

# General Description

## MANUAL TRANSMISSION AND DIFFERENTIAL

### 1. General Description

#### A: SPECIFICATION

##### 1. MANUAL TRANSMISSION AND FRONT DIFFERENTIAL

|                                |   |                               |  |
|--------------------------------|---|-------------------------------|--|
| Type                           | 6-forward speeds and 1-reverse (all stage with synchromesh) |                               |  |
| TRANSMISSION GEAR RATIO        | 1st   |                               | 3.636  |
|                                | 2nd   |                               | 2.235  |
|                                | 3rd   |                               | 1.521  |
|                                | 4th   |                               | 1.137  |
|                                | 5th   |                               | 0.971  |
|                                | 6th   |                               | 0.756  |
|                                | Rev.  |                               | 3.545  |
| Front reduction gear           | Final   | Type of gear                  | Hypoid   |
|                                |   | Gear ratio                    | 3.900  |
| Rear reduction gear            | Transfer  | Type of gear                  | Helical  |
|                                |   | Gear ratio                    | 1.103  |
|                                | Final   | Type of gear                  | Hypoid   |
|                                |   | Gear ratio                    | 3.545  |
| Front differential             | Type and number of gear                                     |                               | Planetary gear (pinion gear: 8, gear: 2)   |
|                                | LSD type  |                               | Helical  |
| Center differential            | Type and number of gear                                     |                               | Planetary gear<br>(Internal gear: 1, pinion gear: 6, sun gear: 1, and solenoid compression variable control multiplate clutch) |
| Transmission gear oil capacity |   | 4.1 L (4.3 US qt, 3.6 Imp qt) |  |

