

# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

### 1. General Description

#### A: SPECIFICATIONS

##### 1. TORQUE CONVERTER CLUTCH

Model	2.5 L Non-TURBO model	2.5 L TURBO model
Type	Symmetric, 3 element, single stage, 2 phase torque converter	
Stall torque ratio	2.1 — 2.3	
Nominal diameter	246 mm (9.69 in)	
Stall speed (at sea level)	2,200 — 2,700 rpm	2,900 — 3,400 rpm
One-way clutch	Sprague type one-way clutch	

##### 2. OIL PUMP

Type	Paracoid 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 sets

##### 4. TRANSMISSION GEAR RATIO

Model	TURBO model	NON-TURBO model
1st	2.785	3.027
2nd	1.545	1.619
3rd	1.000	
4th	0.694	
Rev	2.272	

##### 5. PLANETARY GEAR AND PLATE

	NON-TURBO model	TURBO model
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	19	17
Tooth number of rear internal gear	75	
Drive plate number of high clutch	4	5
Drive plate number of low clutch	6	7
Drive plate number of reverse clutch	2	
Drive plate number of 2-4 brake	3	4
Drive plate number of low & reverse brake	6	7

##### 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 $\leftrightarrow$ 2nd $\leftrightarrow$ 3rd $\leftrightarrow$ 4th
3 (3rd)	Automatic gear change 1st $\leftrightarrow$ 2nd $\leftrightarrow$ 3rd $\leftrightarrow$ 4th
2 (2nd)	2nd gear locked (Deceleration possible 2nd $\leftarrow$ 3rd $\leftarrow$ 4th)
1 (1st)	1st gear locked (Deceleration possible 1st $\leftarrow$ 2nd $\leftarrow$ 3rd $\leftarrow$ 4th)
Control method	Select cable

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## 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
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

## 10.FINAL REDUCTION

Model	TURBO model	NON-TURBO model
Front final gear ratio	4.444 (40/9)	4.444 (40/9)
Lubrication oil	<p style="text-align: center;">MT-00001</p>	
Front differential oil capacity	1.1 — 1.3 ℓ (1.2 — 1.4 US qt, 1.0 — 1.1 Imp qt)	

## 9. TRANSFER

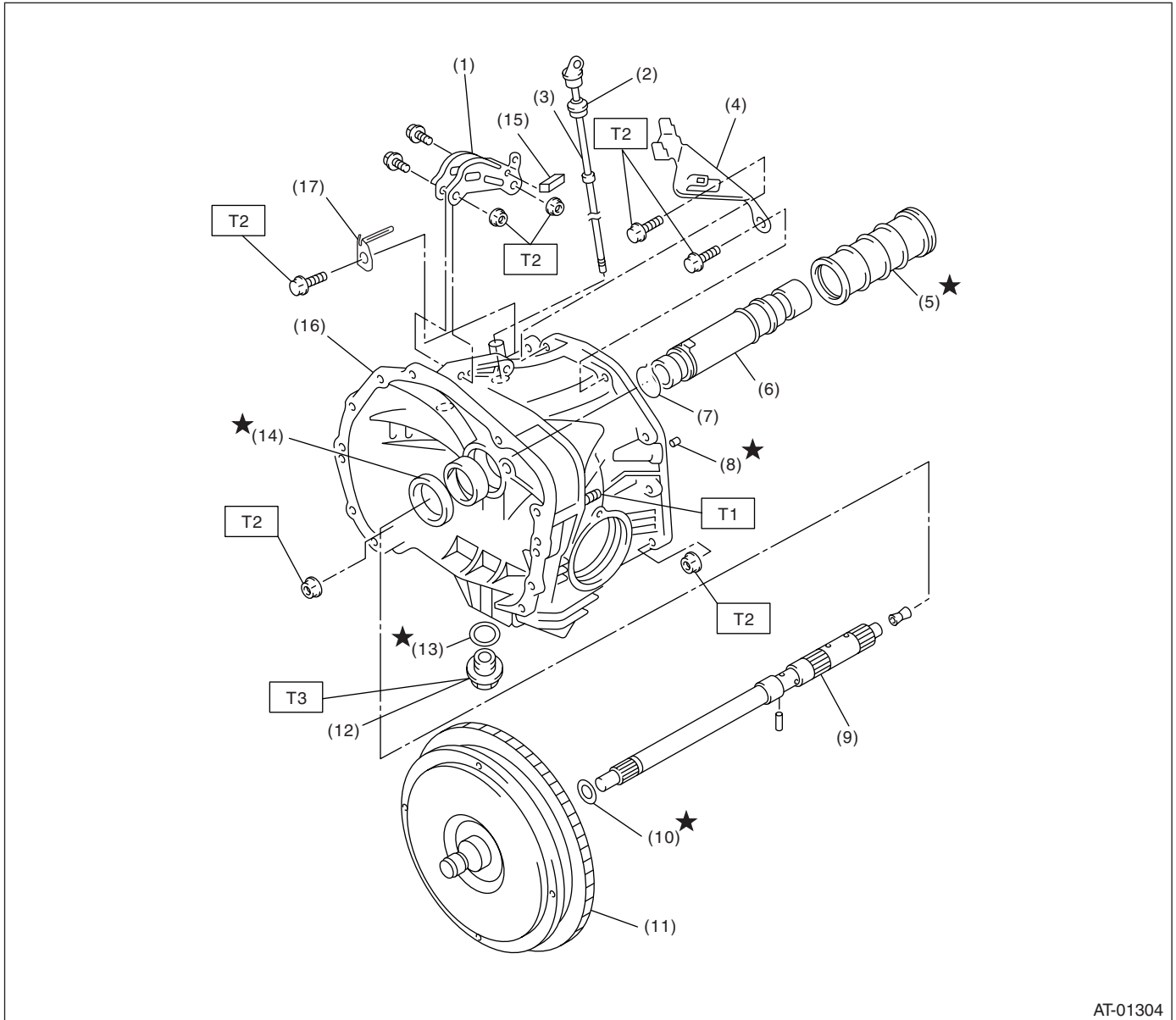
Model	MPT model	Turbo VTD model
Transfer type	Multi-plate transfer (MPT)	Variable torque distribution (VTD)
Drive & driven plate number of transfer clutch	5	3
Control method	Electronic, hydraulic type	
Lubricant	The same Automatic transmission fluid used in automatic transmission	
1st reduction gear ratio	1.000 (53/53)	

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## B: COMPONENT

### 1. TORQUE CONVERTER CLUTCH AND CASE



AT-01304

- |                                  |                                     |
|----------------------------------|-------------------------------------|
| (1) Pitching stopper bracket     | (10) O-ring                         |
| (2) O-ring                       | (11) Torque converter clutch ASSY   |
| (3) Differential oil level gauge | (12) Drain plug                     |
| (4) Stay                         | (13) Gasket                         |
| (5) Seal pipe                    | (14) Oil seal                       |
| (6) Oil pump shaft               | (15) Clip (TURBO model)             |
| (7) Clip                         | (16) Torque converter clutch case   |
| (8) Oil drain pipe               | (17) Harness stay (Non-TURBO model) |
| (9) Input shaft                  |                                     |

