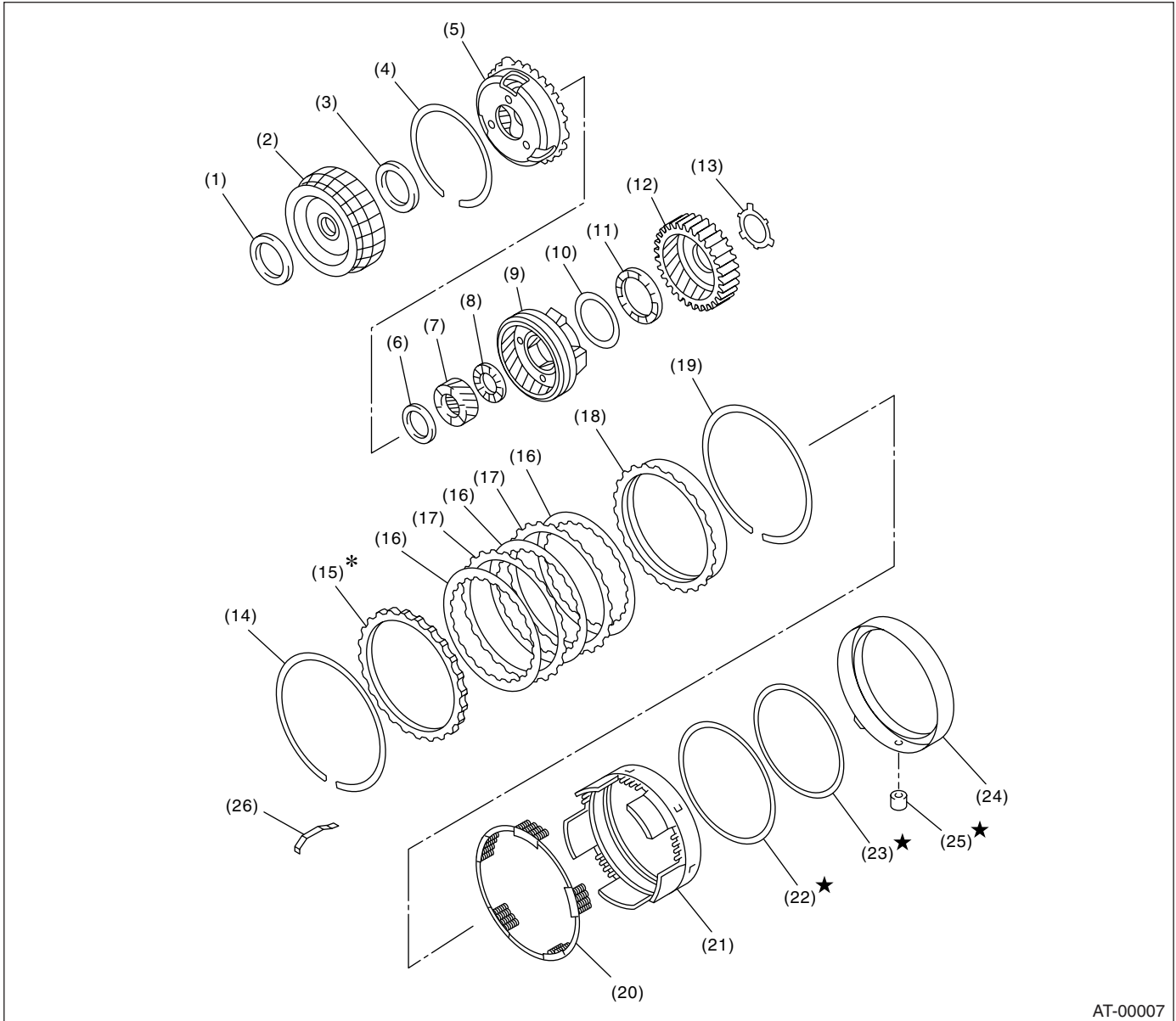
### 5. HIGH CLUTCH AND REVERSE CLUTCH



AT-00006

- |                           |                      |                            |
|---------------------------|----------------------|----------------------------|
| (1) High clutch drum      | (8) Spring retainer  | (15) Dish plate            |
| (2) Lip seal              | (9) Clutch cover     | (16) Driven plate          |
| (3) D-ring                | (10) Snap ring       | (17) Drive plate           |
| (4) Reverse clutch piston | (11) Driven plate    | (18) Retaining plate       |
| (5) D-ring                | (12) Drive plate     | (19) Snap ring             |
| (6) D-ring                | (13) Retaining plate | (20) Thrust needle bearing |
| (7) High clutch piston    | (14) Snap ring       | (21) High clutch hub       |