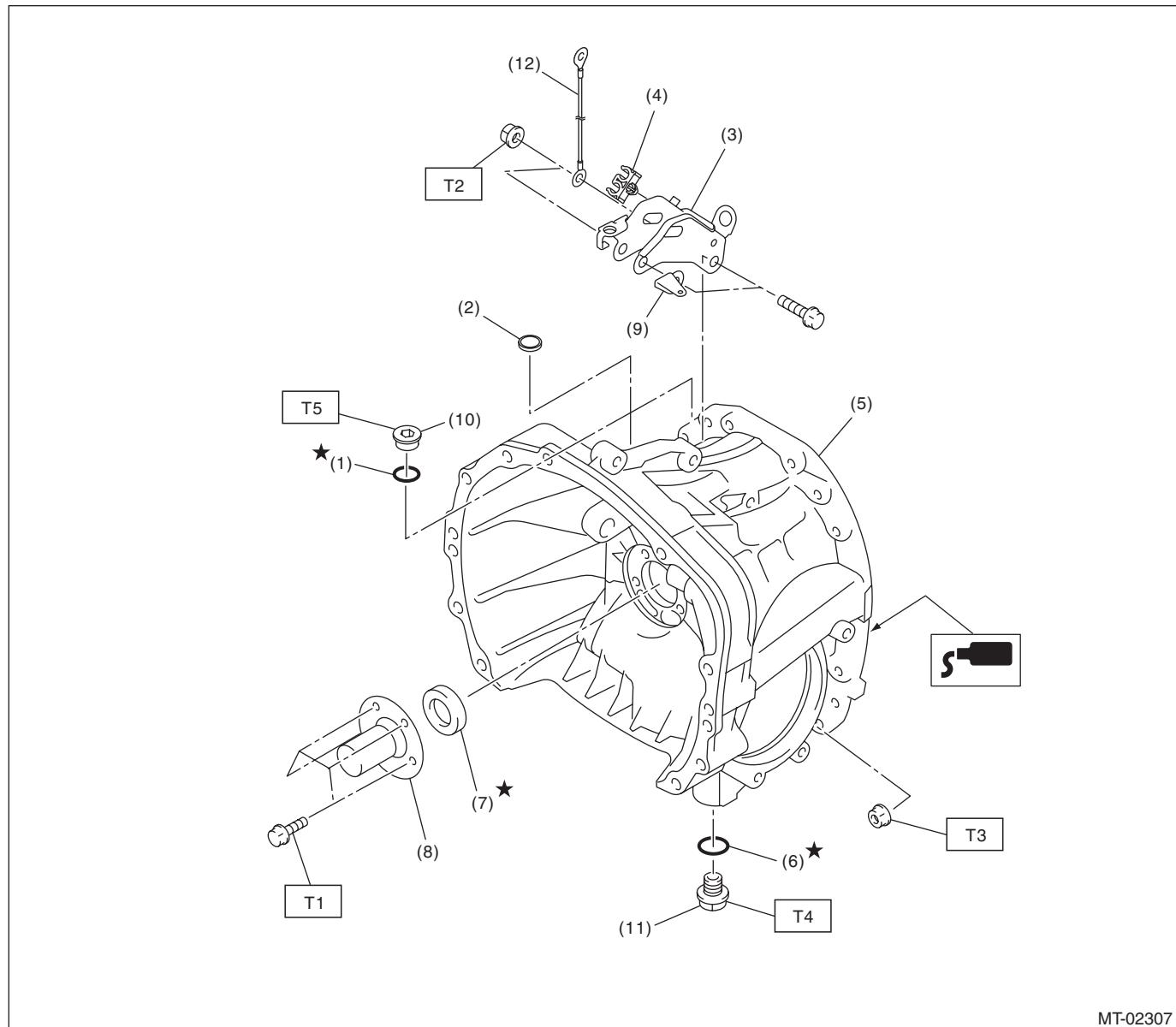
### 2. TRANSMISSION GEAR OIL

*Recommended oil:*

**GL-5 (75W-90) or equivalent**

### B: COMPONENT

#### 1. CLUTCH HOUSING



MT-02307

|                              |                                     |
|------------------------------|-------------------------------------|
| (1) Gasket                   | (7) Oil seal                        |
| (2) Plug                     | (8) Clutch release bearing guide    |
| (3) Pitching stopper bracket | (9) Return spring bracket           |
| (4) Clip                     | (10) Plug                           |
| (5) Clutch housing           | (11) Drain plug                     |
| (6) Gasket                   | (12) Transmission radio ground cord |

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

**T1: 6.4 (0.7, 4.7)**

**T2: 41 (4.2, 30.2)**

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

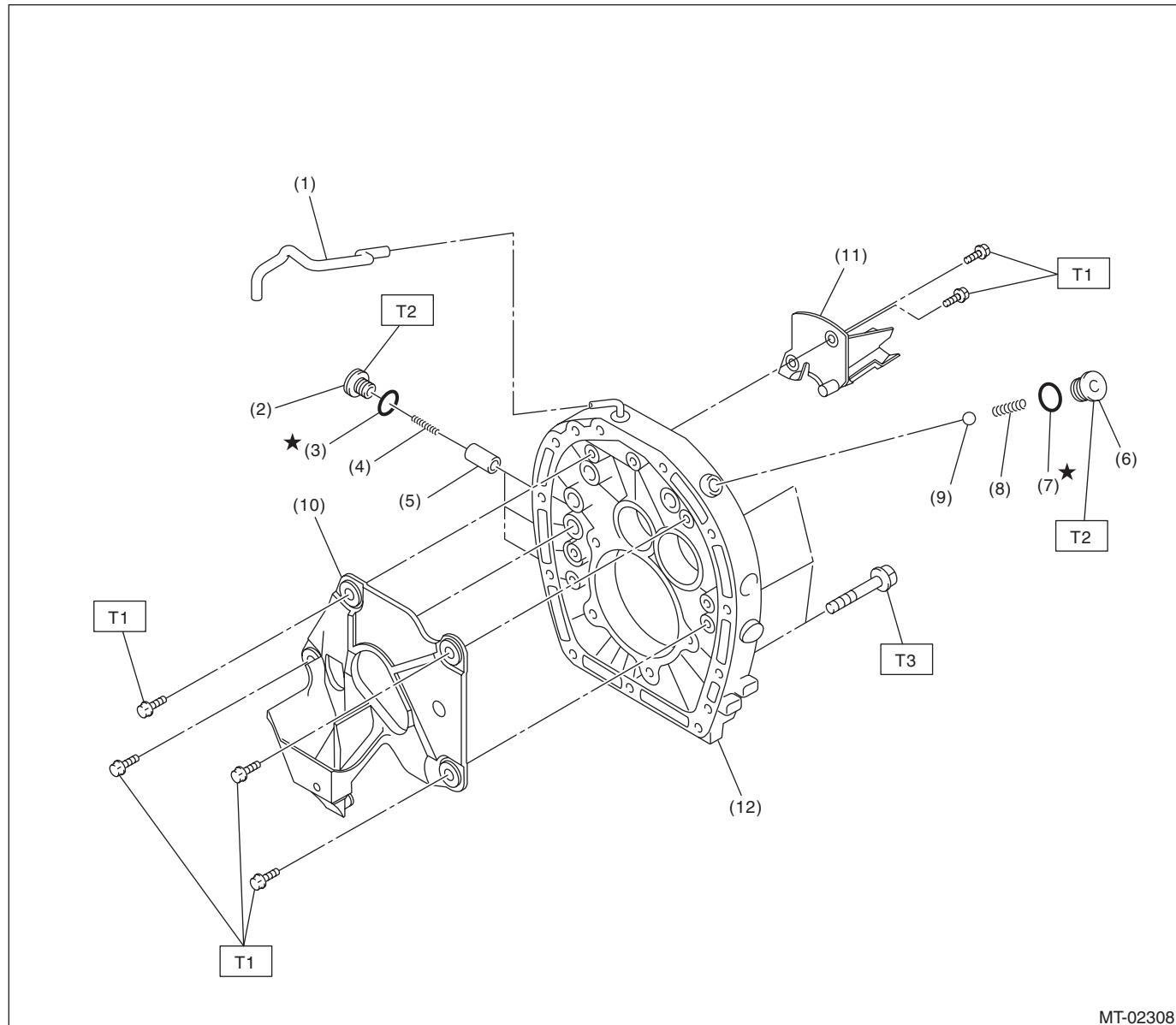
**T4: 70 (7.1, 51.6)**

**T5: 46 (4.7, 33.9)**

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### 2. ADAPTER PLATE



|                       |                     |
|-----------------------|---------------------|
| (1) Air breather hose | (7) O-ring          |
| (2) Check plug        | (8) Checking spring |
| (3) O-ring            | (9) Check ball      |
| (4) Checking spring   | (10) Oil guide A    |
| (5) Plunger           | (11) Oil guide B    |
| (6) Check plug        | (12) Adapter plate  |

