

General Description

AUTOMATIC TRANSMISSION

1. General Description

A: SPECIFICATION

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	Parachoid 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

	Gear ratio
1st	2.785
2nd	1.545
3rd	1.000
4th	0.694
Rev.	2.272

5. PLANETARY GEAR AND PLATE

Model	Non-Turbo	Turbo
Number of front sun gear teeth	33	
Number of front pinion teeth	21	
Number of front internal gear teeth	75	
Number of rear sun gear teeth	42	
Number of rear pinion teeth	17	
Number of rear internal gear teeth	75	
Number of high clutch drive plates	4	5
Number of low clutch drive plates	5	7
Number of reverse clutch drive plates	2	
Number of drive plates for the 2-4 brake	3	4
Number of drive plates for low & reverse brake	5	7

6. SELECTOR POSITION

P (Park)	Transmission is in neutral, output member is immovable, engine start is possible
R (Reverse)	Transmission is in reverse.
N (Neutral)	Transmission is in neutral and engine start is possible
D (Drive)	Automatic gear change 1st gear ← → 2nd gear ← → 3rd gear ← → 4th gear
3 (3rd)	Automatic gear change 1st gear ← → 2nd gear ← → 3rd gear ← 4th gear
2 (2nd)	2nd gear is locked. (Deceleration is possible. 2nd gear ← 3rd gear ← 4th gear)
1 (1st)	1st gear is locked. (Deceleration is possible. 1st gear ← 2nd gear ← 3rd gear ← 4th gear)
Control method	Wire cable type

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7. HYDRAULIC CONTROL AND LUBRICATION

Type	Electronic/hydraulic control [4 forward gear changes made by electronic signals of vehicle speed and accelerator opening]	
Fluid	Recommended materials	SUBARU ATF HP
	Alternative	IDEMITSU: ATF HP Castrol: Transmax J Pennzoil Quaker State: Pennzoil ATF-J
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 (see above)	

8. COOLING AND HARNESS

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

11.RECOMMENDED GEAR OIL

Lubrication oil	<p>(1) Item (2) Front differential gear oil (3) API classification (4) SAE viscosity No. and applicable temperature</p>
	Front differential oil capacity

9. TRANSFER

Model	Non-turbo	Turbo	
Transfer type	Multi-plate transfer (MP-T)		Variable torque distribution (VTD)
Number of transfer clutch drives & driven plates	5	6	3
Control method	Electronic, hydraulic type		
Lubricant	Same automatic transmission fluid as used in the automatic transmission		
Reduction gear ratio	1.000 (53/53)		

10.FINAL REDUCTION GEAR

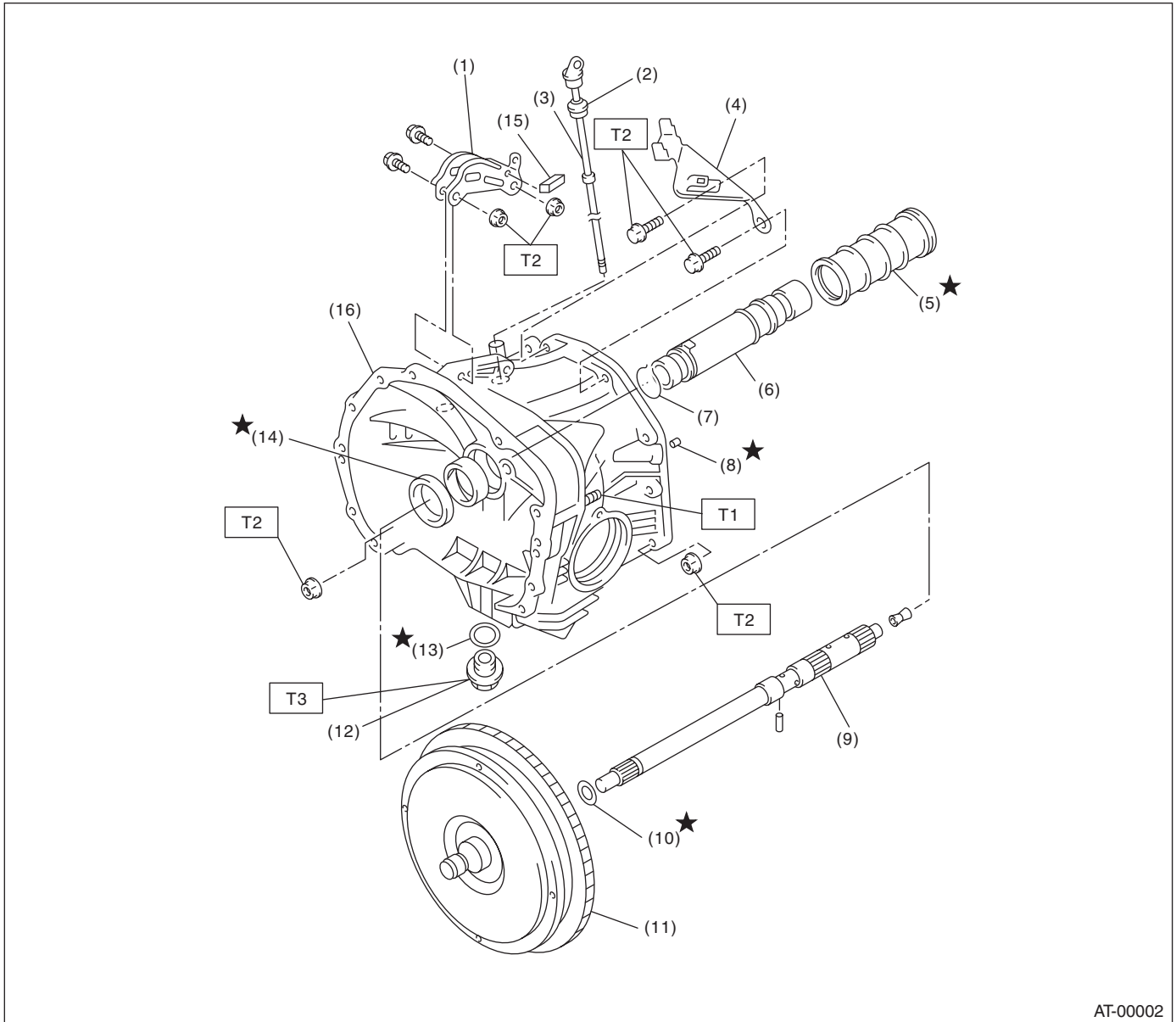
	Non-turbo	Turbo
Front final reduction gear ratio	4.444 (40/9)	4.111 (37/9)

General Description

AUTOMATIC TRANSMISSION

B: COMPONENT

1. TORQUE CONVERTER CLUTCH AND CASE



AT-00002

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

Tightening torque: N·m (kgf·m, ft·lb)

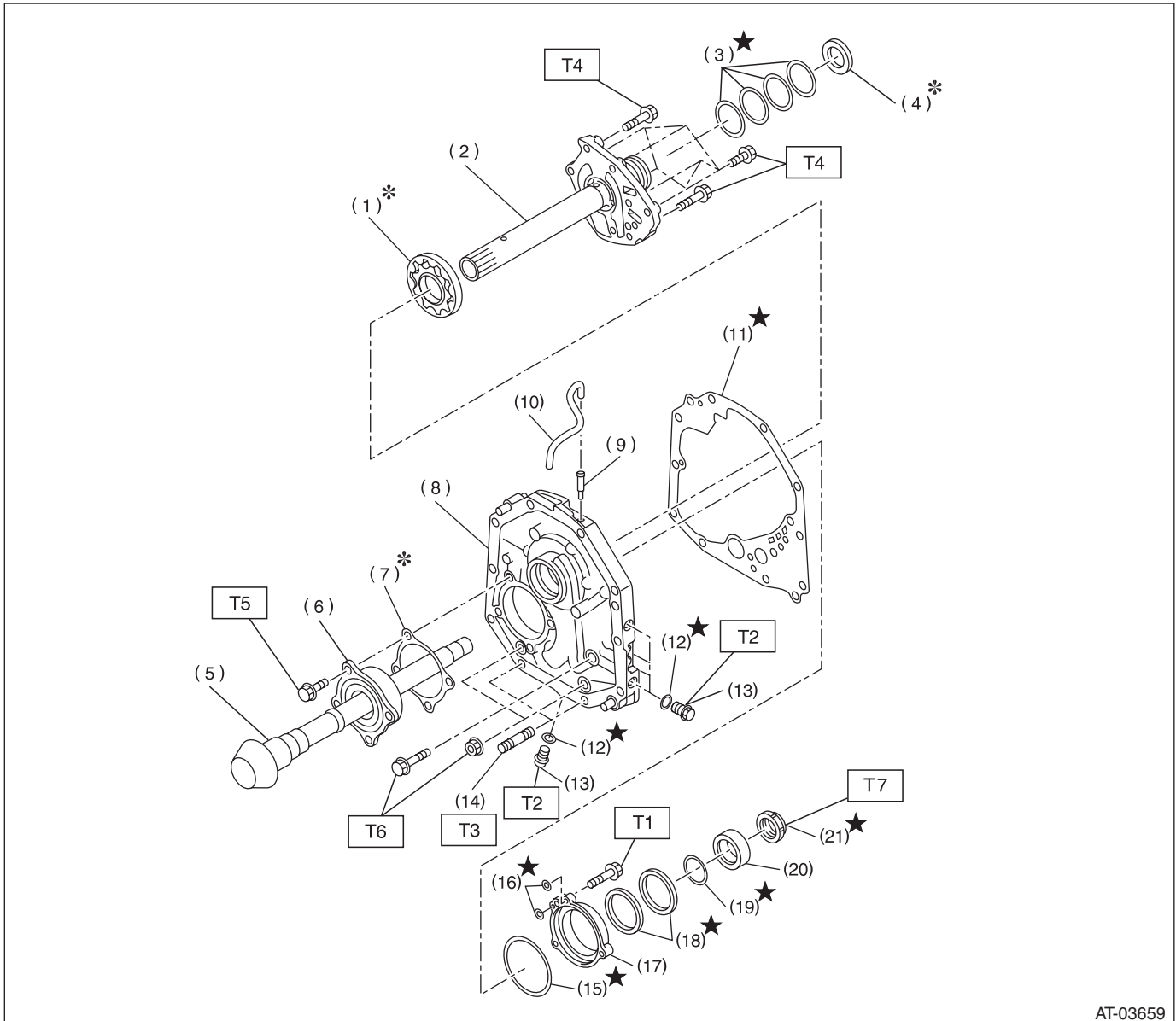
T1: 18 (1.8, 13.0)