### 6. PLANETARY GEAR AND 2-4 BRAKE



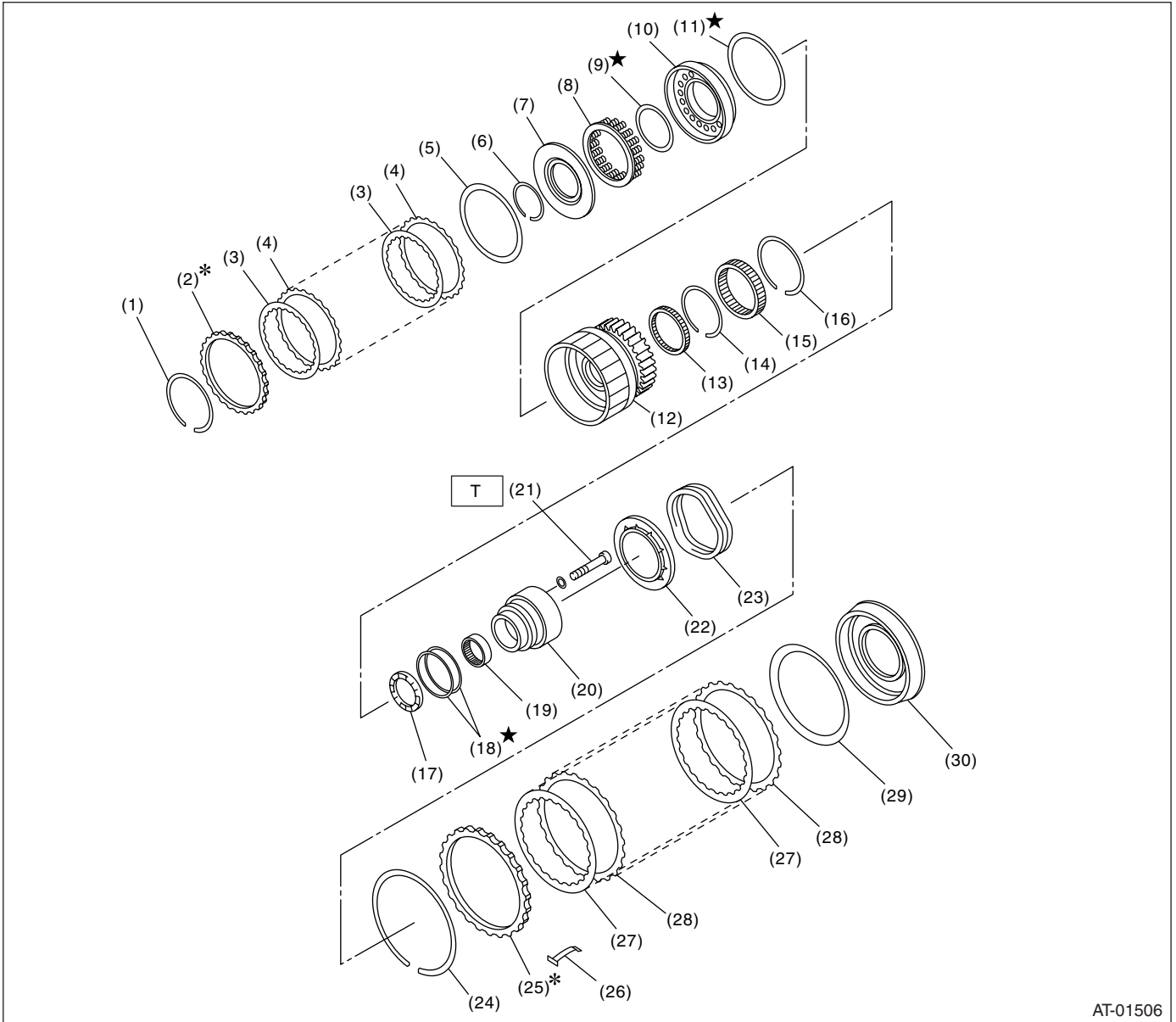
AT-00007

- |                             |                            |                                |
|-----------------------------|----------------------------|--------------------------------|
| (1) Thrust needle bearing   | (10) Washer                | (19) Snap ring                 |
| (2) Front sun gear          | (11) Thrust needle bearing | (20) 2-4 spring retainer       |
| (3) Thrust needle bearing   | (12) Rear internal gear    | (21) 2-4 brake piston          |
| (4) Snap ring               | (13) Washer                | (22) D-ring                    |
| (5) Front planetary carrier | (14) Snap ring             | (23) D-ring                    |
| (6) Thrust needle bearing   | (15) Retaining plate       | (24) 2-4 brake piston retainer |
| (7) Rear sun gear           | (16) Drive plate           | (25) 2-4 brake seal            |
| (8) Thrust needle bearing   | (17) Driven plate          | (26) Leaf spring               |
| (9) Rear planetary carrier  | (18) Pressure rear plate   |                                |

# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

### 7. LOW CLUTCH AND LOW & REVERSE BRAKE



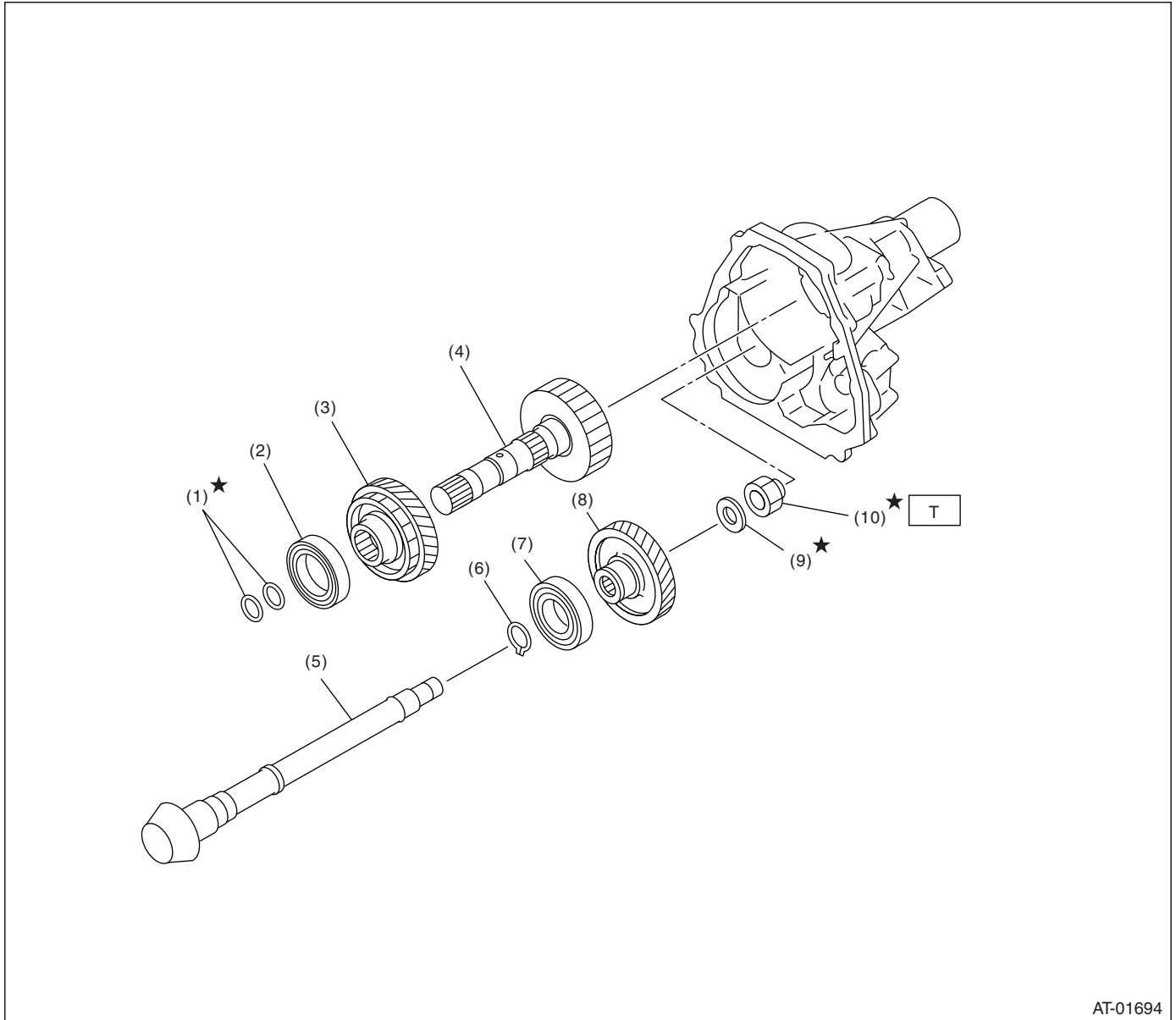
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- |                        |                                |                                 |
|------------------------|--------------------------------|---------------------------------|
| (1) Snap ring          | (12) Low clutch drum           | (23) Return spring              |
| (2) Retaining plate    | (13) Needle bearing            | (24) Snap ring                  |
| (3) Drive plate        | (14) Snap ring                 | (25) Retaining plate            |
| (4) Driven plate       | (15) One-way clutch            | (26) Leaf spring                |
| (5) Dish plate         | (16) Snap ring                 | (27) Drive plate                |
| (6) Snap ring          | (17) Thrust needle bearing     | (28) Driven plate               |
| (7) Cover              | (18) Seal ring                 | (29) Dish plate                 |
| (8) Spring retainer    | (19) Needle bearing            | (30) Low & reverse brake piston |
| (9) D-ring             | (20) One-way clutch inner race |                                 |
| (10) Low clutch piston | (21) Socket bolt               |                                 |
| (11) D-ring            | (22) Spring retainer           |                                 |

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

**T: 25 (2.5, 18.1)**

## 8. REDUCTION GEAR



AT-01694

- |                           |                           |
|---------------------------|---------------------------|
| (1) Seal ring             | (6) Snap ring             |
| (2) Ball bearing          | (7) Ball bearing          |
| (3) Reduction drive gear  | (8) Reduction driven gear |
| (4) Reduction drive shaft | (9) Washer                |
| (5) Drive pinion shaft    | (10) Lock nut             |