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

**T1: 18 (1.8, 13.3)**

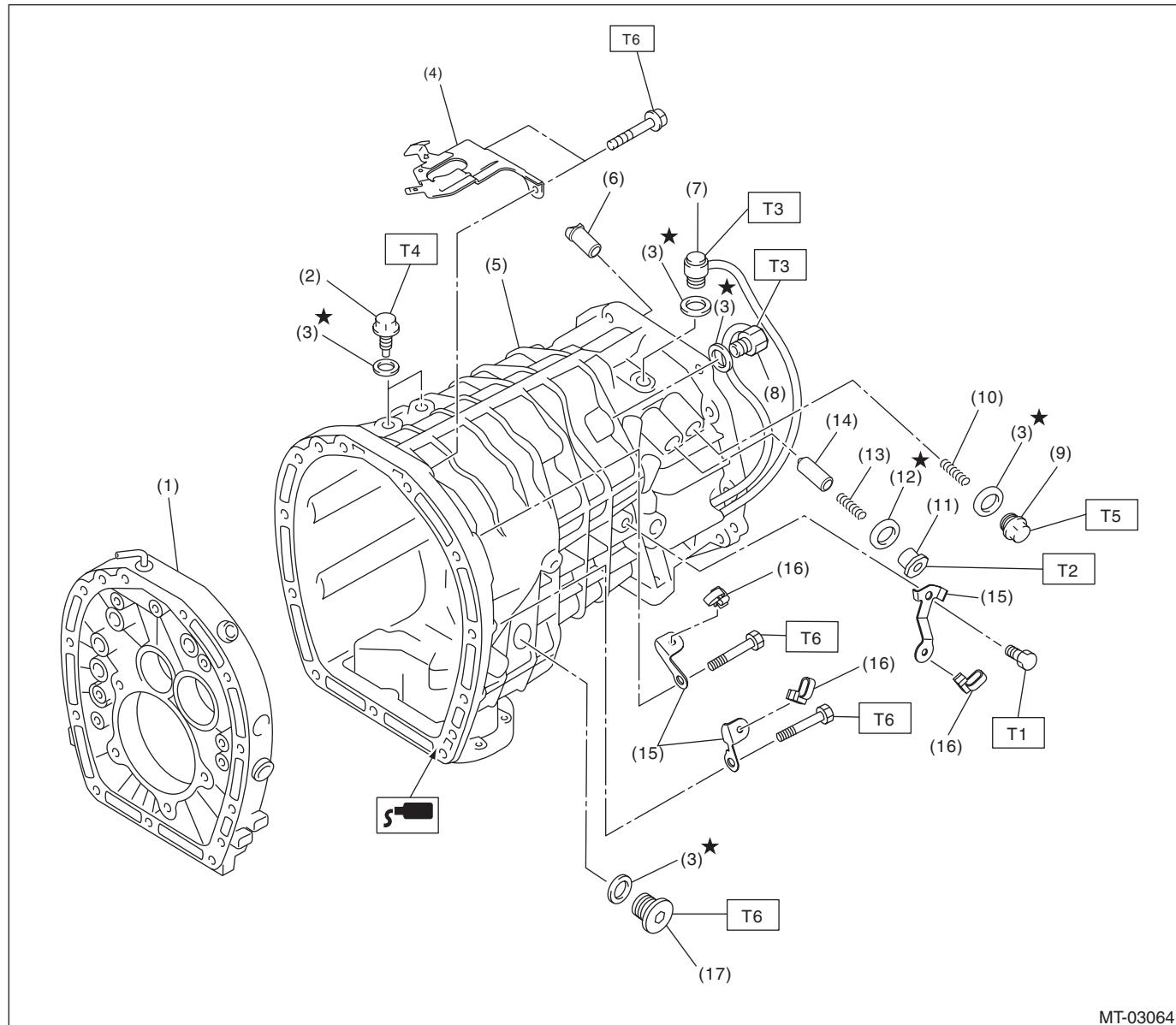
**T2: 25 (2.5, 18.4)**

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

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### 3. TRANSMISSION CASE



MT-03064

|                               |                           |
|-------------------------------|---------------------------|
| (1) Adapter plate             | (10) Spring               |
| (2) Pilot bolt                | (11) Plug                 |
| (3) Gasket                    | (12) O-ring               |
| (4) Transmission harness stay | (13) Spring               |
| (5) Transmission case         | (14) Shift accent plunger |
| (6) Selector plunger          | (15) Harness bracket      |
| (7) Neutral switch            | (16) Band clip            |
| (8) Back-up light switch      | (17) Filler plug          |
| (9) Plug                      |                           |