T2: 41 (4.2, 30.4)

T3: 70 (7.2, 51.7) (Copper gasket)

44 (4.5, 32.5) (Aluminum gasket)

2. OIL PUMP



AT-03659

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

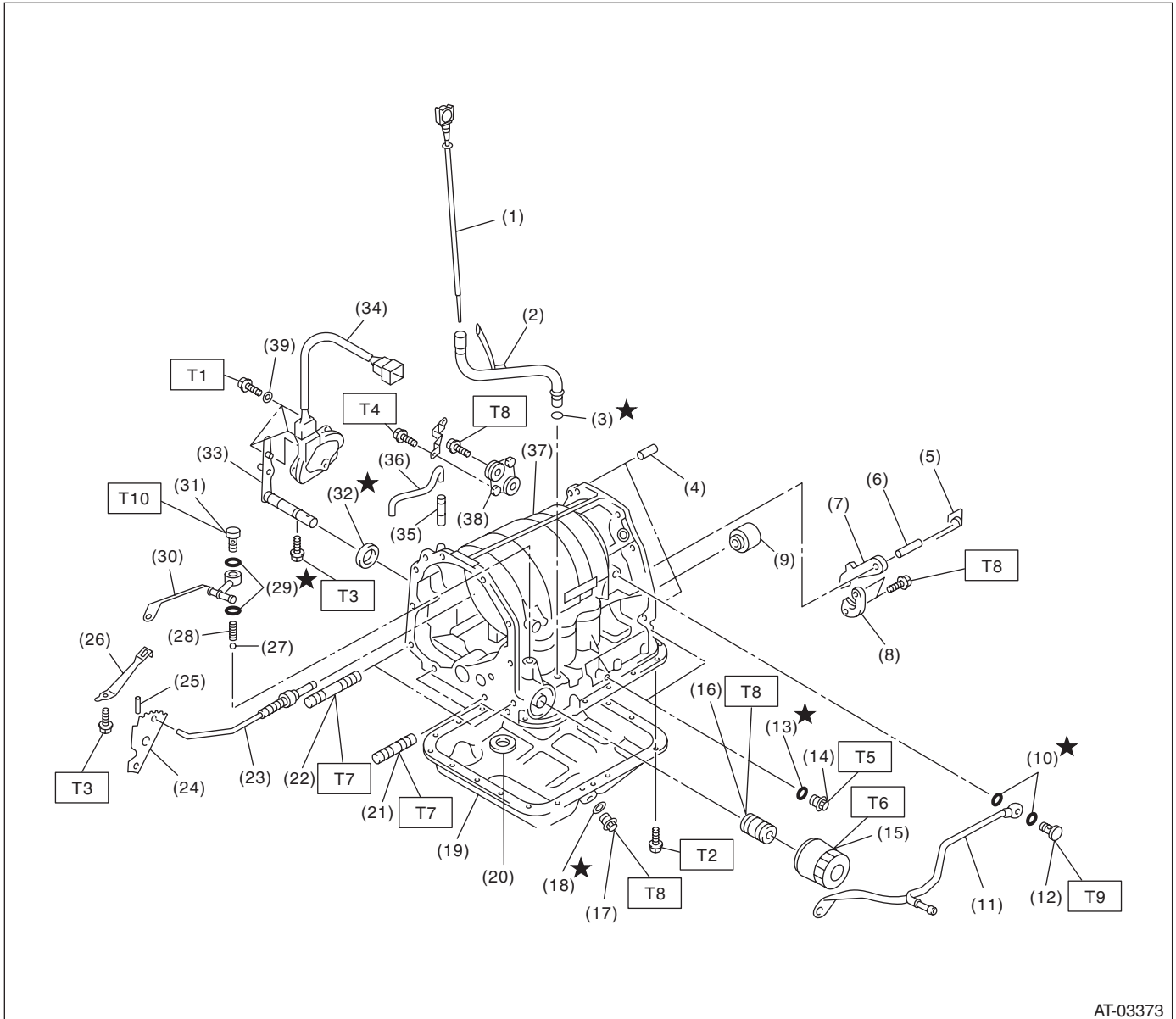
Tightening torque: N-m (kgf-m, ft-lb)

- | | |
|------------|-----------------------|
| 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) |