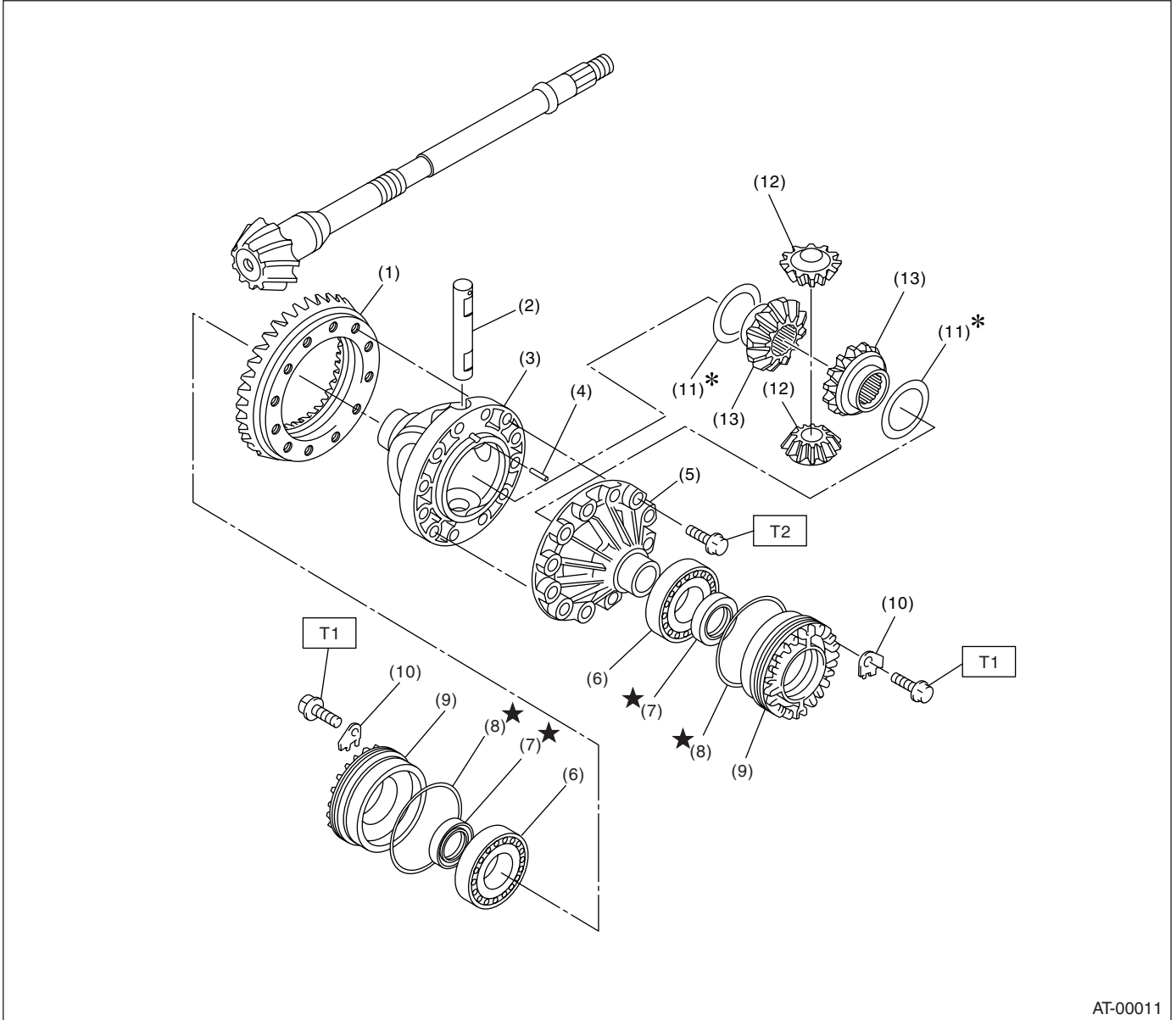
**Tightening torque: N·m (kgf·m, ft·lb)**

**T: 100 (10.2, 73.8)**

# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

### 9. DIFFERENTIAL GEAR



AT-00011

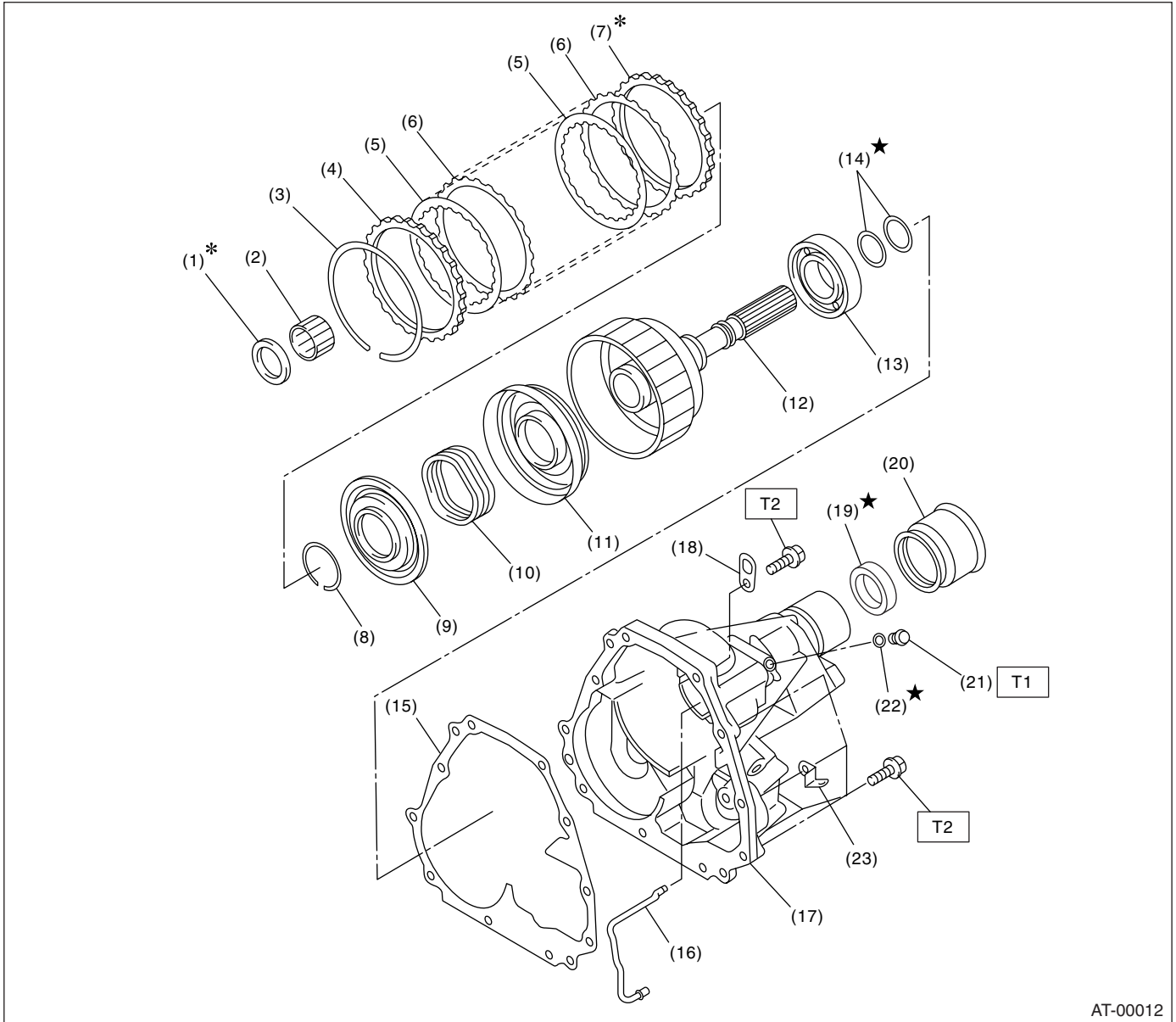
- |                            |                                |                              |
|----------------------------|--------------------------------|------------------------------|
| (1) Hypoid driven gear     | (7) Oil seal                   | (13) Differential bevel gear |
| (2) Pinion shaft           | (8) O-ring                     |                              |
| (3) Differential case (RH) | (9) Differential side retainer |                              |
| (4) Straight pin           | (10) Lock plate                |                              |
| (5) Differential case (LH) | (11) Washer                    |                              |
| (6) Taper roller bearing   | (12) Differential bevel pinion |                              |