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

***T1: 16 (1.6, 11.8)***

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

***T3: 32 (3.3, 23.6)***

***T4: 34 (3.5, 25.1)***

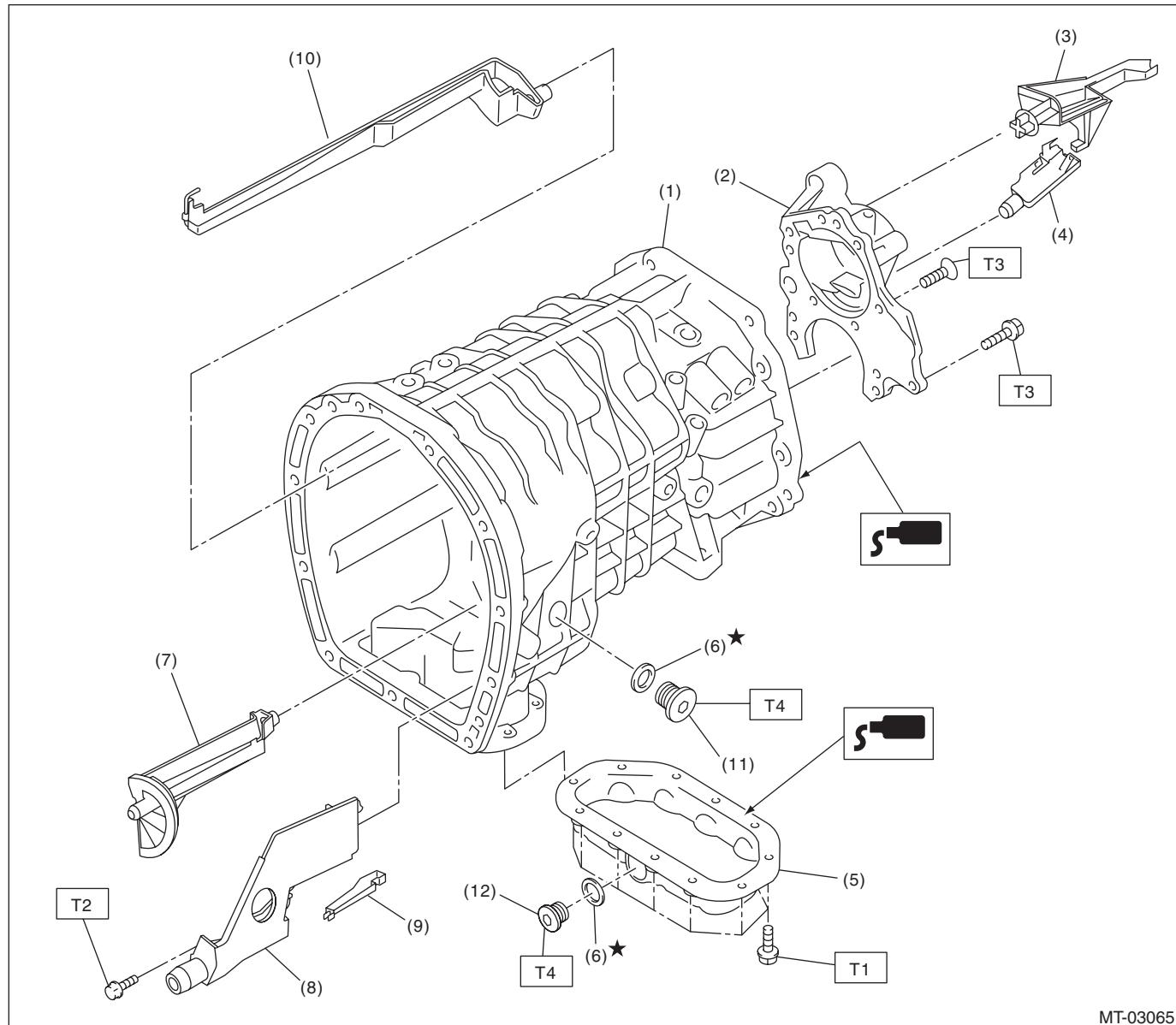
***T5: 41 (4.2, 30.2)***

***T6: 50 (5.1, 36.9)***

# General Description

## MANUAL TRANSMISSION AND DIFFERENTIAL

### 4. OIL PAN & OIL GUIDE



|                             |                  |
|-----------------------------|------------------|
| (1) Transmission case       | (7) Oil guide F  |
| (2) Transfer bearing holder | (8) Oil guide D  |
| (3) Oil guide G             | (9) Oil guide E  |
| (4) Oil guide H             | (10) Oil guide C |
| (5) Oil pan                 | (11) Filler plug |
| (6) Gasket                  | (12) Drain plug  |