General Description

AUTOMATIC TRANSMISSION

3. TRANSMISSION CASE AND CONTROL DEVICE



AT-03373

General Description

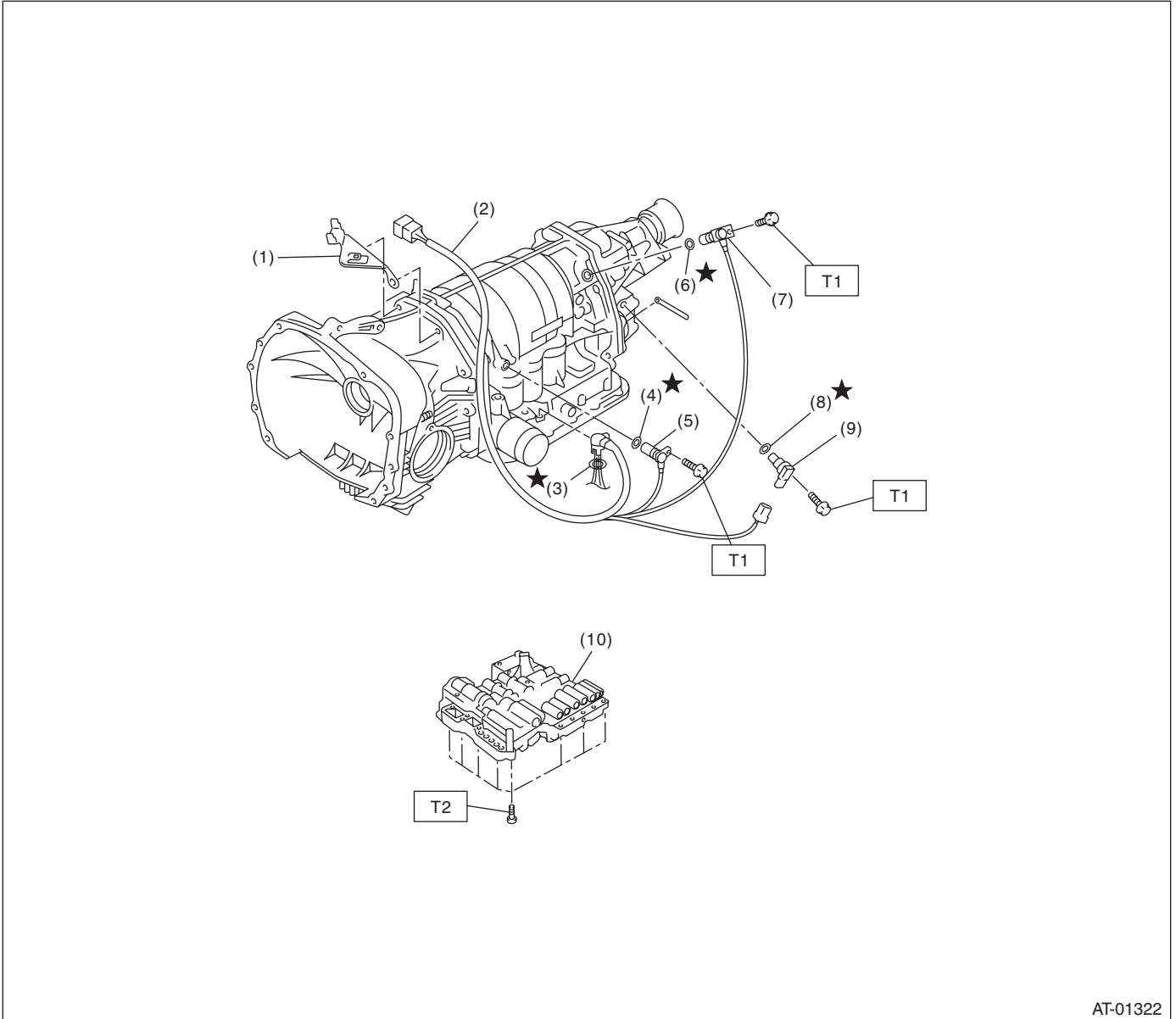
AUTOMATIC TRANSMISSION

(1) ATF level gauge	(18) Gasket	(35) Nipple
(2) Oil charge pipe	(19) Oil pan	(36) Air breather hose
(3) O-ring	(20) Magnet	(37) Transmission case
(4) Straight pin	(21) Stud bolt (short)	(38) Plate ASSY
(5) Return spring	(22) Stud bolt (long)	(39) Washer
(6) Shaft	(23) Parking rod	
(7) Parking pawl	(24) Manual plate	<i>Tightening torque: N·m (kgf·m, ft·lb)</i>
(8) Parking support	(25) Spring pin	<i>T1: 3.4 (0.35, 2.6)</i>
(9) Transfer clutch seal	(26) Detention spring	<i>T2: 5 (0.5, 3.6)</i>
(10) Gasket	(27) Ball	<i>T3: 6 (0.6, 4.4)</i>
(11) Inlet pipe	(28) Spring	<i>T4: 12 (1.2, 8.7)</i>
(12) Union screw	(29) Gasket	<i>T5: 13 (1.3, 10)</i>
(13) O-ring	(30) Outlet pipe	<i>T6: 14 (1.4, 10)</i>
(14) Test plug	(31) Union screw	<i>T7: 18 (1.8, 13)</i>
(15) Oil filter	(32) Oil seal	<i>T8: 25 (2.5, 18.1)</i>
(16) Oil filter stud bolt	(33) Range select lever	<i>T9: 40 (4.1, 29.5)</i>
(17) Drain plug (ATF)	(34) Inhibitor switch ASSY	<i>T10: 45 (4.6, 33.2)</i>

General Description

AUTOMATIC TRANSMISSION

4. CONTROL VALVE AND HARNESS ROUTING



AT-01322

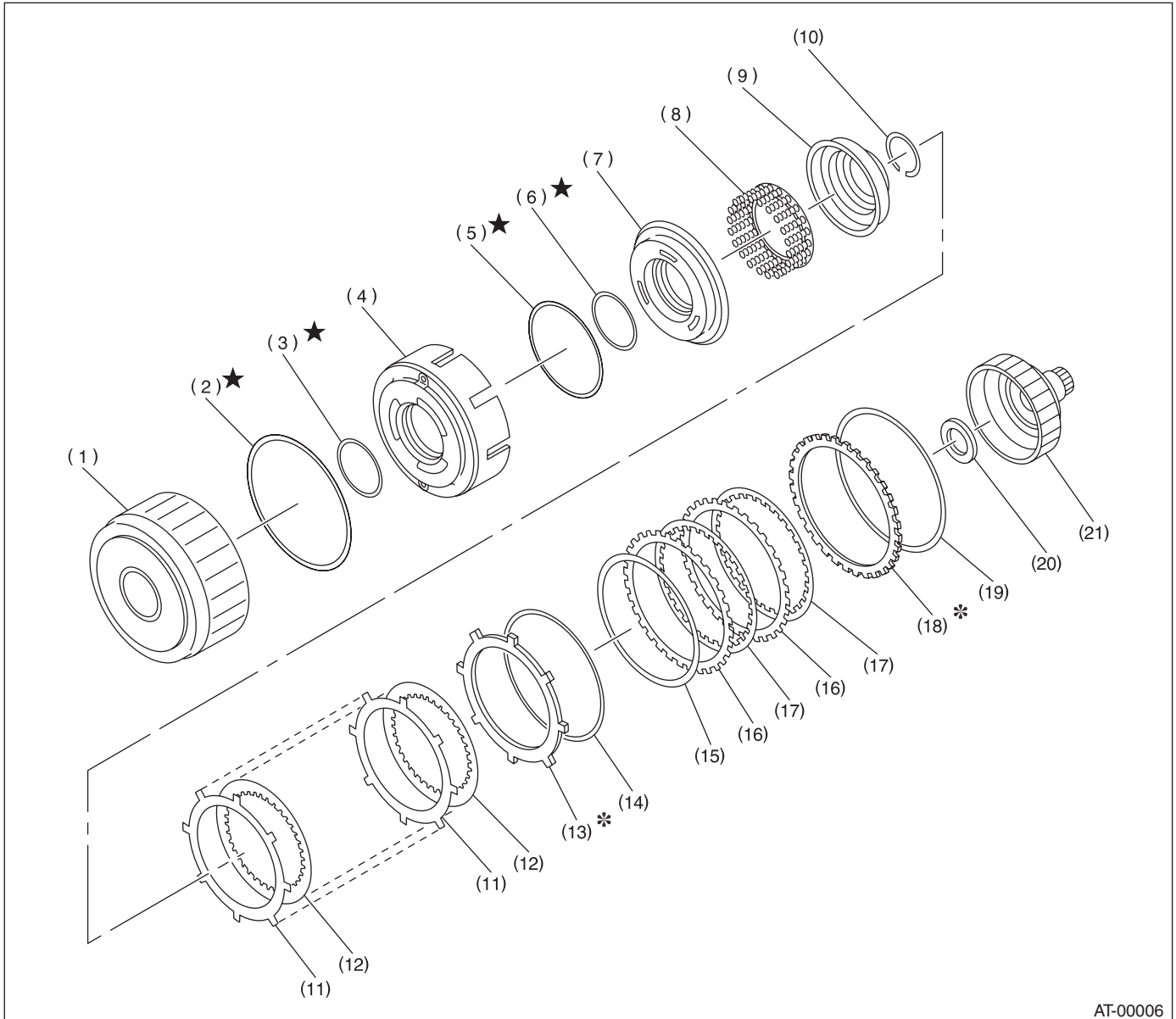
- | | |
|---|--------------------------------|
| (1) Stay | (6) O-ring |
| (2) Transmission harness ASSY | (7) Front vehicle speed sensor |
| (3) O-ring | (8) O-ring |
| (4) O-ring | (9) Rear vehicle speed sensor |
| (5) Torque converter turbine speed sensor | (10) Control valve body |