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

**T1: 18 (1.8, 13.0)**

**T2: 41 (4.2, 30.4)**

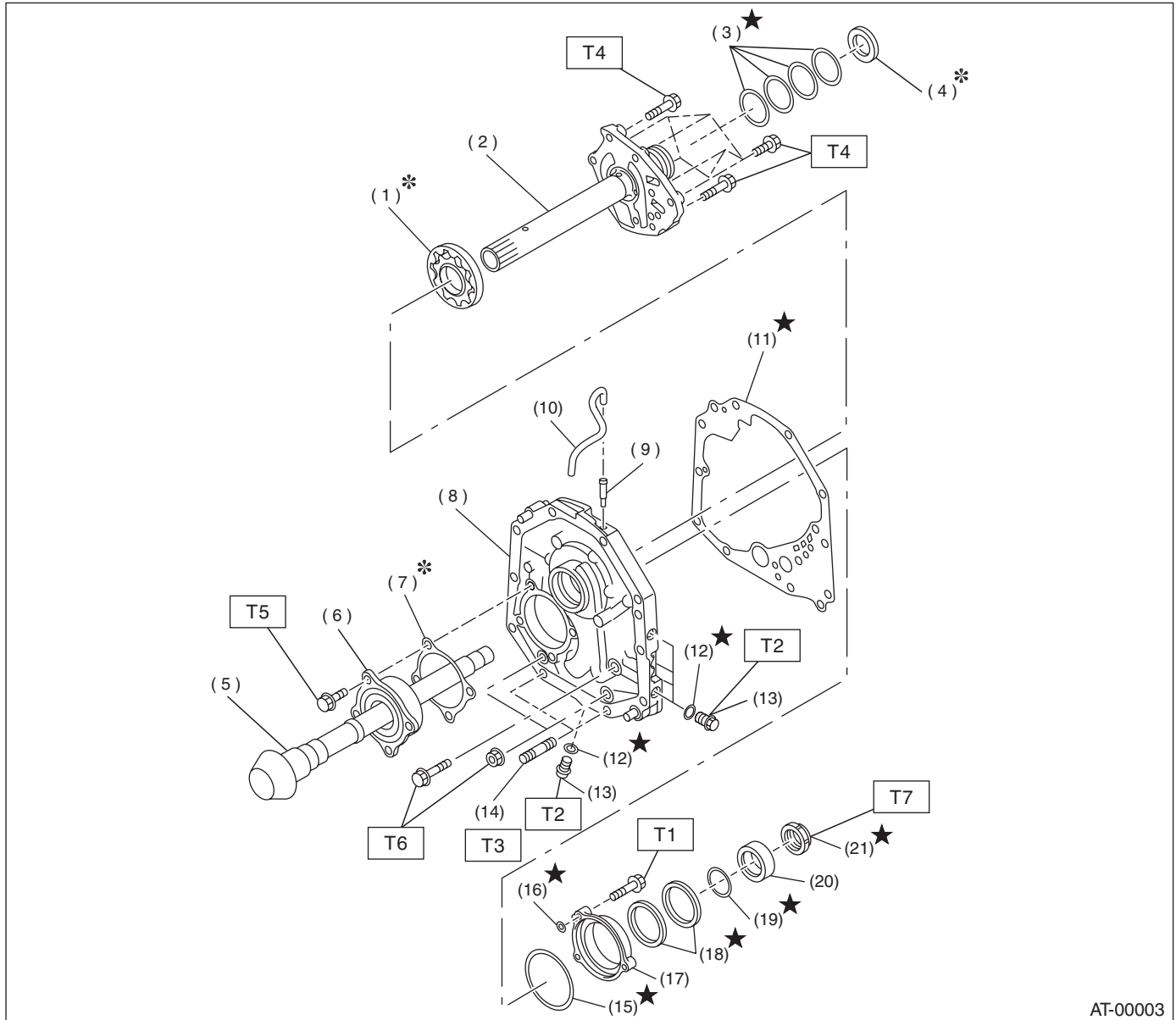
**T3: Copper gasket**

**70 (7.1, 51.4)**

**Aluminum gasket**

**44 (4.5, 32.5)**

## 2. OIL PUMP



AT-00003

- |                           |                          |
|---------------------------|--------------------------|
| (1) Oil pump rotor        | (12) O-ring              |
| (2) Oil pump cover        | (13) Test plug           |
| (3) Seal ring             | (14) Stud bolt           |
| (4) Thrust needle bearing | (15) O-ring              |
| (5) Drive pinion shaft    | (16) O-ring              |
| (6) Roller bearing        | (17) Oil seal retainer   |
| (7) Shim                  | (18) Oil seal            |
| (8) Oil pump housing      | (19) O-ring              |
| (9) Nipple                | (20) Drive pinion collar |
| (10) Air breather hose    | (21) Lock nut            |
| (11) Gasket               |                          |

**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, 30)**

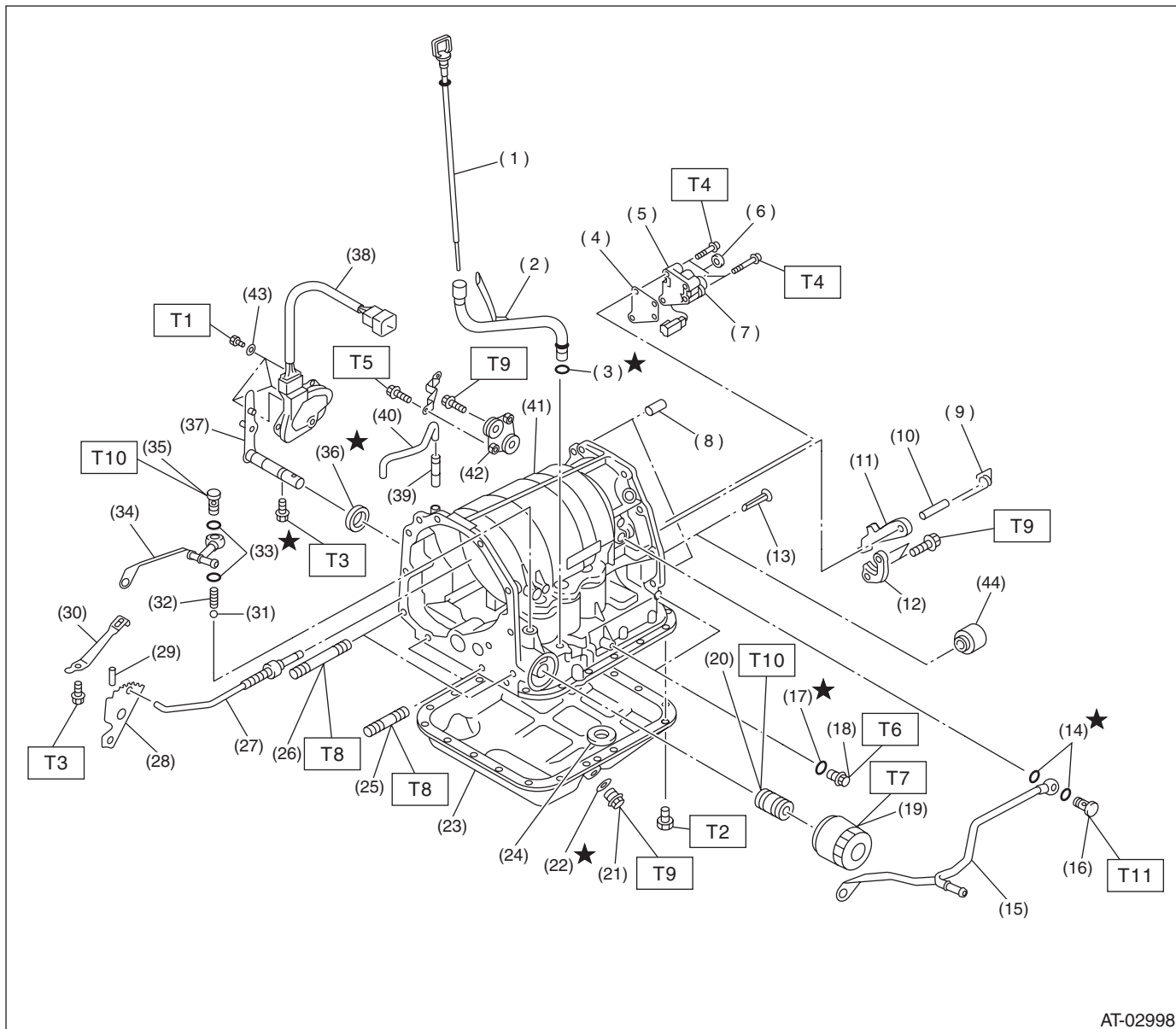
**T6: 42 (4.3, 31)**

**T7: 116 (11.8, 85)**

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## 3. TRANSMISSION CASE AND CONTROL DEVICE



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## AUTOMATIC TRANSMISSION

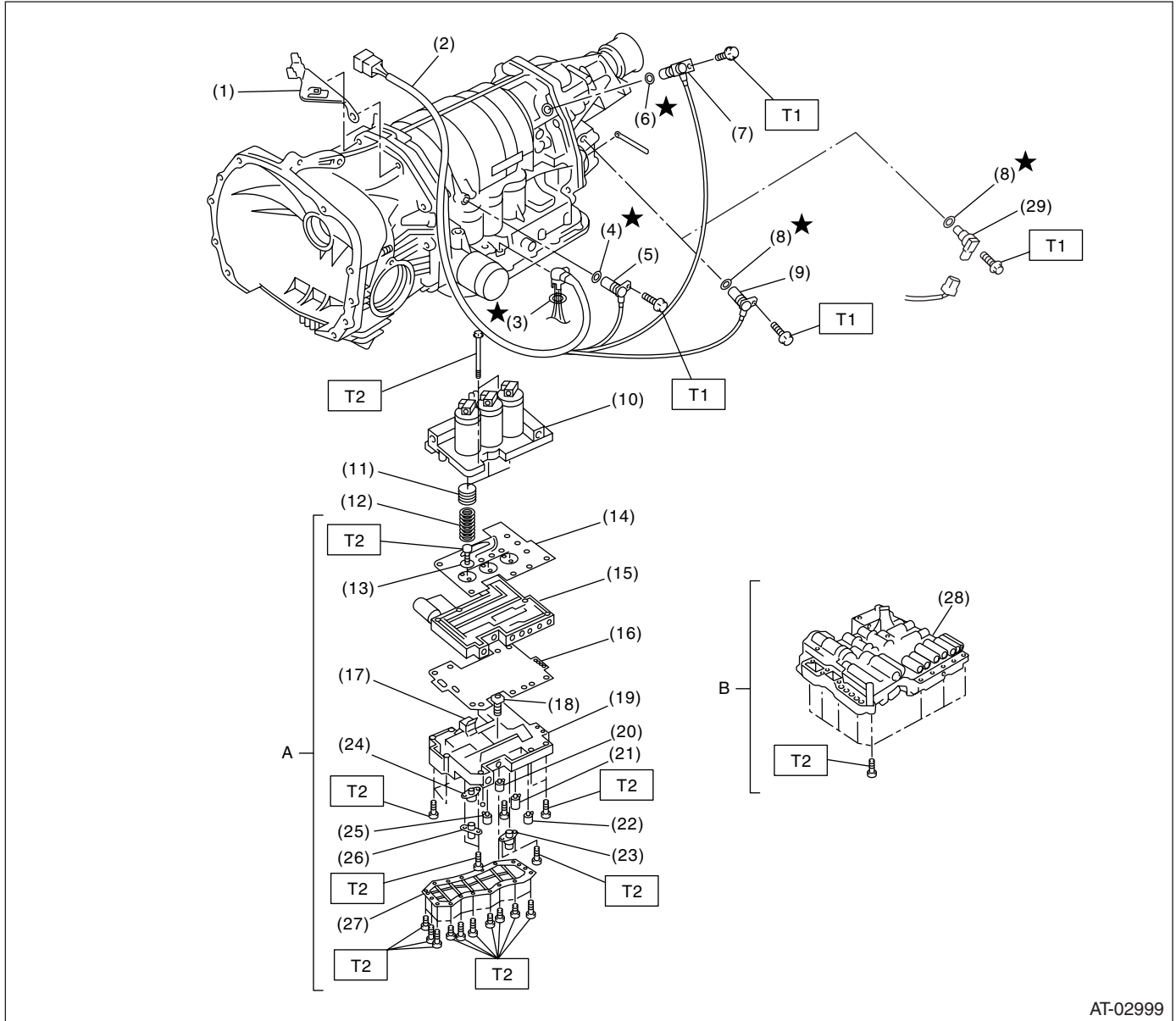
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(1) ATF level gauge	(21) Drain plug	(44) Bushing (TURBO model)
(2) ATF charger pipe	(22) Gasket	
(3) O-ring	(23) Oil pan	
(4) Transfer valve plate (Non-TURBO model)	(24) Magnet	<hr/> <b>Tightening torque: N·m (kgf-m, ft-lb)</b>
(5) Transfer valve ASSY (Non-TURBO model)	(25) Stud bolt (Short)	<b>T1: 3.4 (0.35, 2.5)</b>
(6) Transfer clutch seal (Non-TURBO model)	(26) Stud bolt (Long)	<b>T2: 5 (0.5, 3.6)</b>
(7) Transfer duty solenoid (Non-TURBO model)	(27) Parking rod	<b>T3: 6 (0.6, 4)</b>
(8) Straight pin	(28) Manual plate	<b>T4: 8 (0.8, 6)</b>
(9) Return spring	(29) Spring pin	<b>T5: 12 (1.2, 8.7)</b>
(10) Shaft	(30) Detention spring	<b>T6: 13 (1.3, 10)</b>
(11) Parking pawl	(31) Ball	<b>T7: 14 (1.4, 10)</b>
(12) Parking support	(32) Spring	<b>T8: 18 (1.8, 13)</b>
(13) Inlet filter	(33) Gasket	<b>T9: 25 (2.6, 18)</b>
(14) Gasket	(34) Outlet pipe	<b>T10: 44 (4.5, 32)</b>
(15) Inlet pipe	(35) Union screw	<hr/> <b>T11: 40 (4.1, 30)</b>
(16) Union screw	(22) Gasket	
(17) O-ring	(36) Oil seal	
(18) Test plug	(37) Select lever	
(19) Oil filter	(38) Inhibitor switch ASSY	
(20) Oil filter stud bolt	(39) Nipple	
	(40) Air breather hose	
	(41) Transmission case	
	(42) Plate ASSY	
	(43) Washer	