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

***T1: 6.4 (0.7, 4.7)***

***T2: 18 (1.8, 13.3)***

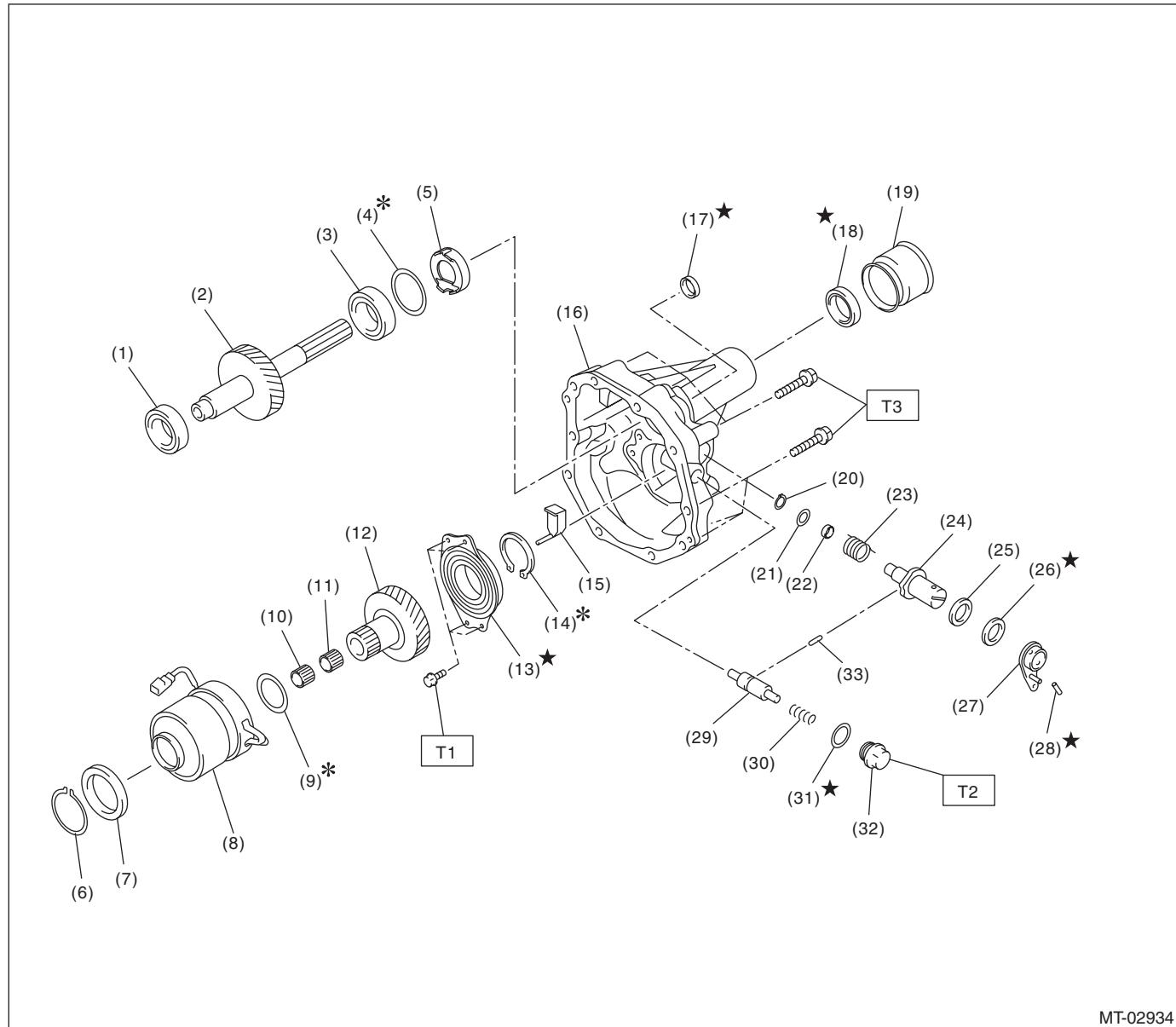
***T3: 25 (2.5, 18.4)***

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

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### 5. EXTENSION CASE AND CENTER DIFFERENTIAL



MT-02934

|   |                          |                            |
|---|--------------------------|----------------------------|
| (1) Taper roller bearing (transmission case side) | (14) Snap ring           | (27) Reverse check lever   |
| (2) Transfer driven gear                          | (15) Oil guide           | (28) Straight pin          |
| (3) Taper roller bearing (extension case side)    | (16) Extension case      | (29) Reverse check plunger |
| (4) Adjusting washer                              | (17) Oil seal            | (30) Spring                |
| (5) Oil plate                                     | (18) Oil seal            | (31) Gasket                |
| (6) Snap ring                                     | (19) Dust cover          | (32) Plug                  |
| (7) Collar  | (20) Snap ring           | (33) Reverse lock plunger  |
| (8) Center differential                           | (21) Washer              |                            |
| (9) Adjusting washer                              | (22) Bushing             |                            |
| (10) Needle bearing                               | (23) Spring              |                            |
| (11) Needle bearing                               | (24) Reverse check shaft |                            |
| (12) Transfer drive gear                          | (25) Ball bearing        |                            |
| (13) Ball bearing (with flange)                   | (26) Oil seal            |                            |

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

T1: 25 (2.5, 18.4)