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



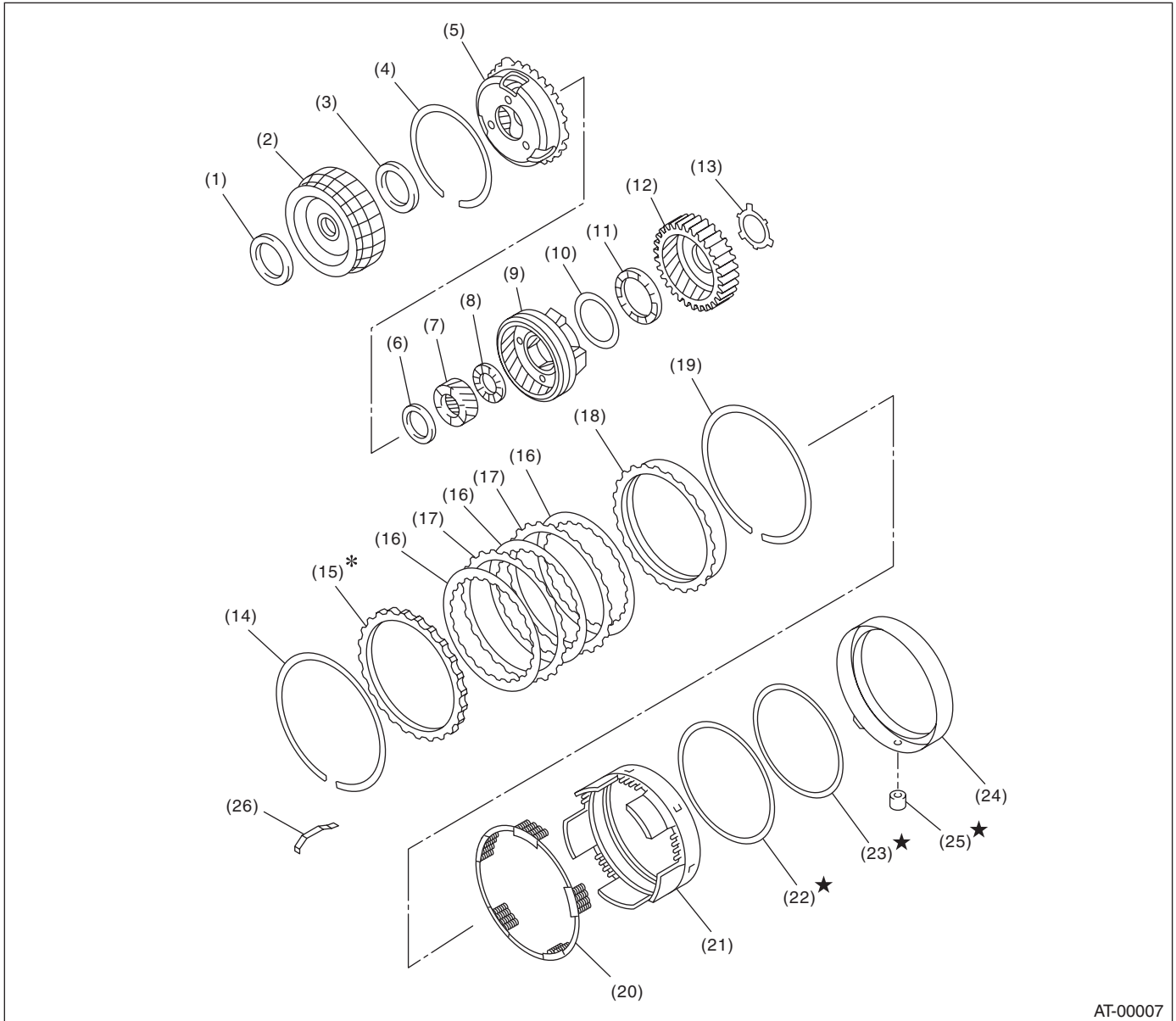
AT-00006

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

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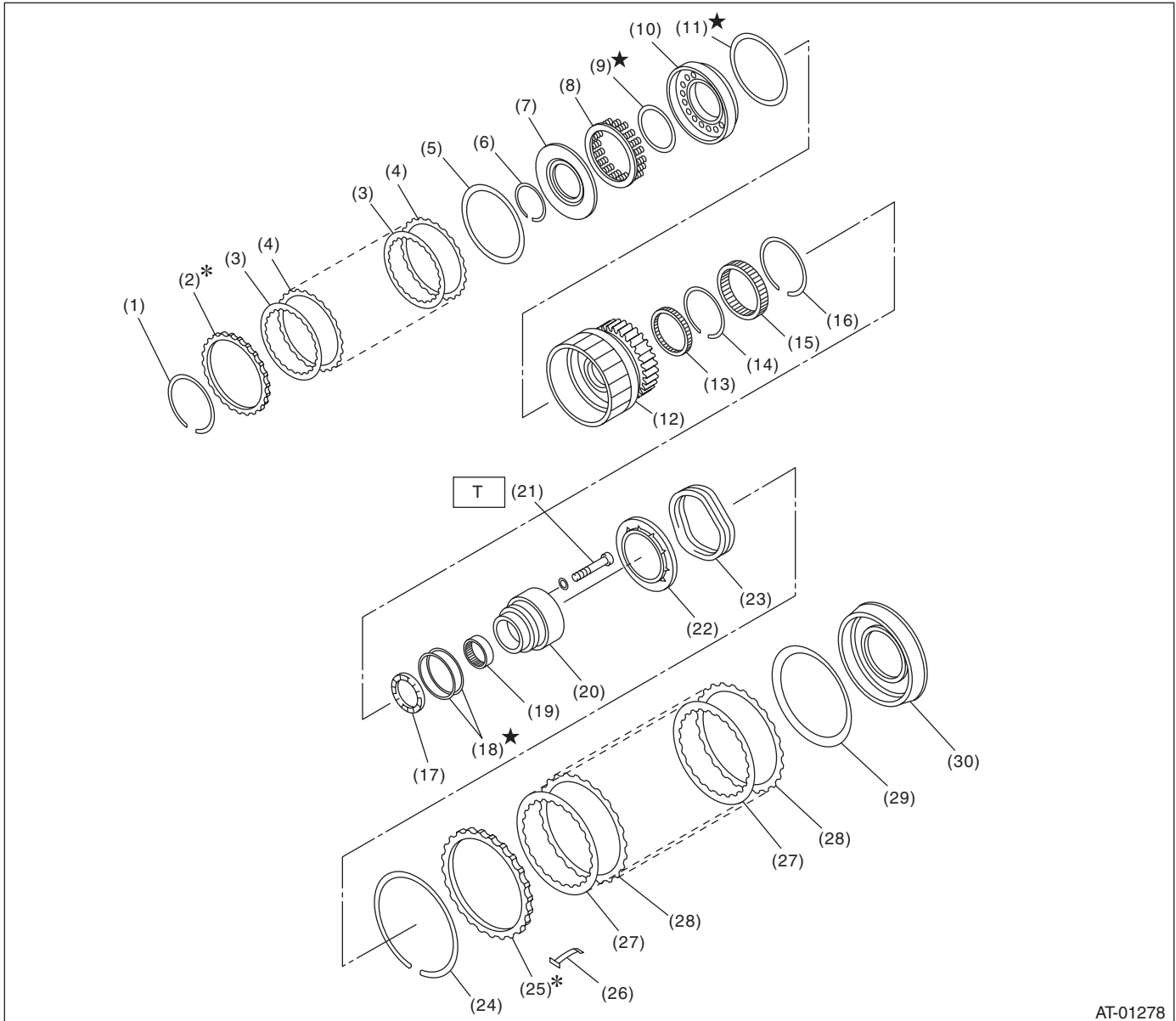
6. PLANETARY GEAR AND 2-4 BRAKE



AT-00007

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

7. LOW CLUTCH AND LOW & REVERSE BREAK



AT-01278

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

Tightening torque: N·m (kgf·m, ft·lb)

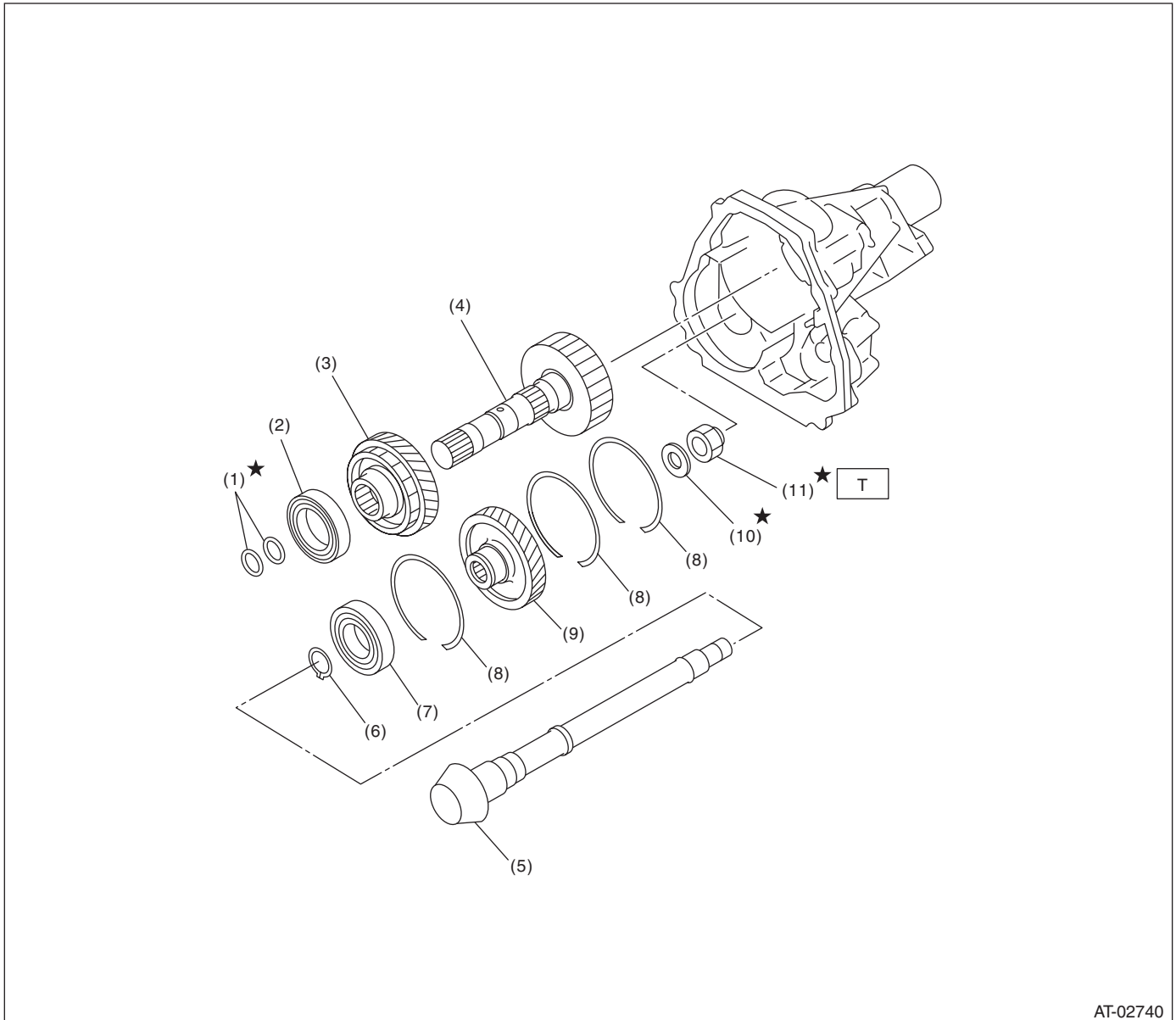
T: 25 (2.5, 18.1)