# GENERAL DESCRIPTION

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### 4. CONTROL VALVE AND HARNESS ROUTING



AT-02999

A: Non-TURBO model

B: TURBO model

- (1) Stay
- (2) Transmission harness
- (3) O-ring
- (4) O-ring
- (5) Torque converter turbine speed sensor
- (6) O-ring
- (7) Front vehicle speed sensor
- (8) O-ring
- (9) Rear vehicle speed sensor (Non-TURBO model)
- (10) Upper valve body

- (11) Accumulator piston
- (12) Accumulator spring
- (13) Side plate
- (14) Separate plate
- (15) Middle valve body
- (16) Separate plate
- (17) Fluid filter
- (18) Fluid filter
- (19) Lower valve body
- (20) Shift solenoid 2
- (21) Shift solenoid 1
- (22) 2-4 brake timing solenoid

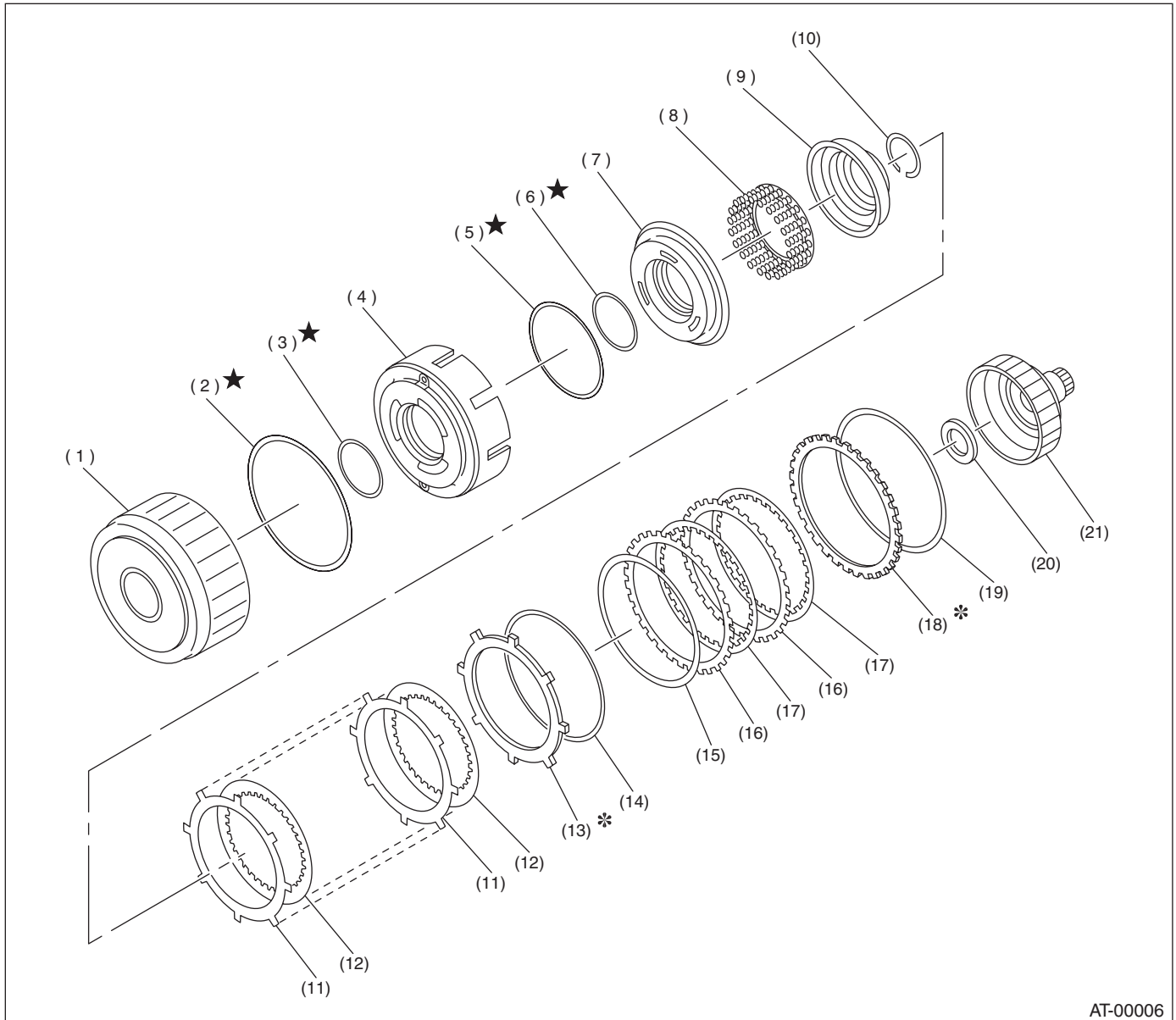
- (23) 2-4 brake duty solenoid
- (24) Line pressure duty solenoid
- (25) Low clutch timing solenoid
- (26) Lock-up duty solenoid
- (27) Oil strainer
- (28) Control valve ASSY
- (29) Rear vehicle speed sensor (TURBO model)