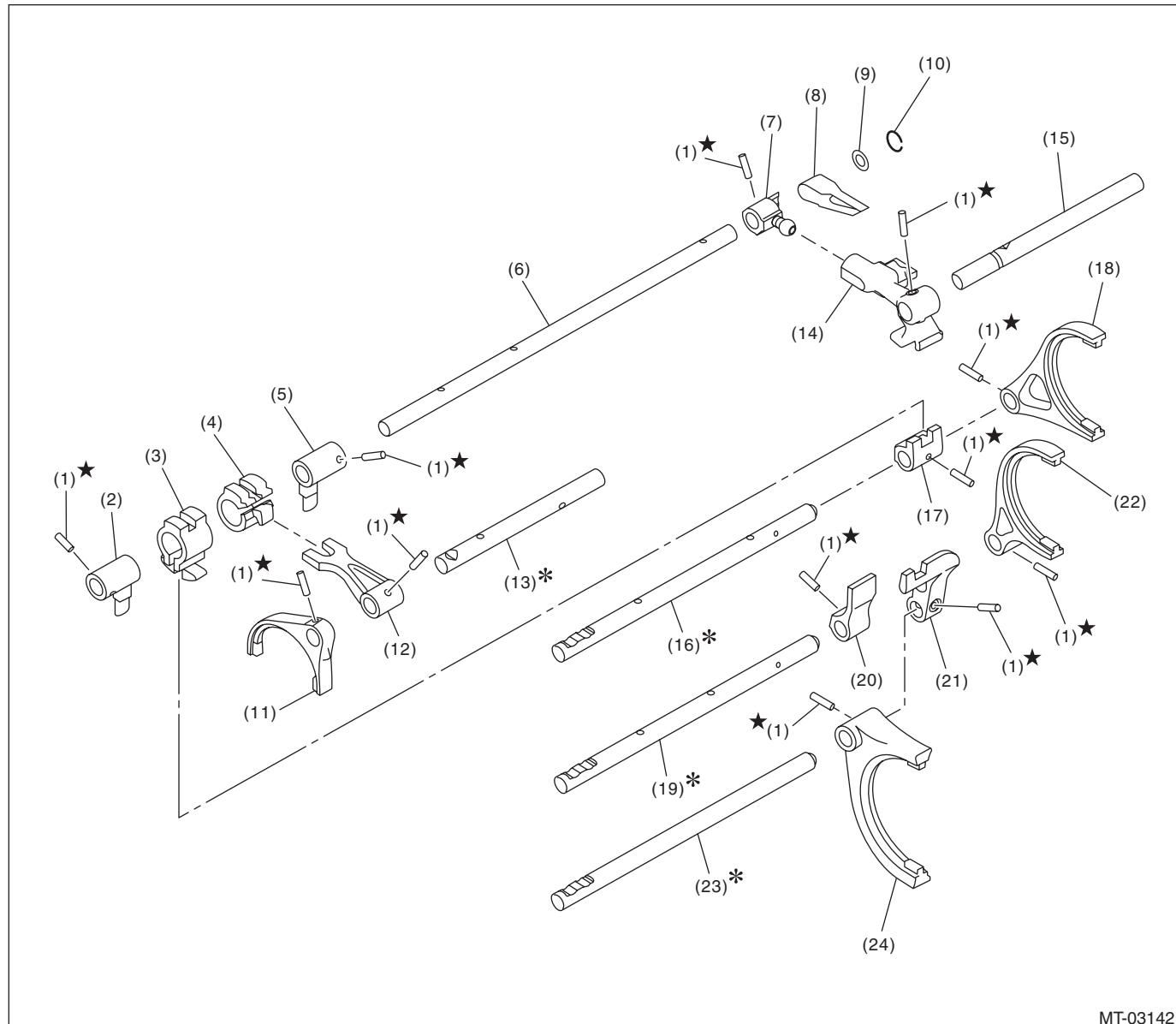
T2: 41 (4.2, 30.2)

T3: 48 (4.9, 35.4)

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### 6. SHIFTER FORK AND FORK ROD