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

**T1: 25 (2.5, 18.1)**

**T2: 62 (6.3, 45.6)**

### 10. TRANSFER AND EXTENSION CASE



AT-00012

- |                                 |                             |                         |
|---------------------------------|-----------------------------|-------------------------|
| (1) Thrust needle bearing       | (10) Return spring          | (19) Oil seal           |
| (2) Needle bearing              | (11) Transfer clutch piston | (20) Dust cover         |
| (3) Snap ring                   | (12) Rear drive shaft       | (21) Test plug          |
| (4) Pressure plate              | (13) Ball bearing           | (22) O-ring             |
| (5) Drive plate                 | (14) Seal ring              | (23) Clip (Turbo model) |
| (6) Driven plate                | (15) Gasket                 |                         |
| (7) Retaining plate             | (16) Transfer clutch pipe   |                         |
| (8) Snap ring                   | (17) Extension case         |                         |
| (9) Transfer clutch piston seal | (18) Transmission hanger    |                         |

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

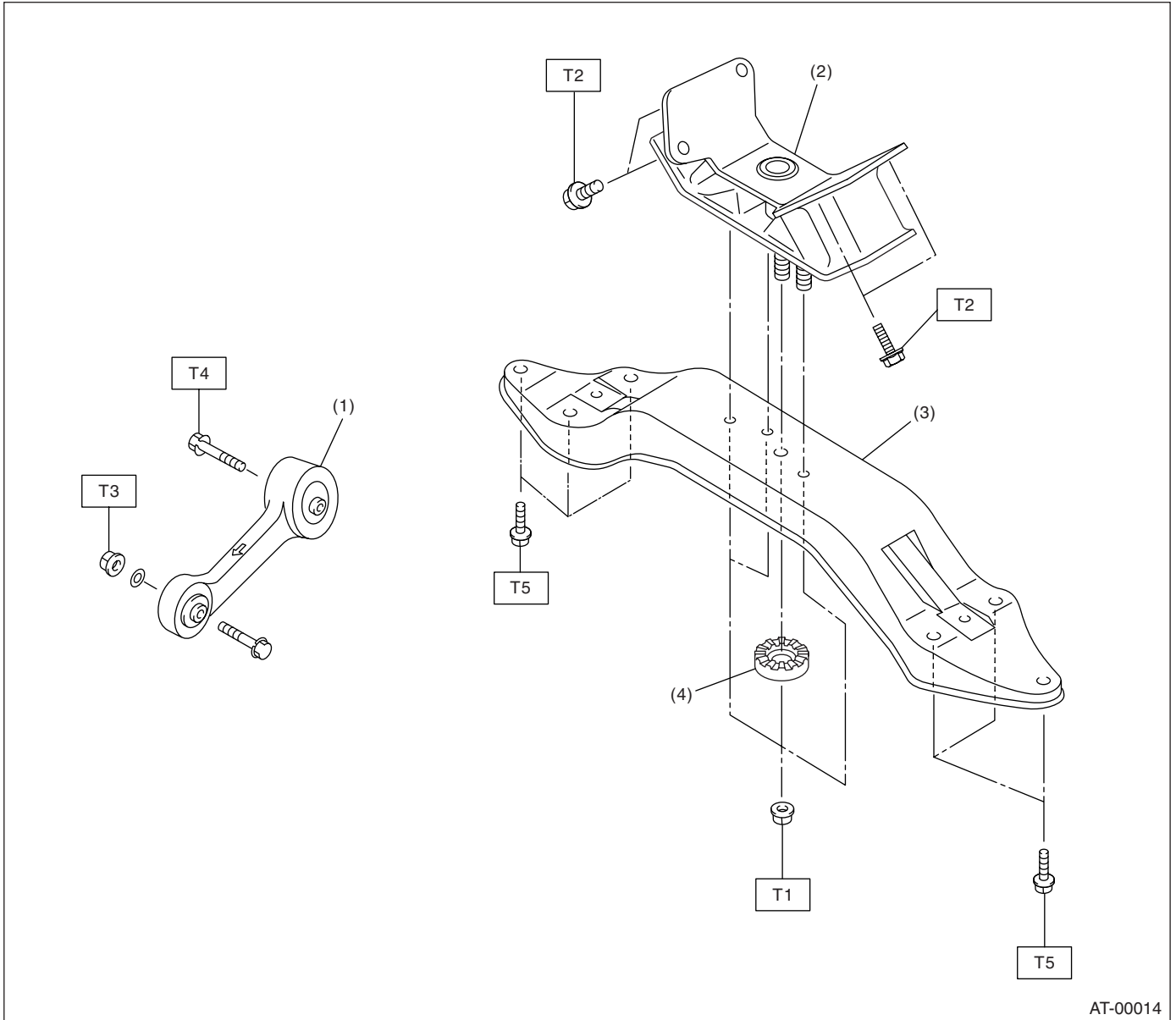
**T1: 13 (1.3, 9.4)**

**T2: 25 (2.5, 18.1)**

# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

## 11. TRANSMISSION MOUNTING



AT-00014

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

- (4) Stopper

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

**T1: 35 (3.6, 26)**

**T2: 39 (4.0, 29)**

**T3: 50 (5.1, 37)**

**T4: 58 (5.9, 43)**

**T5: 70 (7.1, 51)**

### **C: CAUTION**

- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation, and disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Until the oil pan is removed, do not place with the oil pan side facing up to prevent foreign matter from entering the 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 it apart with a screwdriver or other tool.
- Be careful not to burn your hands, because each part on the vehicle is hot after running.
- Use SUBARU genuine gear oil, grease etc. or the equivalent. Do not mix gear oil, grease etc. with that of another grade or from other manufacturers.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Apply gear oil onto sliding or revolution surfaces before installation.