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8. REDUCTION GEAR

MP-T MODEL



AT-02740

- (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) Snap ring
- (9) Reduction driven gear
- (10) Washer

- (11) Lock nut

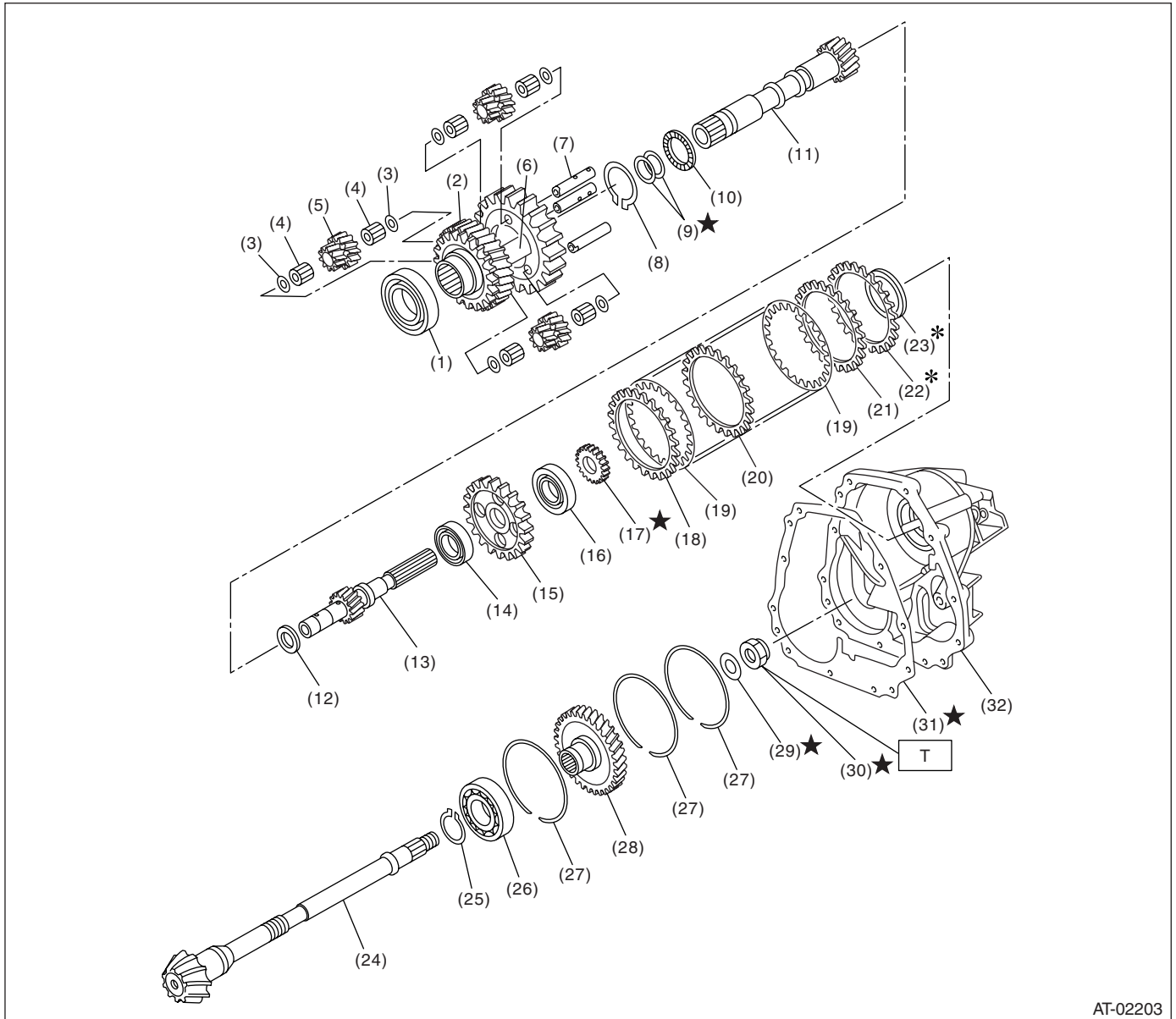
Tightening torque: N·m (kgf·m, ft·lb)

T: 100 (10.2, 73.8)

General Description

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VTD MODEL



AT-02203

- | | | |
|----------------------------|-----------------------------------|----------------------------|
| (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) Snap ring |
| (4) Needle bearing | (16) Ball bearing | (28) Reduction driven gear |
| (5) Pinion gear | (17) Revolution gear | (29) Lock washer |
| (6) Carrier | (18) Driven plate (Thick) | (30) Lock nut |
| (7) Planetary pinion shaft | (19) Drive 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 | |

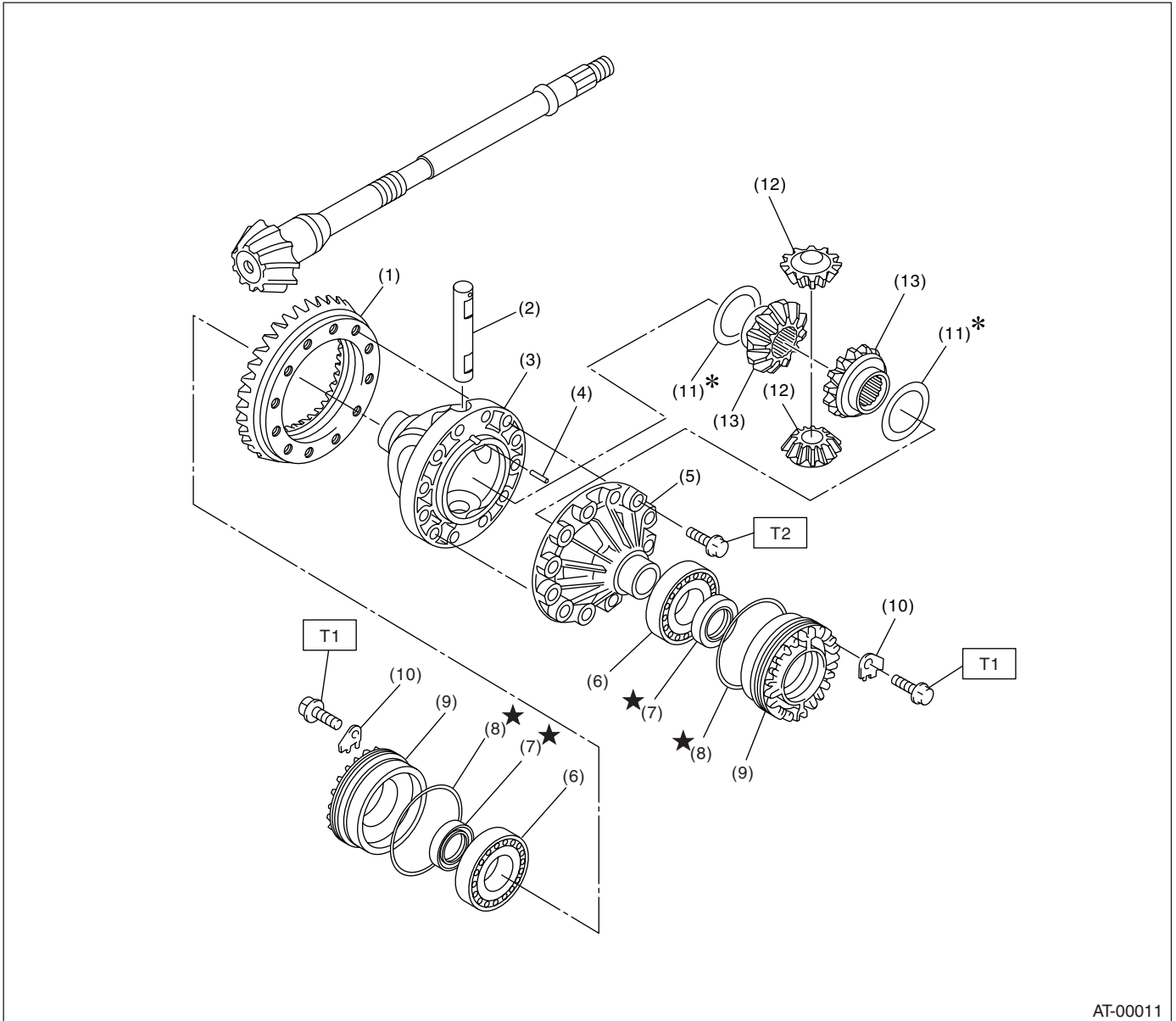
Tightening torque: N·m (kgf·m, ft·lb)

T: 100 (10.2, 73.8)