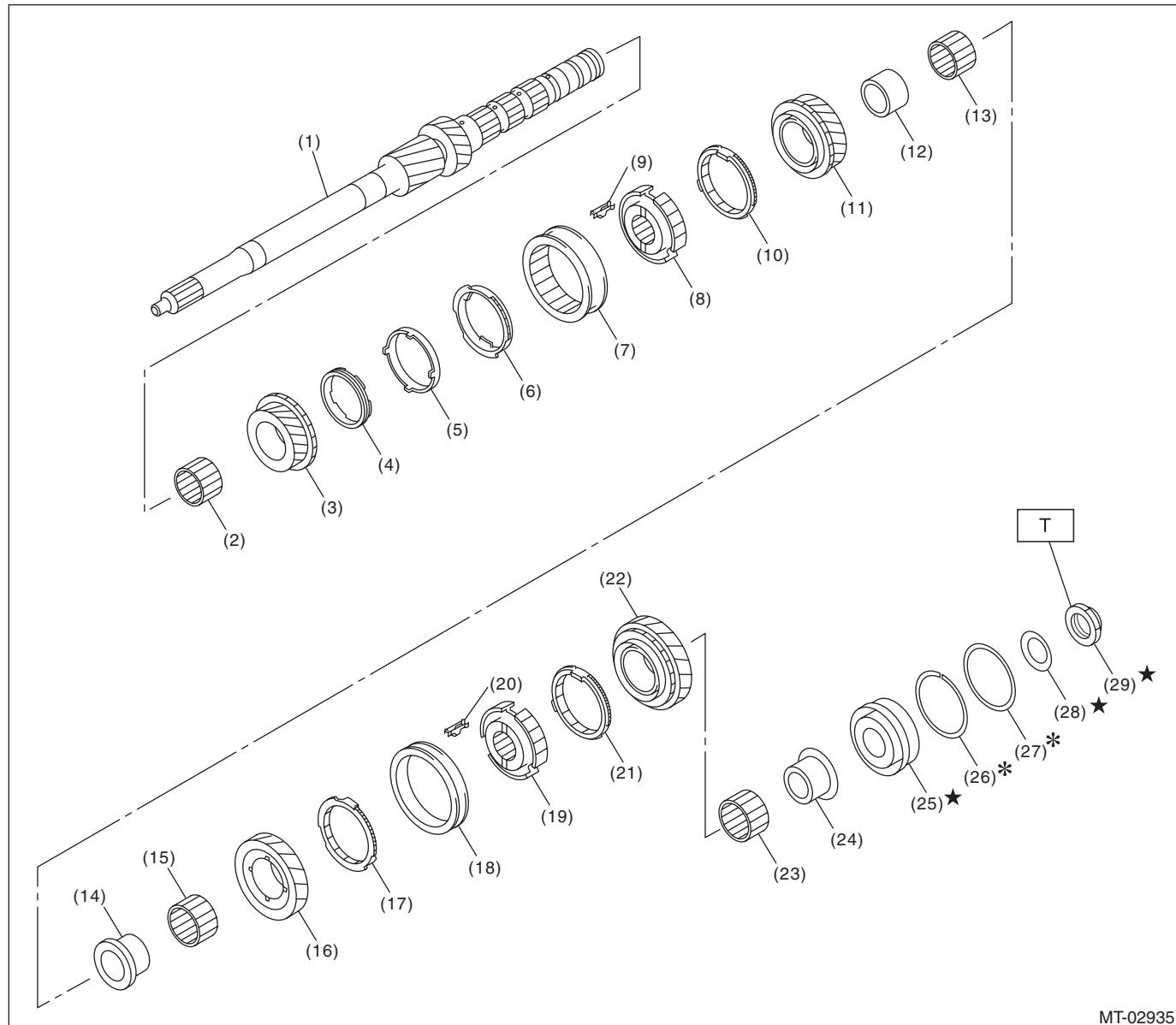
MT-03142

|                             |                           |                           |
|-----------------------------|---------------------------|---------------------------|
| (1) Straight pin            | (9) Washer                | (17) 5th-6th shifter arm  |
| (2) Interlock arm           | (10) Snap ring            | (18) 5th-6th shifter fork |
| (3) Interlock block         | (11) Reverse shifter fork | (19) 3rd-4th fork rod     |
| (4) Reverse interlock block | (12) Reverse shifter arm  | (20) 3rd-4th shifter arm  |
| (5) Interlock arm           | (13) Reverse fork rod     | (21) 1st-2nd shifter arm  |
| (6) Striking rod            | (14) Selector arm         | (22) 3rd-4th shifter fork |
| (7) Selector arm No. 2      | (15) Shifter arm shaft    | (23) 1st-2nd fork rod     |
| (8) Neutral set spring      | (16) 5th-6th fork rod     | (24) 1st-2nd shifter fork |