- Replace deformed or otherwise damaged snap rings with new ones.
- Before installing O-rings or oil seals, apply sufficient amount of ATF 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 shop cloth between the part and the vise.
- Avoid damaging the mating surface of the case.
- Before applying sealant, completely remove the old seal.

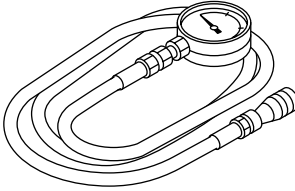
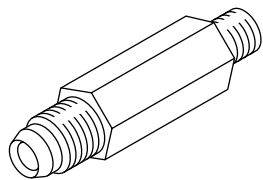
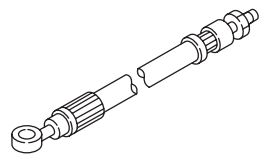
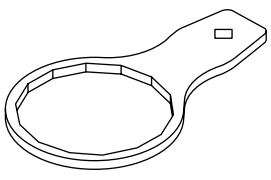


# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

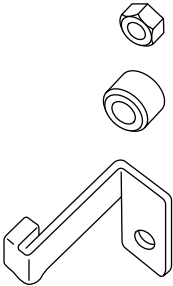
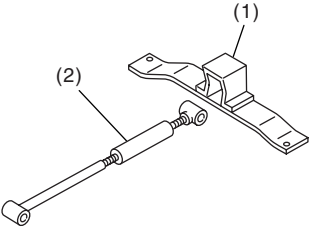
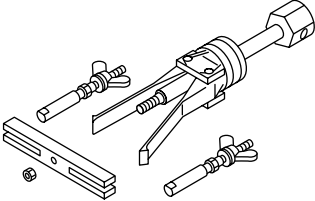
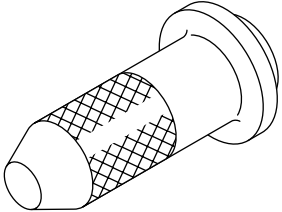
## D: PREPARATION TOOL

### 1. SPECIAL TOOLS

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-498575400	498575400	OIL PRESSURE GAUGE ASSY	Used for measuring oil pressure.
 ST-498897200	498897200	OIL PRESSURE GAUGE ADAPTER	Used oil pump housing when measuring reverse clutch pressure and line pressure.
 ST-498897700	498897700	ADAPTER SET	Used for measuring transfer clutch pressure.
 ST-498545400	498545400	FILTER WRENCH	Used for removing and installing ATF filter.

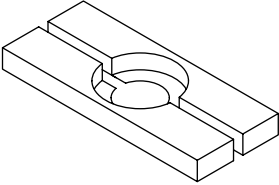
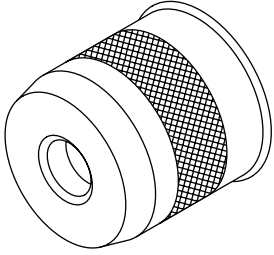
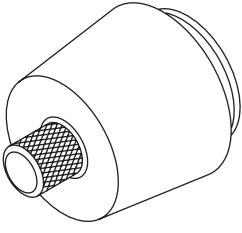
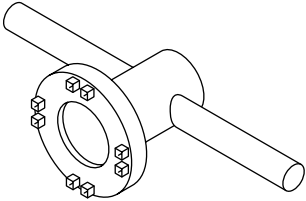
# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-498277200</p>	498277200	STOPPER SET	Used for removing and installing automatic transmission assembly to engine.
 <p>ST41099AA000</p>	41099AA000	ENGINE SUPPORT ASSY	Used for supporting engine. (1) ENGINE SUPPORT BRACKET (41099AA010) (2) ENGINE SUPPORT (41099AA020)
 <p>ST-398527700</p>	398527700	PULLER ASSY	<ul style="list-style-type: none"> <li>• Used for removing extension case roller bearing.</li> <li>• Used for removing extension oil seal.</li> <li>• Used for removing front differential side retainer bearing outer race.</li> <li>• Used for removing front differential side retainer bearing outer ball race.</li> </ul>
 <p>ST-498057300</p>	498057300	INSTALLER	Used for installing extension oil seal.