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

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

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

## 5. HIGH CLUTCH AND REVERSE CLUTCH



AT-00006

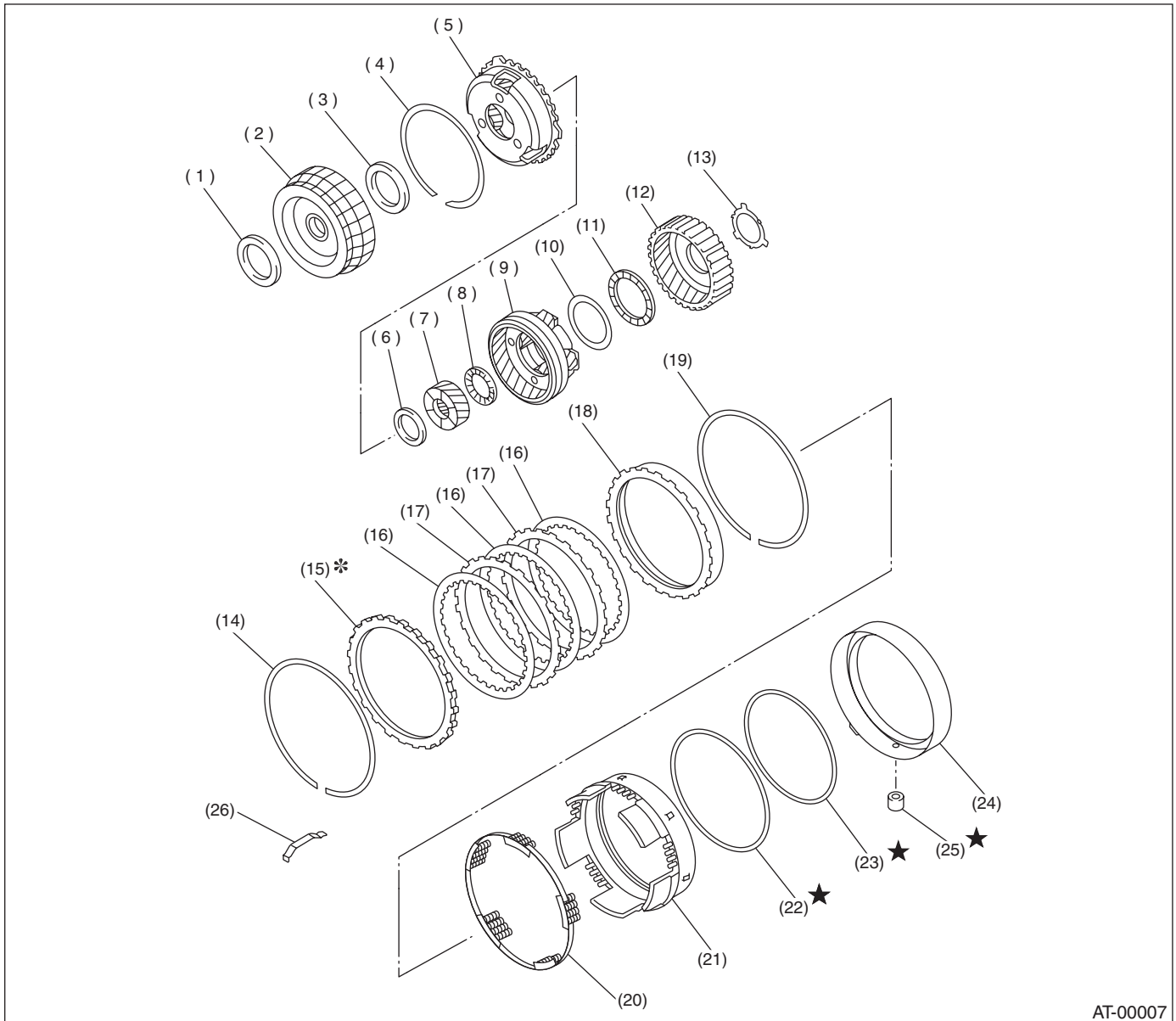
- |                           |                      |                            |
|---------------------------|----------------------|----------------------------|
| (1) High clutch drum      | (8) Spring retainer  | (15) Dish plate            |
| (2) Lip seal              | (9) Cover            | (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       |



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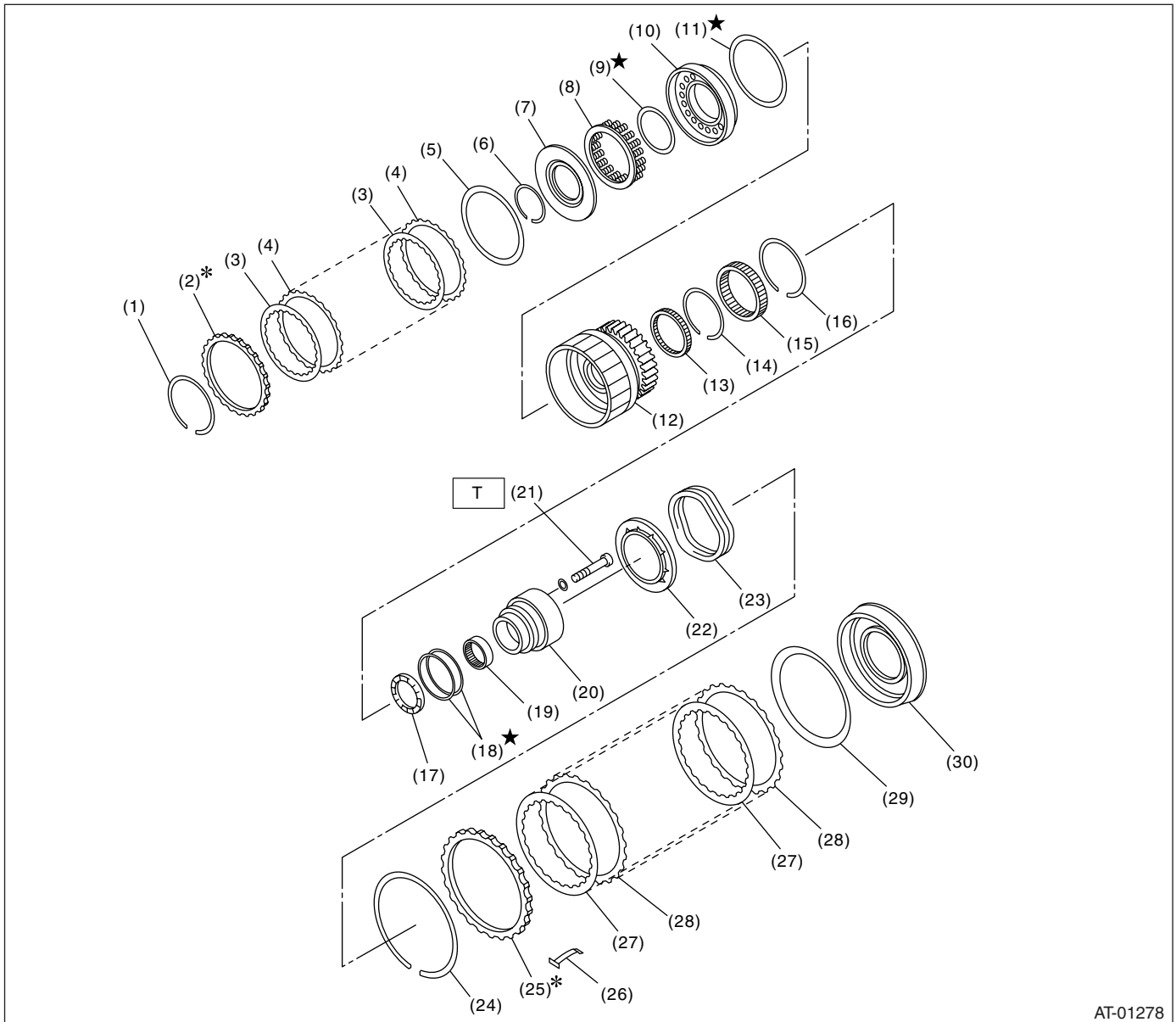
### 6. PLANETARY GEAR AND 2-4 BRAKE



AT-00007

- |                             |                            |                                |
|-----------------------------|----------------------------|--------------------------------|
| (1) Thrust needle bearing   | (10) Washer                | (19) Snap ring                 |
| (2) Front sun gear          | (11) Thrust needle bearing | (20) 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   |                                |

## 7. LOW CLUTCH AND LOW & REVERSE BRAKE



AT-01278

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

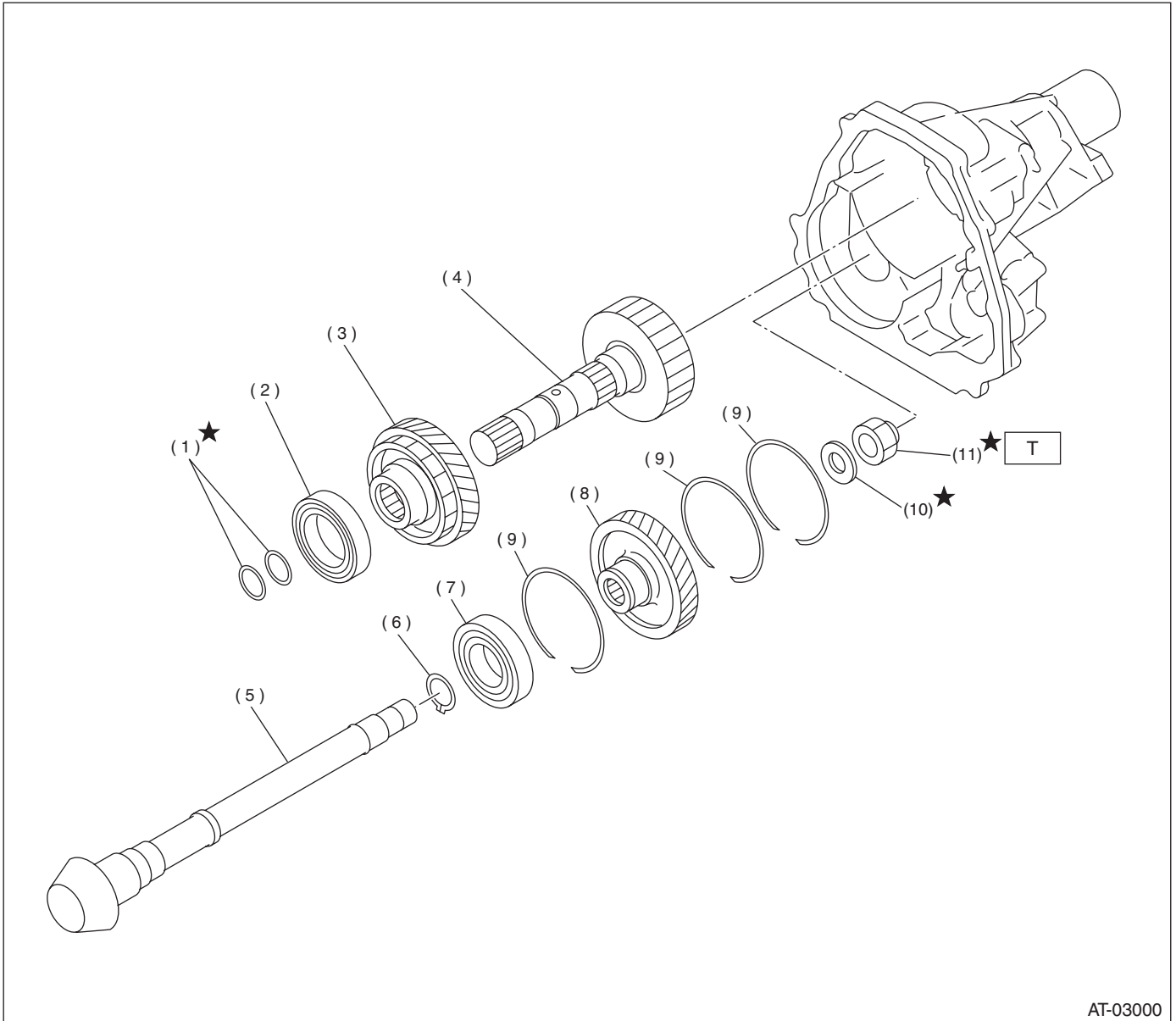
**Tightening torque: N-m (kgf-m, ft-lb)**