General Description

AUTOMATIC TRANSMISSION

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 | |

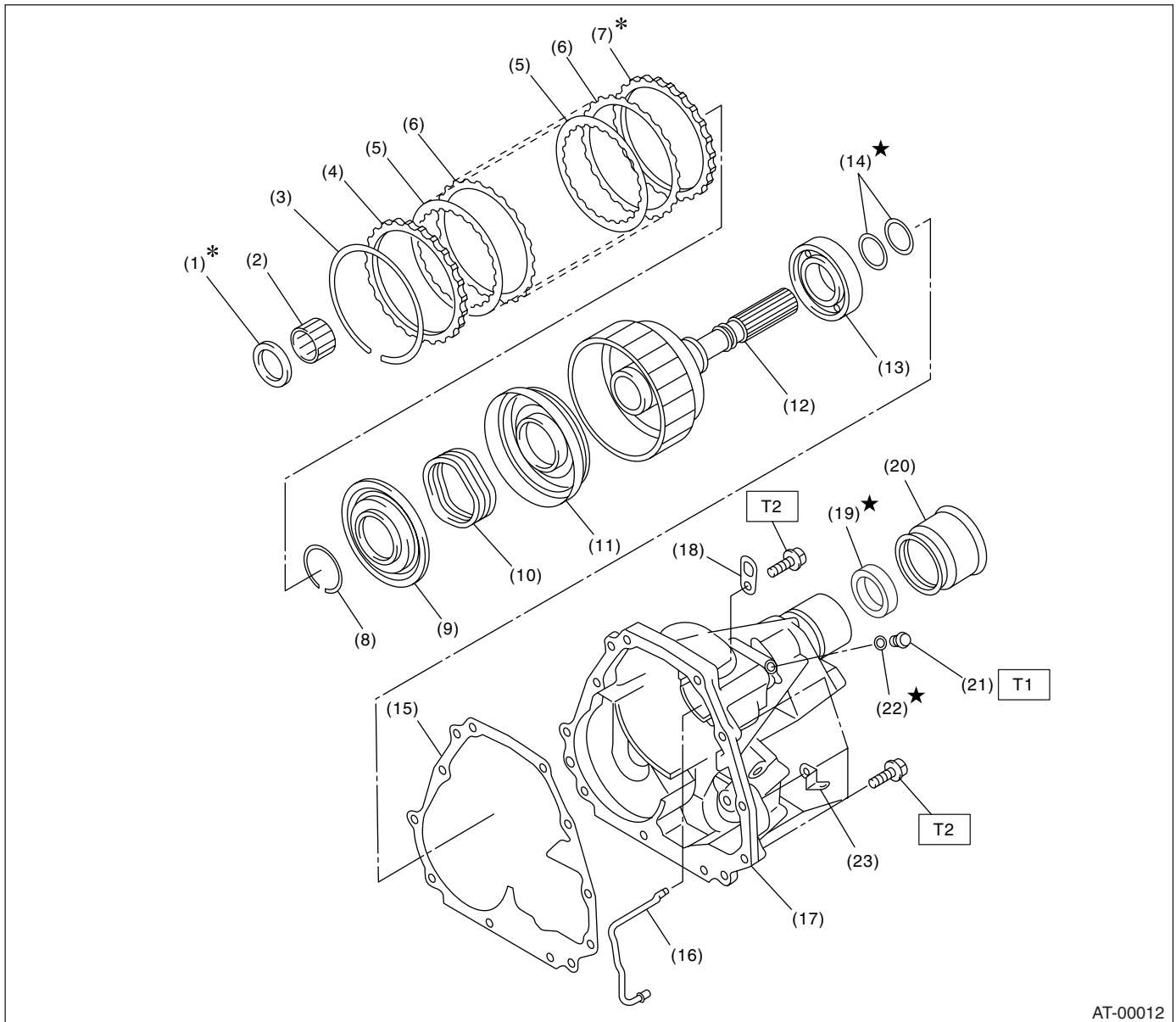
Tightening torque: N·m (kgf·m, ft·lb)

T1: 25 (2.5, 18.1)

T2: 62 (6.3, 45.6)

10. TRANSFER AND EXTENSION CASE

MP-T MODEL



AT-00012

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

Tightening torque: N·m (kgf·m, ft·lb)

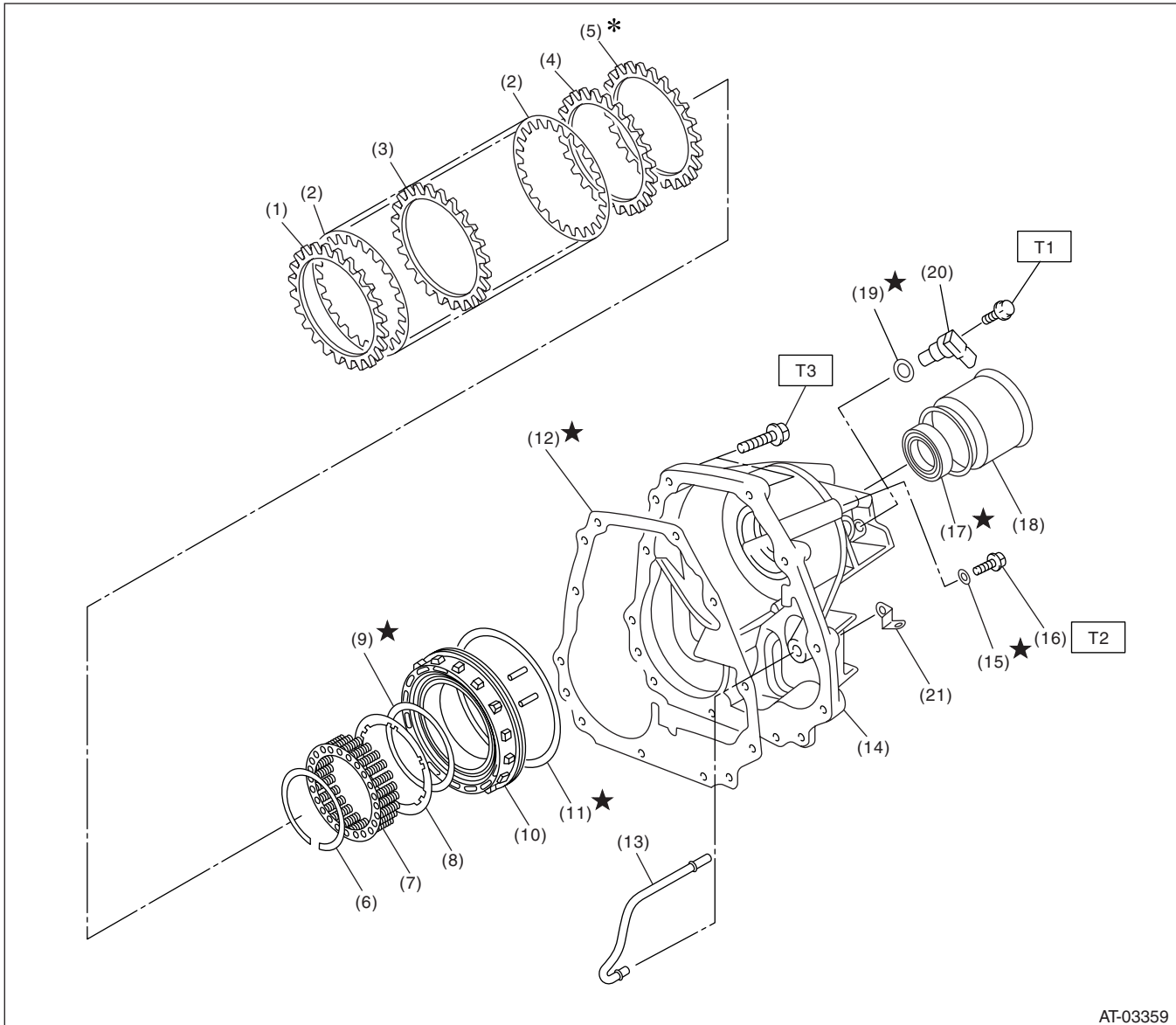
T1: 13 (1.3, 9.4)

T2: 25 (2.5, 18.1)