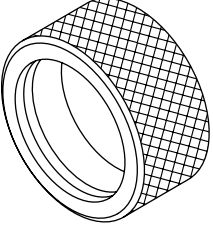
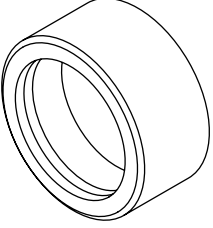
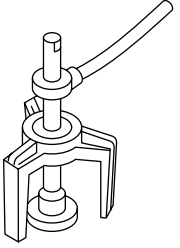
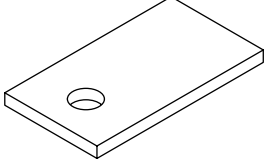
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-498077000</p>	498077000	REMOVER	Used for removing differential taper roller bearing.
 <p style="text-align: center;">ST-499247400</p>	499247400	INSTALLER	<ul style="list-style-type: none"> <li>• Used for installing transfer outer snap ring.</li> <li>• Used with GUIDE (499257300).</li> </ul>
 <p style="text-align: center;">ST-499257300</p>	499257300	SNAP RING OUTER GUIDE	<ul style="list-style-type: none"> <li>• Used for installing transfer outer snap ring.</li> <li>• Used with INSTALLER (499247400).</li> </ul>
 <p style="text-align: center;">ST-499787000</p>	499787000	WRENCH ASSY	Used for removing and installing differential side retainer.

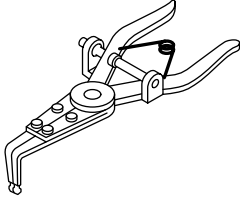
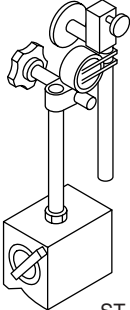
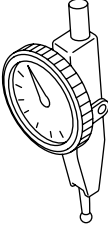
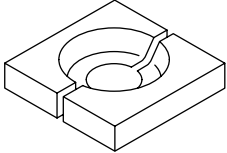
# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-398437700</p>	398437700	DRIFT	Used for installing torque converter case oil seal.
 <p>ST-398487700</p>	398487700	INSTALLER	Used for installing taper roller bearing of front differential.
 <p>ST-398673600</p>	398673600	COMPRESSOR	Used for removing and installing clutch spring.
 <p>ST-498255400</p>	498255400	PLATE	Used for measuring backlash of hypoid gear.

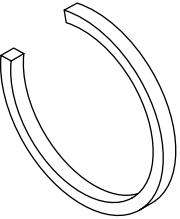
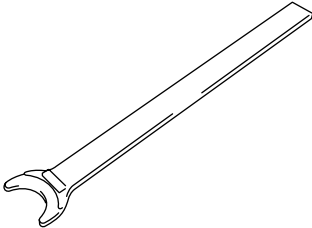
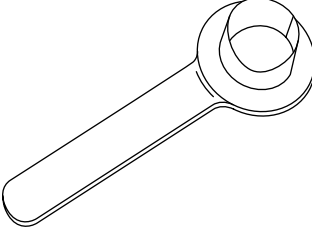
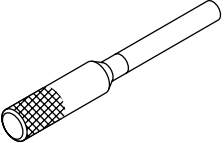
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-399893600</p>	399893600	PLIERS	Used for removing and installing clutch spring.
 <p style="text-align: center;">ST-498247001</p>	498247001	MAGNET BASE	<ul style="list-style-type: none"> <li>• Used for measuring gear backlash.</li> <li>• Used with DIAL GAUGE (498247100).</li> </ul>
 <p style="text-align: center;">ST-498247100</p>	498247100	DIAL GAUGE	<ul style="list-style-type: none"> <li>• Used for measuring gear backlash.</li> <li>• Used with MAGNET BASE (498247001).</li> </ul>
 <p style="text-align: center;">ST-498517000</p>	498517000	REPLACER	Used for removing front roller bearing.

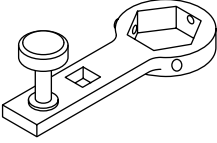
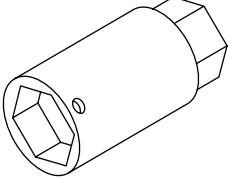
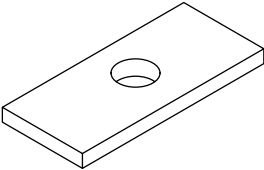
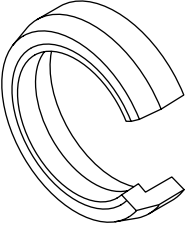
# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p data-bbox="342 537 472 562">ST-398623600</p>	398623600	SEAT	Used for removing spring of transfer clutch piston.
 <p data-bbox="326 915 467 940">ST28399SA000</p>	28399SA000	DRIVE SHAFT REMOVER	Used for removing axle shaft.
 <p data-bbox="326 1293 467 1318">ST28399SA010</p>	28399SA010	OIL SEAL PROTEC- TOR	Used for installing axle shaft.
 <p data-bbox="342 1671 472 1696">ST-499267300</p>	499267300	STOPPER PIN	Used for installing inhibitor switch.