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

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## 8. REDUCTION GEAR WITH MPT



AT-03000

- (1) Seal ring
- (2) Ball bearing
- (3) Reduction drive gear
- (4) Reduction drive shaft
- (5) Drive pinion shaft

- (6) Snap ring
- (7) Ball bearing
- (8) Reduction driven gear
- (9) Snap ring
- (10) Washer

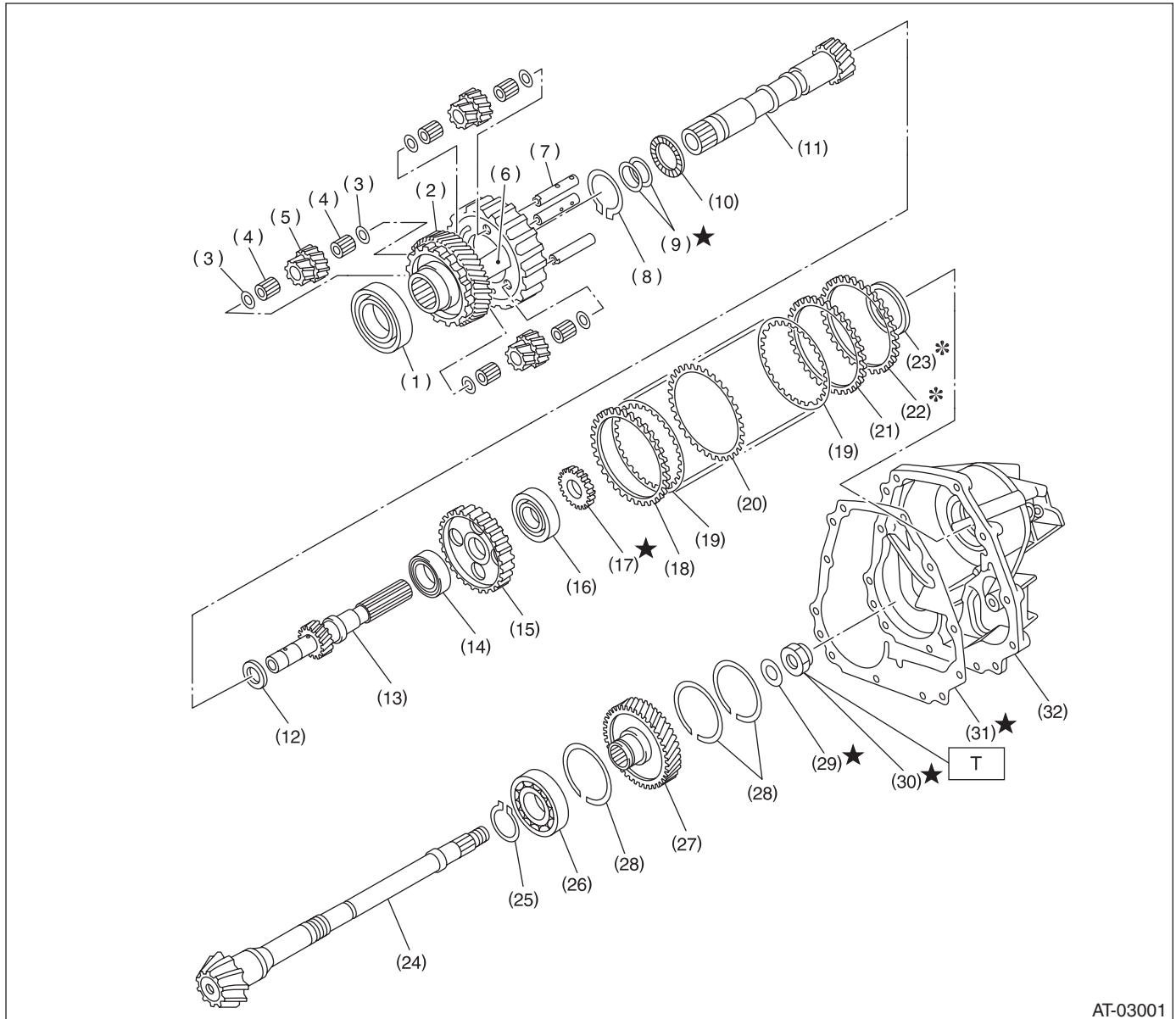
- (11) Lock nut

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**Tightening torque: N·m (kgf·m, ft·lb)**  
**T: 100 (10.2, 73.8)**

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## 9. REDUCTION GEAR WITH VTD



AT-03001

- |                            |                                   |                            |
|----------------------------|-----------------------------------|----------------------------|
| (1) Ball bearing           | (13) Rear drive shaft             | (25) Snap ring             |
| (2) Reduction drive gear   | (14) Ball bearing                 | (26) Ball bearing          |
| (3) Washer                 | (15) Multi-plate clutch (LSD) hub | (27) Reduction driven gear |
| (4) Needle bearing         | (16) Ball bearing                 | (28) Snap ring             |
| (5) Pinion gear            | (17) Revolution gear              | (29) Lock washer           |
| (6) Carrier                | (18) Driven plate (Thick)         | (30) Lock nut              |
| (7) Planetary pinion shaft | (19) Driven plate                 | (31) Gasket                |
| (8) Snap ring              | (20) Driven plate (Thin)          | (32) Extension case        |
| (9) Seal ring              | (21) Driven plate (Thick)         |                            |
| (10) Thrust needle bearing | (22) Pressure plate               |                            |
| (11) Intermediate shaft    | (23) Rear drive shaft shim        |                            |
| (12) Thrust washer         | (24) Drive pinion shaft           |                            |

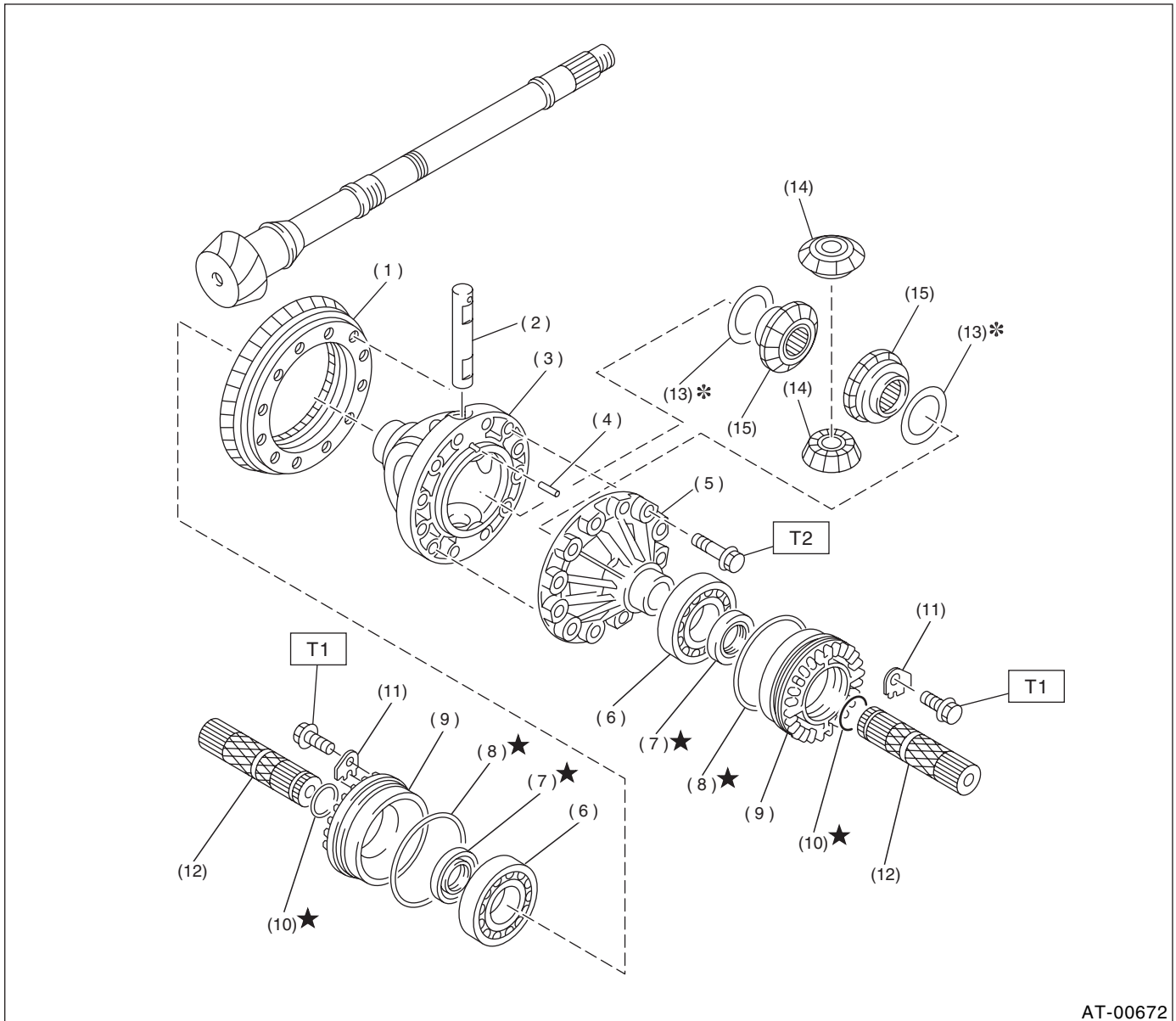
**Tightening torque: N-m (kgf-m, ft-lb)**