General Description

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VTD MODEL



AT-03359

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

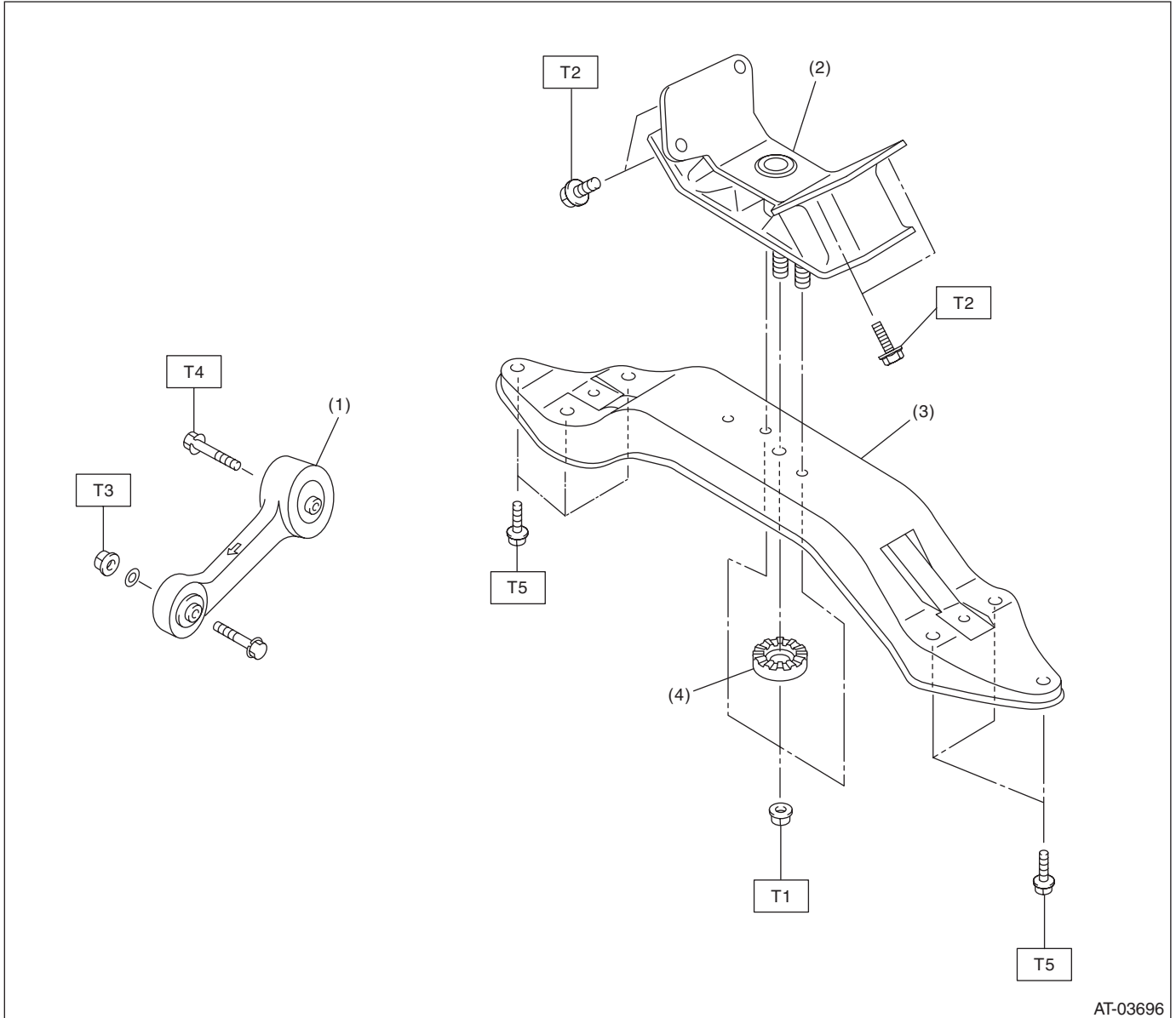
Tightening torque: N·m (kgf·m, ft·lb)

T1: 7 (0.7, 5.1)

T2: 13 (1.3, 9.4)

T3: 25 (2.5, 18.1)

11. TRANSMISSION MOUNTING



AT-03696

- (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)

General Description

AUTOMATIC TRANSMISSION

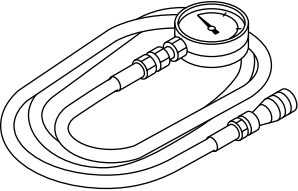
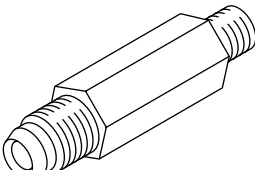
C: CAUTION

- Wear work clothing, including a cap, protective goggles and protective shoes during operation.
- 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 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 separate the case. Do not pry apart with screwdrivers or other tools.
- Be careful not to burn yourself, because each part on the vehicle is hot after running.
- Use SUBARU genuine gear oil, grease etc. or equivalent. Do not mix fluid, 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 rigid racks at the specified points.
- Apply gear oil or ATF onto sliding or revolving surfaces before installation.
- Replace deformed or damaged snap rings with new parts.
- 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 a cushioning material such as wood blocks, aluminum plates, or shop cloth between the part and the vise.
- Avoid damaging the mating surface of the case.
- Before applying sealant, completely remove the old sealant.
- When disassembling the AT, be sure to use nylon gloves and paper towels. Do not use cloth gloves or waste cloth.

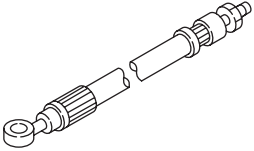
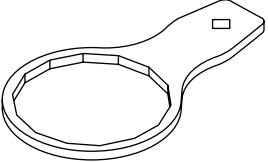
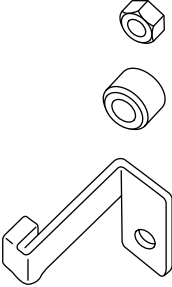
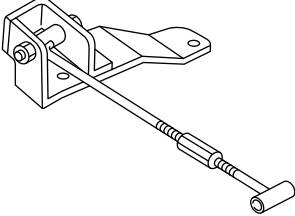
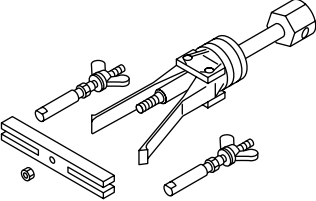
D: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-498575400</p>	498575400	OIL PRESSURE GAUGE ASSY	Used for measuring oil pressure.
 <p>ST-498897200</p>	498897200	OIL PRESSURE GAUGE ADAPTER	Used at the oil pump housing when measuring reverse clutch pressure and line pressure.

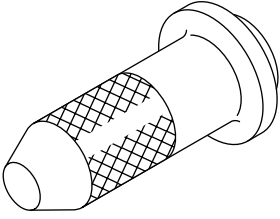
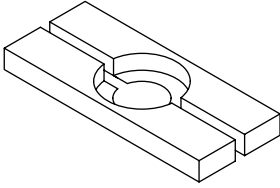
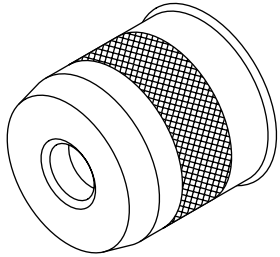
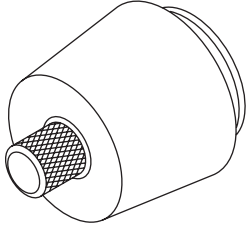
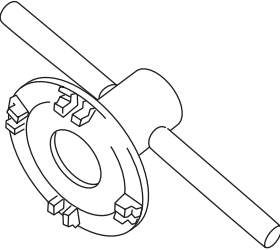
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ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p data-bbox="337 520 467 541">ST-498897700</p>	498897700	OIL PRESSURE ADAPTER SET	Used for measuring the transfer clutch pressure.
 <p data-bbox="337 871 467 892">ST-498545400</p>	498545400	OIL FILTER WRENCH	Used for removing and installing the ATF filter.
 <p data-bbox="337 1222 467 1243">ST-498277200</p>	498277200	STOPPER SET	Used for removing and installing the automatic transmission assembly.
 <p data-bbox="324 1575 467 1593">ST41099AC000</p>	41099AC000	ENGINE SUPPORT ASSY	Used for supporting the engine.
 <p data-bbox="337 1923 467 1944">ST-398527700</p>	398527700	PULLER ASSY	<ul style="list-style-type: none"> • Used for removing the extension case roller bearing. • Used for removing the extension oil seal. • Used for removing the front differential side retainer bearing outer race. • Used for removing the front differential side retainer oil seal.

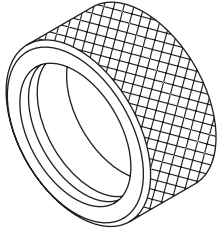
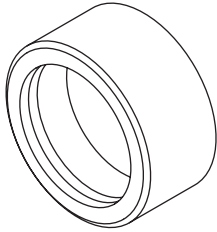
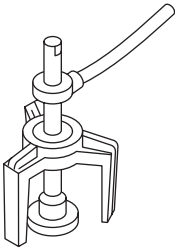
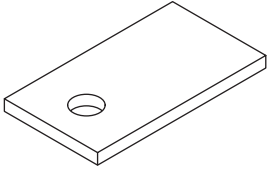
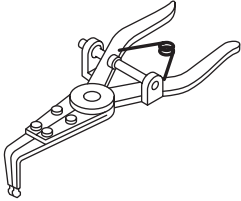
General Description

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-498057300</p>	498057300	INSTALLER	Used for installing the extension oil seal.
 <p style="text-align: center;">ST-498077000</p>	498077000	REMOVER	Used for removing the differential taper roller bearing.
 <p style="text-align: center;">ST-499247400</p>	499247400	INSTALLER	<ul style="list-style-type: none"> • Used for installing the transfer outer snap ring. • Used with GUIDE (499257300).
 <p style="text-align: center;">ST-499257300</p>	499257300	SNAP RING OUTER GUIDE	<ul style="list-style-type: none"> • Used for installing the transfer outer snap ring. • Used with the INSTALLER (499247400).
 <p style="text-align: center;">ST18630AA010</p>	18630AA010	WRENCH COMPL RETAINER	<ul style="list-style-type: none"> • Used for removing and installing the differential side retainer. • WRENCH ASSEMBLY (499787000) can also be used.