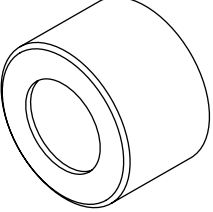
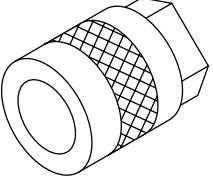
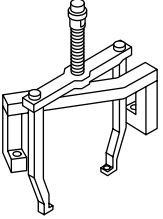
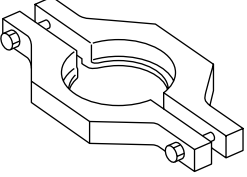
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-499787700</p>	499787700	WRENCH	Used for removing and installing drive pinion lock nut.
 <p style="text-align: center;">ST-499787500</p>	499787500	ADAPTER	Used for removing and installing drive pinion lock nut.
 <p style="text-align: center;">ST-398643600</p>	398643600	GAUGE	Used for measuring total end play, extension end play and drive pinion height.
 <p style="text-align: center;">ST-498627100</p>	498627100	SEAT	Used for holding low clutch piston retainer spring when installing snap ring.

# GENERAL DESCRIPTION

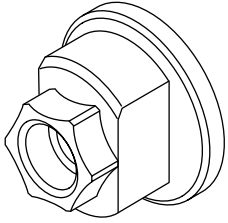
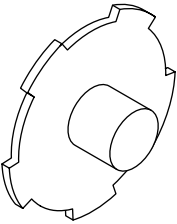
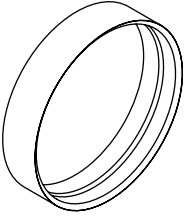
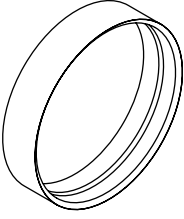
AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-499577000</p>	499577000	GAUGE	Used for measuring the transmission case mating surface to the reduction gear end surface.
 <p style="text-align: center;">ST-499737000</p>	499737000	PULLER	Used for removing reduction driven gear assembly.
 <p style="text-align: center;">ST-499737100</p>	499737100	PULLER SET	Used for removing reduction drive gear assembly.
 <p style="text-align: center;">ST-498077600</p>	498077600	REMOVER	Used for removing ball bearing.



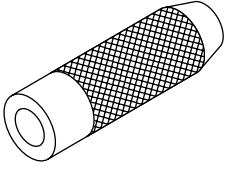
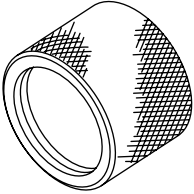
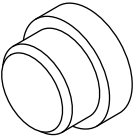
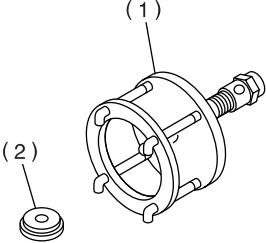
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-498937110</p>	498937110	HOLDER	Used for removing and installing drive pinion lock nut.
 <p style="text-align: center;">ST-498677100</p>	498677100	COMPRESSOR	Used for installing 2-4 brake snap ring.
 <p style="text-align: center;">ST-498437000</p>	498437000	HIGH CLUTCH PIS- TON GUIDE	Used for installing high clutch piston.
 <p style="text-align: center;">ST-498437100</p>	498437100	LOW CLUTCH PIS- TON GUIDE	Used for installing low clutch piston.

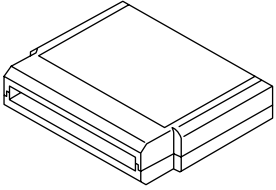

# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-899580100</p>	899580100	INSTALLER	Used for press-fitting the ball bearing for transfer clutch.
 <p style="text-align: center;">ST18675AA000</p>	18675AA000	DIFFERENTIAL OIL SEAL INSTALLER	Used for installing differential side retainer oil seal.
 <p style="text-align: center;">ST-398497701</p>	398497701	SEAT	Used for installing needle bearing.
 <p style="text-align: center;">ST-899524100</p>	899524100	PULLER SET	<ul style="list-style-type: none"> <li>• Using the bolt only.</li> <li>(1) Bolt</li> <li>• Used with PULLER SET (499737100).</li> <li>• Used with PULLER (499737000).</li> <li>(1) Puller</li> <li>(2) Cap</li> </ul>

# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST24082AA230	24082AA230	CARTRIDGE	Troubleshooting for electrical systems.
 ST22771AA030	22771AA030	SUBARU SELECT MONITOR KIT	Troubleshooting for electrical systems.

## 2. GENERAL PURPOSE TOOLS

TOOL NAME	REMARKS
Depth gauge	Used for measuring transmission end play.
Thickness gauge	Used for measuring clearances of clutch, brake and oil pump.
Micro meter	Used for measuring thickness of drive pinion.
Spring balance	Used for measuring starting torque of drive pinion.
Circuit tester	Used for measuring resistance and voltage.
TORX® T70	Used for removing and installing differential gear oil drain plug.