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

# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

### 10.DIFFERENTIAL GEAR



AT-00672

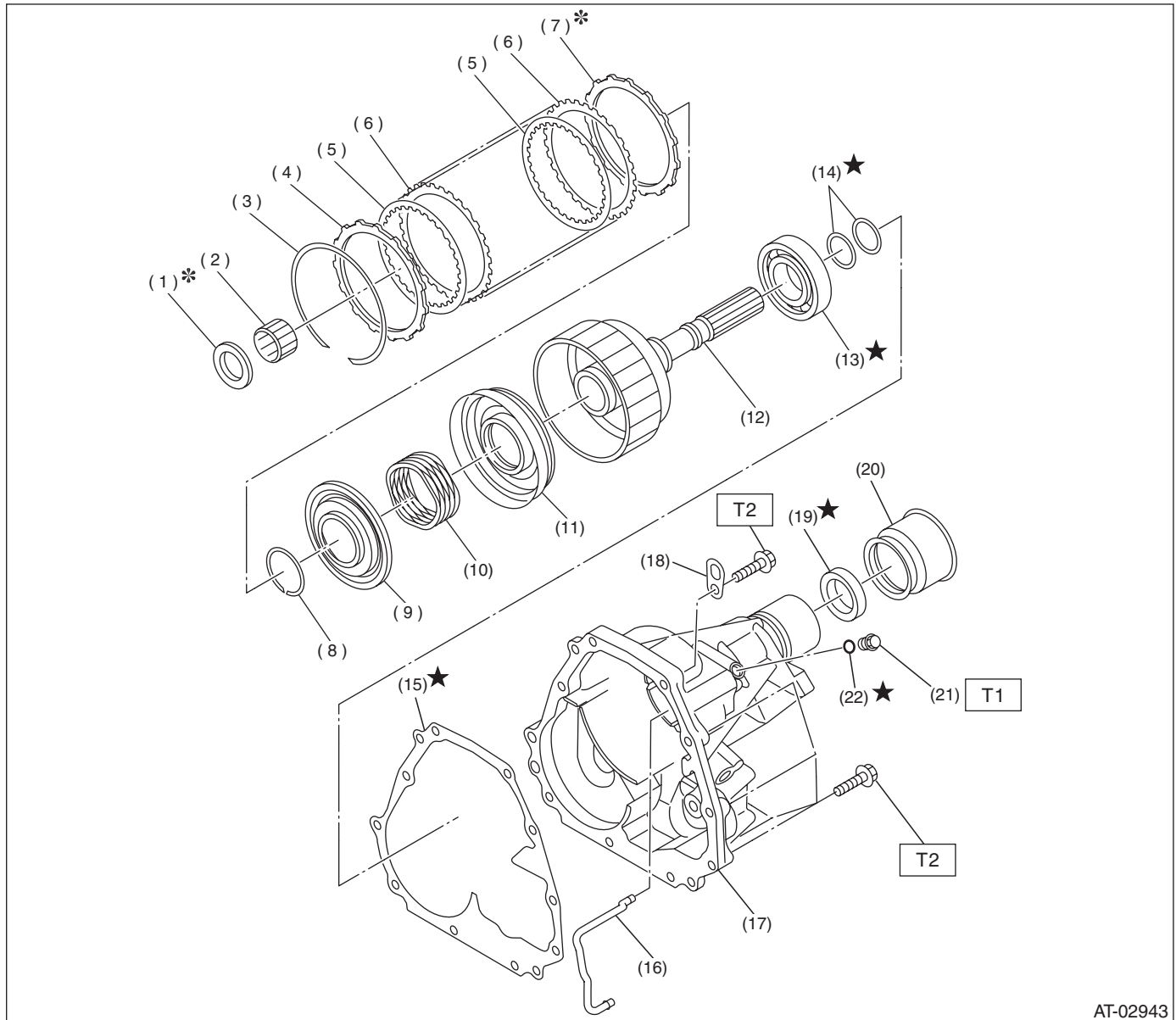
- |                            |                                   |                              |
|----------------------------|-----------------------------------|------------------------------|
| (1) Crown gear             | (8) O-ring                        | (15) Differential bevel gear |
| (2) Pinion shaft           | (9) Differential side retainer    |                              |
| (3) Differential case (RH) | (10) Circlip (Non-TURBO model)    |                              |
| (4) Straight pin           | (11) Lock plate                   |                              |
| (5) Differential case (LH) | (12) Axle shaft (Non-TURBO model) |                              |
| (6) Taper roller bearing   | (13) Washer                       |                              |
| (7) Oil seal               | (14) Differential bevel pinion    |                              |

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

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

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

## 11. TRANSFER AND EXTENSION CASE WITH MPT



AT-02943

- |                           |                             |                 |
|---------------------------|-----------------------------|-----------------|
| (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              |                 |
| (6) Driven plate          | (15) Gasket                 |                 |
| (7) Retaining plate       | (16) Transfer clutch pipe   |                 |
| (8) Snap ring             | (17) Extension case         |                 |
| (9) Transfer piston seal  | (18) Transmission hanger    |                 |

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

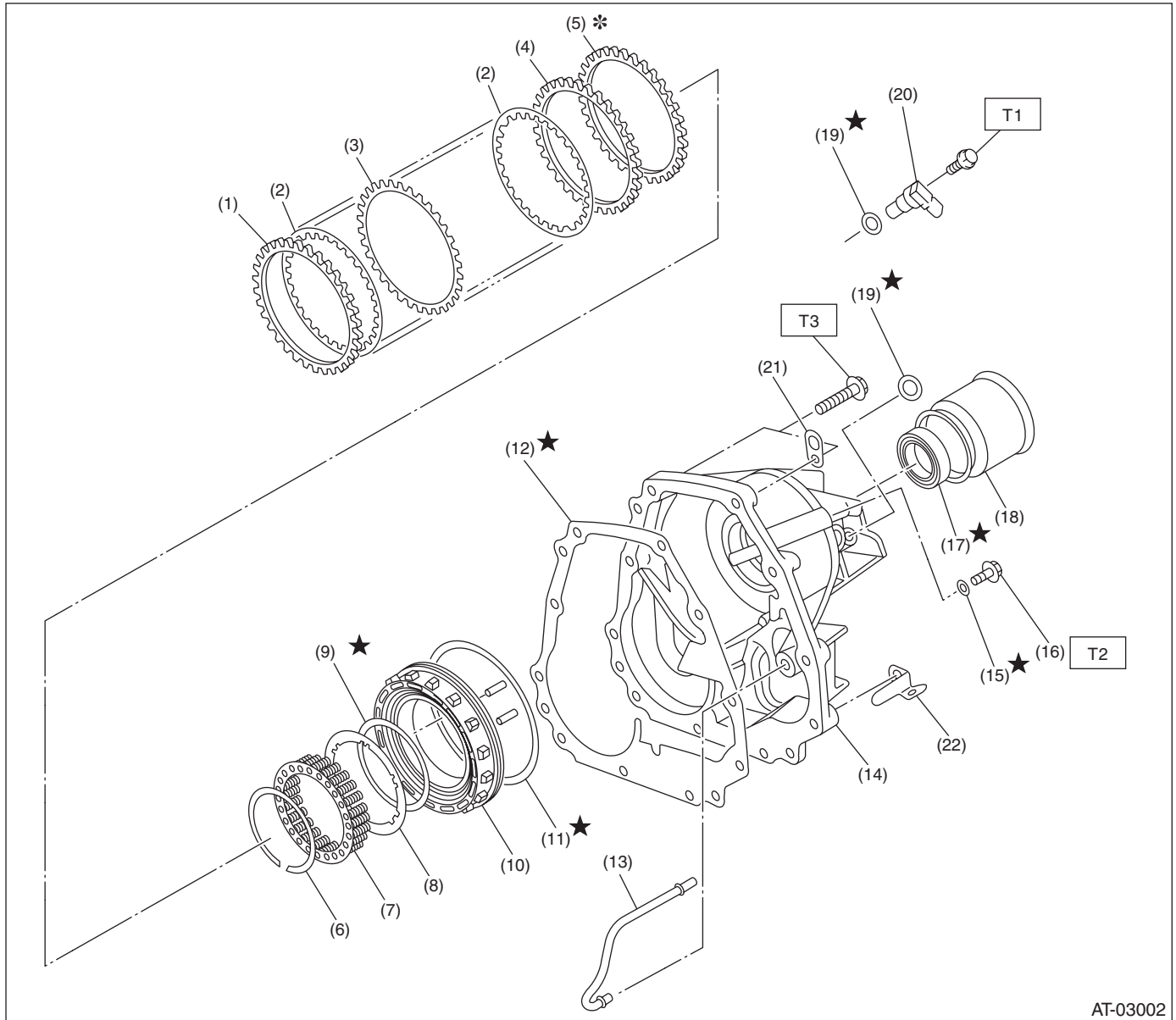
**T1: 13 (1.3, 9.4)**

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

# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

### 12. TRANSFER AND EXTENSION CASE WITH VTD



AT-03002

- |                                      |                                    |  |
|--------------------------------------|------------------------------------|--|
| (1) Driven plate (Thick)             | (11) D-ring                        | (20) Rear vehicle speed sensor (TURBO model) |
| (2) Driven plate                     | (12) Gasket                        | (21) Transmission hanger                     |
| (3) Driven plate (Thin)              | (13) Multi-plate clutch (LSD) pipe | (22) Clip (TURBO model)                      |
| (4) Driven plate (Thick)             | (14) Extension case                |  |
| (5) Retaining plate                  | (15) O-ring                        |  |
| (6) Snap ring                        | (16) Test plug                     |  |
| (7) Spring retainer                  | (17) Oil seal                      |  |
| (8) Plate                            | (18) Dust cover                    |  |
| (9) O-ring                           | (19) O-ring                        |  |
| (10) Multi-plate clutch (LSD) piston |                                    |  |