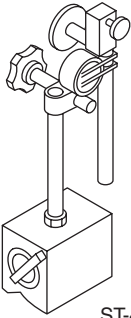
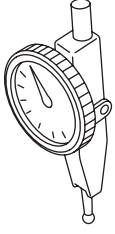
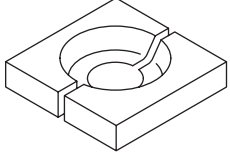
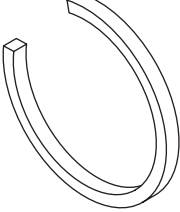
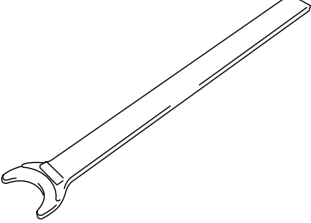
General Description

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p data-bbox="337 516 469 541">ST-398437700</p>	398437700	DRIFT	Used for installing the torque converter case oil seal.
 <p data-bbox="337 867 469 892">ST-398487700</p>	398487700	INSTALLER	Used for installing the front differential taper roller bearing.
 <p data-bbox="337 1220 469 1245">ST-398673600</p>	398673600	COMPRESSOR	Used for removing and installing the clutch spring.
 <p data-bbox="337 1570 469 1596">ST-498255400</p>	498255400	PLATE	Used for measuring the backlash of hypoid gear.
 <p data-bbox="337 1921 469 1946">ST-399893600</p>	399893600	PLIERS	Used for removing and installing the clutch spring.

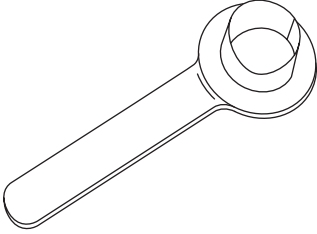
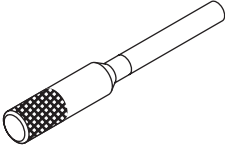
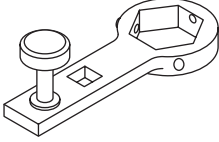
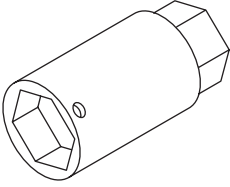
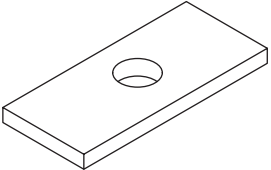
General Description

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-498247001</p>	498247001	MAGNET BASE	<ul style="list-style-type: none"> • Used for measuring the gear backlash. • Used with the DIAL GAUGE (498247100).
 <p style="text-align: center;">ST-498247100</p>	498247100	DIAL GAUGE	<ul style="list-style-type: none"> • Used for measuring the gear backlash. • Used with the MAGNET BASE (498247001).
 <p style="text-align: center;">ST-498517000</p>	498517000	REPLACER	Used for removing the front roller bearing.
 <p style="text-align: center;">ST-398623600</p>	398623600	SEAT	Used for removing the spring of the transfer clutch piston.
 <p style="text-align: center;">ST28399SA000</p>	28399SA000	DRIVE SHAFT REMOVER	Used for removing the axle shaft.

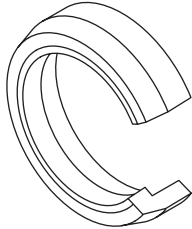
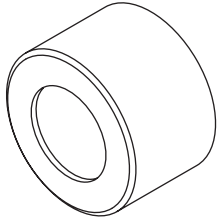
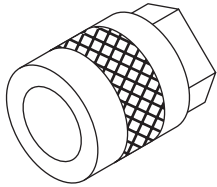
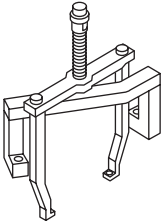
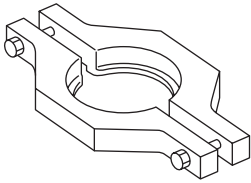
General Description

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p data-bbox="326 520 467 541">ST28399SA010</p>	28399SA010	OIL SEAL PROTECTOR	Used for installing the axle shaft.
 <p data-bbox="337 871 469 892">ST-499267300</p>	499267300	STOPPER PIN	Used for installing the inhibitor switch.
 <p data-bbox="337 1222 469 1243">ST-499787700</p>	499787700	WRENCH	Used for removing and installing the drive pinion lock nut.
 <p data-bbox="337 1572 469 1593">ST-499787500</p>	499787500	ADAPTER	Used for removing and installing the drive pinion lock nut.
 <p data-bbox="337 1927 469 1948">ST-398643600</p>	398643600	GAUGE	Used for measuring the total end play, extension end play and drive pinion height.

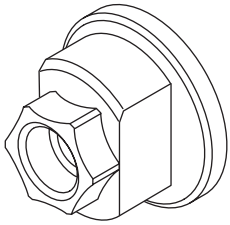
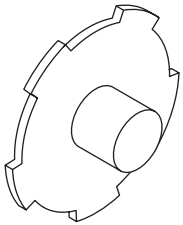
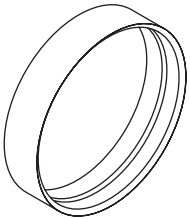
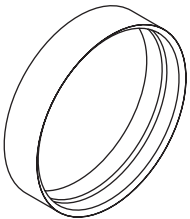
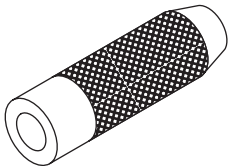
General Description

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-498627100</p>	498627100	SEAT	Used for holding the low clutch piston retainer spring when installing snap ring.
 <p style="text-align: center;">ST-499577000</p>	499577000	GAUGE	Used for measuring the mating surface of the transmission to the end face of the reduction gear.
 <p style="text-align: center;">ST-499737000</p>	499737000	PULLER	Used for removing the reduction driven gear assembly.
 <p style="text-align: center;">ST-499737100</p>	499737100	PULLER SET	Used for removing the reduction drive gear assembly.
 <p style="text-align: center;">ST-498077600</p>	498077600	REMOVER	Used for removing the ball bearing.

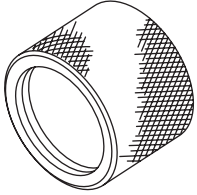
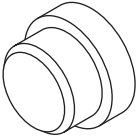
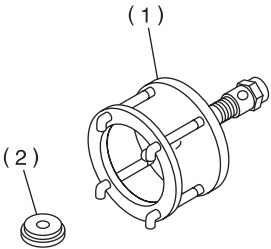
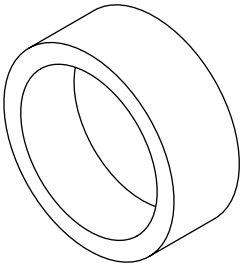
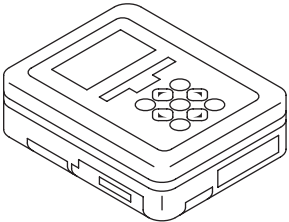
General Description

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>ST-498937110</p>	498937110	HOLDER	Used for removing and installing the drive pinion lock nut.
 <p>ST-498677100</p>	498677100	COMPRESSOR	Used for installing the 2-4 brake snap ring.
 <p>ST-498437000</p>	498437000	HIGH CLUTCH PISTON GUIDE	Used for installing the high clutch piston.
 <p>ST-498437100</p>	498437100	LOW CLUTCH PISTON GUIDE	Used for installing the low clutch piston.
 <p>ST-899580100</p>	899580100	INSTALLER	Used for press-fitting the ball bearing of the transfer clutch.

General Description

AUTOMATIC TRANSMISSION

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST18675AA000</p>	18675AA000	DIFFERENTIAL SIDE OIL SEAL INSTALLER	Used for installing the differential side retainer oil seal.
 <p style="text-align: center;">ST-398497701</p>	398497701	SEAT	Used for installing the needle bearing.
 <p style="text-align: center;">ST-899524100</p>	899524100	PULLER SET	Used for bolt only. <ul style="list-style-type: none"> • Used with 499737100 PULLEY SET. • Used with 499737000 PULLER. (1) Puller (2) Cap
 <p style="text-align: center;">ST-398744300</p>	398744300	PISTON GUIDE	<ul style="list-style-type: none"> • Used for measuring the contact surface of the transmission mating surface to the multi-plate clutch end face. • For VTD model.
 <p style="text-align: center;">ST1B020XU0</p>	1B020XU0	SUBARU SELECT MONITOR KIT	Used for troubleshooting for the electrical system.

General Description

AUTOMATIC TRANSMISSION

2. GENERAL TOOL

TOOL NAME	REMARKS
Depth gauge	Used for measuring the transmission end play.
Thickness gauge	Used for measuring clearance of the clutch, brake and oil pump.
Micrometer	Used for measuring thickness of the drive pinion.
Spring balance	Used for measuring the starting torque of the drive pinion.
Circuit tester	Used for measuring resistance and voltage.
TORX® T70	Used for installing and removing the differential gear oil drain plug.
Push/pull gauge	Used for measuring each piston stroke.