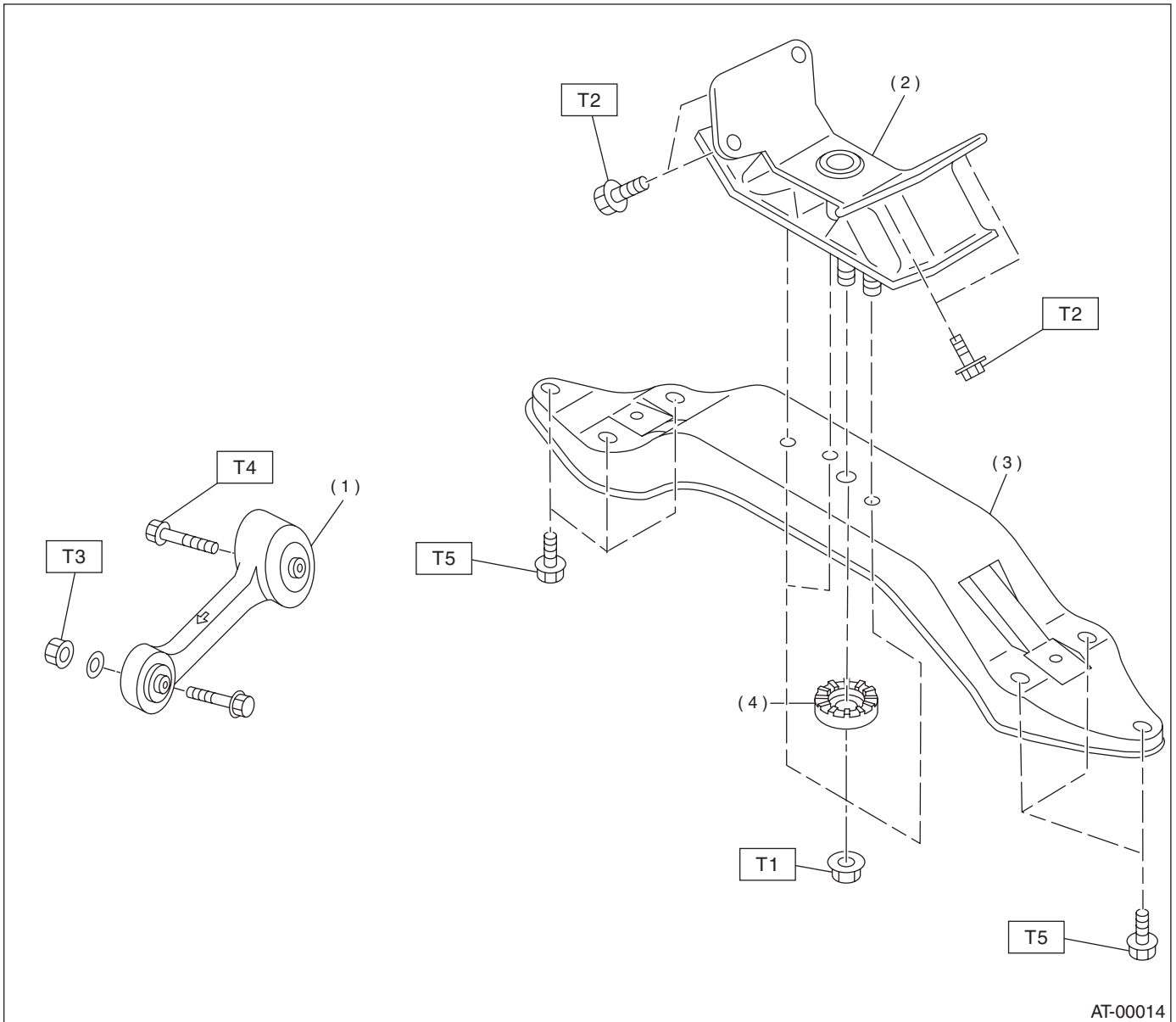
**Tightening torque: N·m (kgf·m, ft·lb)**

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

**T2: 13 (1.3, 9.4)**

**T3: 25 (2.5, 18.1)**

## 13.TRANSMISSION MOUNTING



AT-00014

- |                         |                 |
|-------------------------|-----------------|
| (1) Pitching stopper    | (3) Crossmember |
| (2) Rear cushion rubber | (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: 75 (7.7, 55)**



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#### **C: CAUTION**

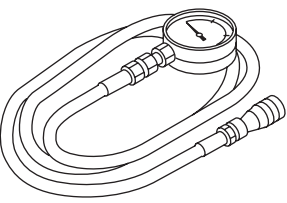
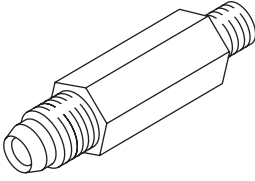
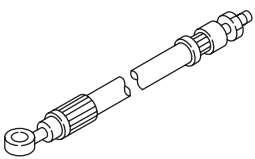
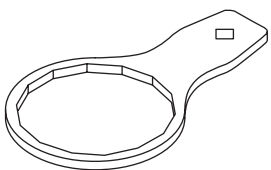
- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation, and disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Until the oil pan is installed, do not place with the oil pan inside 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 open the case. 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 bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Apply appropriate gear oil or ATF onto sliding or revolving 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 fluid 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.

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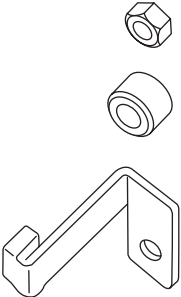
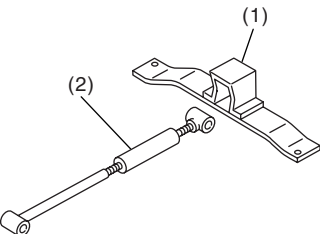
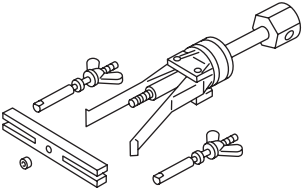
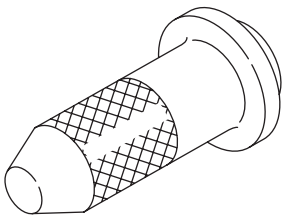
## D: PREPARATION TOOL

### 1. SPECIAL TOOLS

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-498575400</p>	498575400	OIL PRESSURE GAUGE ASSY	Used for measuring oil pressure.
 <p style="text-align: center;">ST-498897200</p>	498897200	ADAPTER	Used oil pump housing when measuring reverse clutch pressure and line pressure.
 <p style="text-align: center;">ST-498897700</p>	498897700	ADAPTER SET	Used for measuring transfer clutch pressure.
 <p style="text-align: center;">ST-498545400</p>	498545400	FILTER WRENCH	Used for removing and installing ATF filter.

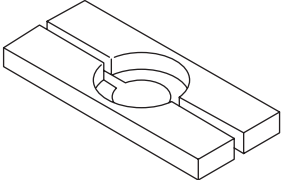
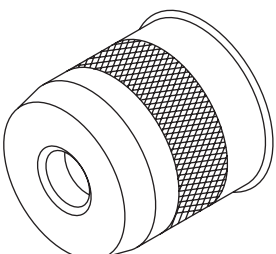
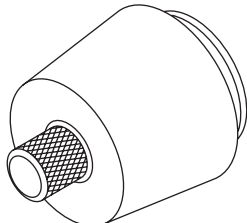
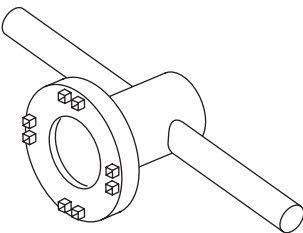
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-498277200</p>	498277200	STOPPER SET	Used for removing and installing automatic transmission assembly to engine.
 <p style="text-align: center;">ST41099AA000</p>	41099AA000	ENGINE SUPPORT ASSY	Used for supporting engine. (1) ENGINE SUPPORT BRACKET (41099AA010) (2) ENGINE SUPPORT (41099AA020)
 <p style="text-align: center;">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 style="text-align: center;">ST-498057300</p>	498057300	INSTALLER	Used for installing extension oil seal.

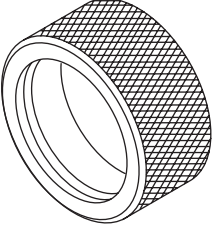
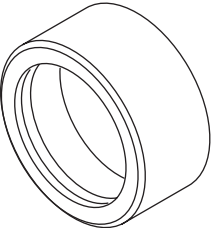
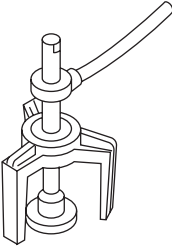
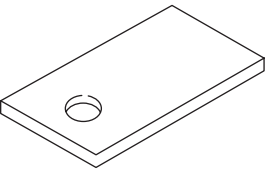
# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p data-bbox="321 542 457 570">ST-498077000</p>	498077000	REMOVER	Used for removing differential taper roller bearing.
 <p data-bbox="321 968 457 995">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 data-bbox="321 1393 457 1421">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 data-bbox="321 1819 457 1847">ST-499787000</p>	499787000	WRENCH ASSY	Used for removing and installing differential side retainer.

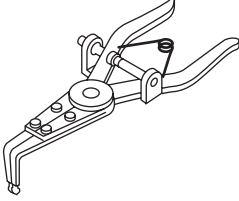
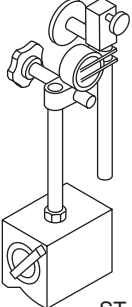
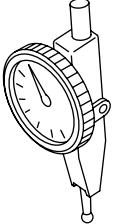
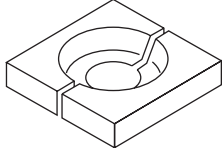
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

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

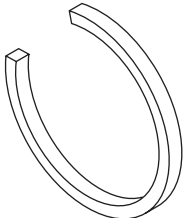
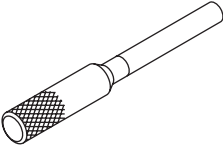
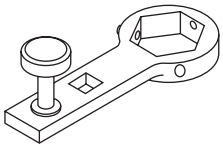
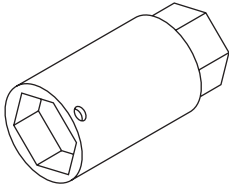
# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p data-bbox="321 542 462 570">ST-399893600</p>	399893600	PLIERS	Used for removing and installing clutch spring.
 <p data-bbox="321 968 462 995">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 data-bbox="321 1393 462 1421">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 data-bbox="321 1819 462 1847">ST-498517000</p>	498517000	REPLACER	Used for removing front roller bearing.

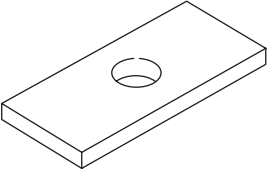
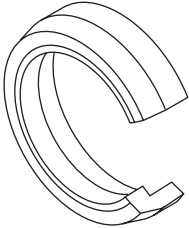
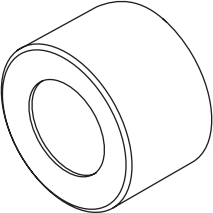
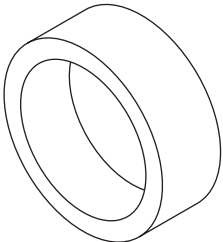
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-398623600</p>	398623600	SEAT	Used for removing spring of transfer clutch piston.
 <p style="text-align: center;">ST-499267300</p>	499267300	STOPPER PIN	Used for installing inhibitor switch.
 <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.

# GENERAL DESCRIPTION

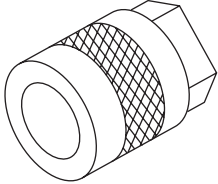
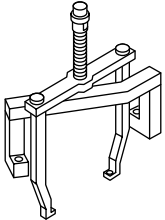
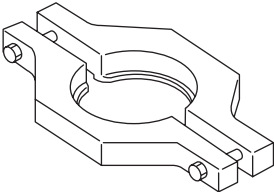
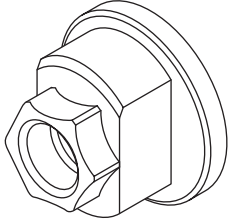
AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <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.
 <p style="text-align: center;">ST-499577000</p>	499577000	GAUGE	<ul style="list-style-type: none"> <li>• Used for measuring the transmission case mating surface to the reduction gear end surface.</li> <li>• For MPT model.</li> </ul>
 <p style="text-align: center;">ST-398744300</p>	398744300	GAUGE	<ul style="list-style-type: none"> <li>• Use for measuring contact face between multi-plate clutch end and transmission.</li> <li>• For VTD model.</li> </ul>



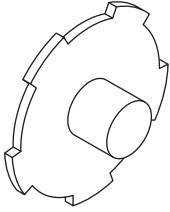
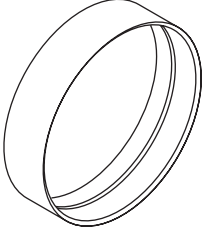
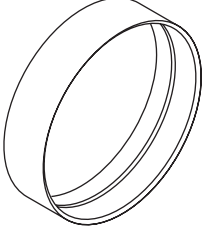
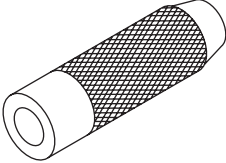
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <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.
 <p style="text-align: center;">ST-498937110</p>	498937110	HOLDER	Used for removing and installing drive pinion lock nut.

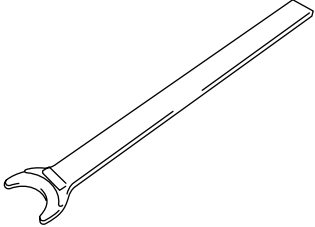
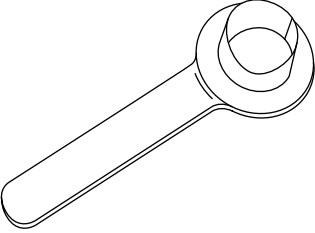
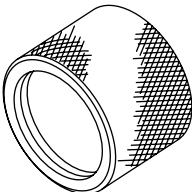
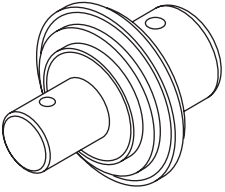
# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-498677100</p>	<p style="text-align: center;">498677100</p>	<p style="text-align: center;">COMPRESSOR</p>	<p>Used for installing 2-4 brake snap ring.</p>
 <p style="text-align: center;">ST-498437000</p>	<p style="text-align: center;">498437000</p>	<p style="text-align: center;">HIGH CLUTCH PIS- TON GUIDE</p>	<p>Used for installing high clutch piston.</p>
 <p style="text-align: center;">ST-498437100</p>	<p style="text-align: center;">498437100</p>	<p style="text-align: center;">LOW CLUTCH PIS- TON GUIDE</p>	<p>Used for installing low clutch piston.</p>
 <p style="text-align: center;">ST-899580100</p>	<p style="text-align: center;">899580100</p>	<p style="text-align: center;">INSTALLER</p>	<p>Used for press-fitting the ball bearing for transfer clutch.</p>

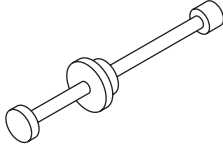
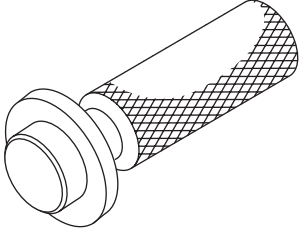
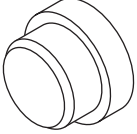
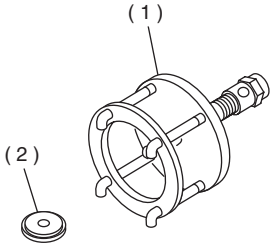
# GENERAL DESCRIPTION

## AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST28399SA000</p>	<p style="text-align: center;">28399SA000</p>	<p style="text-align: center;">REMOVER</p>	<ul style="list-style-type: none"> <li>• Used for removing axle shaft.</li> <li>• TURBO model</li> </ul>
 <p style="text-align: center;">ST28399SA010</p>	<p style="text-align: center;">28399SA010</p>	<p style="text-align: center;">PROTECTOR</p>	<ul style="list-style-type: none"> <li>• Used for installing axle shaft.</li> <li>• TURBO model</li> </ul>
 <p style="text-align: center;">ST18675AA000</p>	<p style="text-align: center;">18675AA000</p>	<p style="text-align: center;">DIFFERENTIAL OIL SEAL INSTALLER</p>	<ul style="list-style-type: none"> <li>• Used for installing differential side retainer oil seal.</li> <li>• TURBO model</li> </ul>
 <p style="text-align: center;">ST-499247300</p>	<p style="text-align: center;">499247300</p>	<p style="text-align: center;">INSTALLER</p>	<ul style="list-style-type: none"> <li>• Used for removing axle shaft.</li> <li>• Used with REMOVER (499095500).</li> <li>• Non-TURBO model</li> </ul>

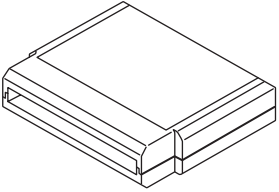

# GENERAL DESCRIPTION

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-499095500</p>	499095500	REMOVER	<ul style="list-style-type: none"> <li>• Used for removing axle shaft.</li> <li>• Non-TURBO model</li> </ul>
 <p style="text-align: center;">ST-499797000</p>	499797000	INSTALLER	<ul style="list-style-type: none"> <li>• Used for installing differential side retainer oil seal.</li> <li>• Non-TURBO model</li> </ul>
 <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
  ST24082AA260	24082AA260	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.