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### 7. MAIN SHAFT ASSY



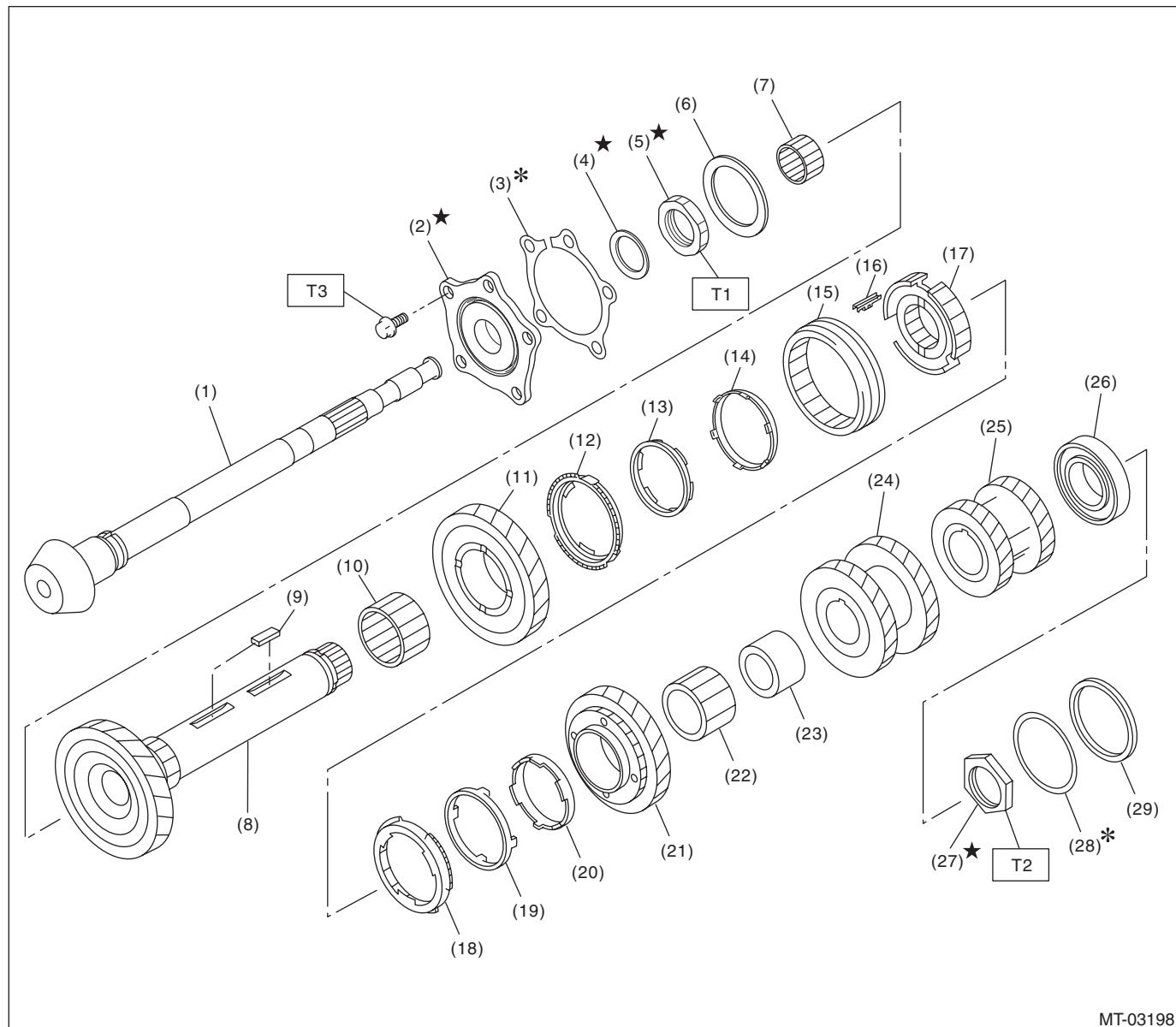
|                              |                               |                                  |
|------------------------------|-------------------------------|----------------------------------|
| (1) Main shaft               | (12) 4th needle bearing race  | (23) Needle bearing              |
| (2) Needle bearing           | (13) Needle bearing           | (24) 6th drive gear bushing      |
| (3) 3rd drive gear           | (14) 5th drive gear bushing   | (25) Double taper roller bearing |
| (4) 3rd inner baulk ring     | (15) Needle bearing           | (26) Snap ring                   |
| (5) 3rd synchro cone         | (16) 5th drive gear           | (27) Adjusting washer            |
| (6) 3rd outer baulk ring     | (17) 5th baulk ring           | (28) Lock washer                 |
| (7) 3rd-4th coupling sleeve  | (18) 5th-6th coupling sleeve  | (29) Lock nut                    |
| (8) 3rd-4th synchronizer hub | (19) 5th-6th synchronizer hub |                                  |
| (9) 3rd-4th shifting insert  | (20) 5th-6th shifting insert  |                                  |
| (10) 4th baulk ring          | (21) 6th baulk ring           |                                  |
| (11) 4th drive gear          | (22) 6th drive gear           |                                  |

**Tightening torque: N·m (kgf-m, ft-lb)**  
**T: 392 (40.0, 289.1)**

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### 8. DRIVE PINION SHAFT ASSY & DRIVEN GEAR ASSY



MT-03198

|                                 |                               |                       |
|---------------------------------|-------------------------------|-----------------------|
| (1) Drive pinion shaft          | (14) 1st inner baulk ring     | (27) Lock nut         |
| (2) Double taper roller bearing | (15) 1st-2nd coupling sleeve  | (28) Adjusting washer |
| (3) Drive pinion shim           | (16) 1st-2nd shifting insert  | (29) Collar           |
| (4) Lock washer                 | (17) 1st-2nd synchronizer hub |                       |
| (5) Lock nut                    | (18) 2nd outer baulk ring     |                       |
| (6) Thrust bearing              | (19) 2nd synchro cone         |                       |
| (7) Needle bearing              | (20) 2nd inner baulk ring     |                       |
| (8) Driven shaft                | (21) 2nd driven gear          |                       |
| (9) Key                         | (22) Needle bearing           |                       |
| (10) Needle bearing             | (23) 2nd driven gear bushing  |                       |
| (11) 1st driven gear            | (24) 3rd-4th driven gear      |                       |
| (12) 1st outer baulk ring       | (25) 5th-6th driven gear      |                       |
| (13) 1st synchro cone           | (26) Ball bearing             |                       |

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

**T1: 285 (29.1, 210.2)**

**\*265 (27.0, 195.4)**

**T2: 570 (58.1, 420.4)**

**\*530 (54.0, 390.9)**

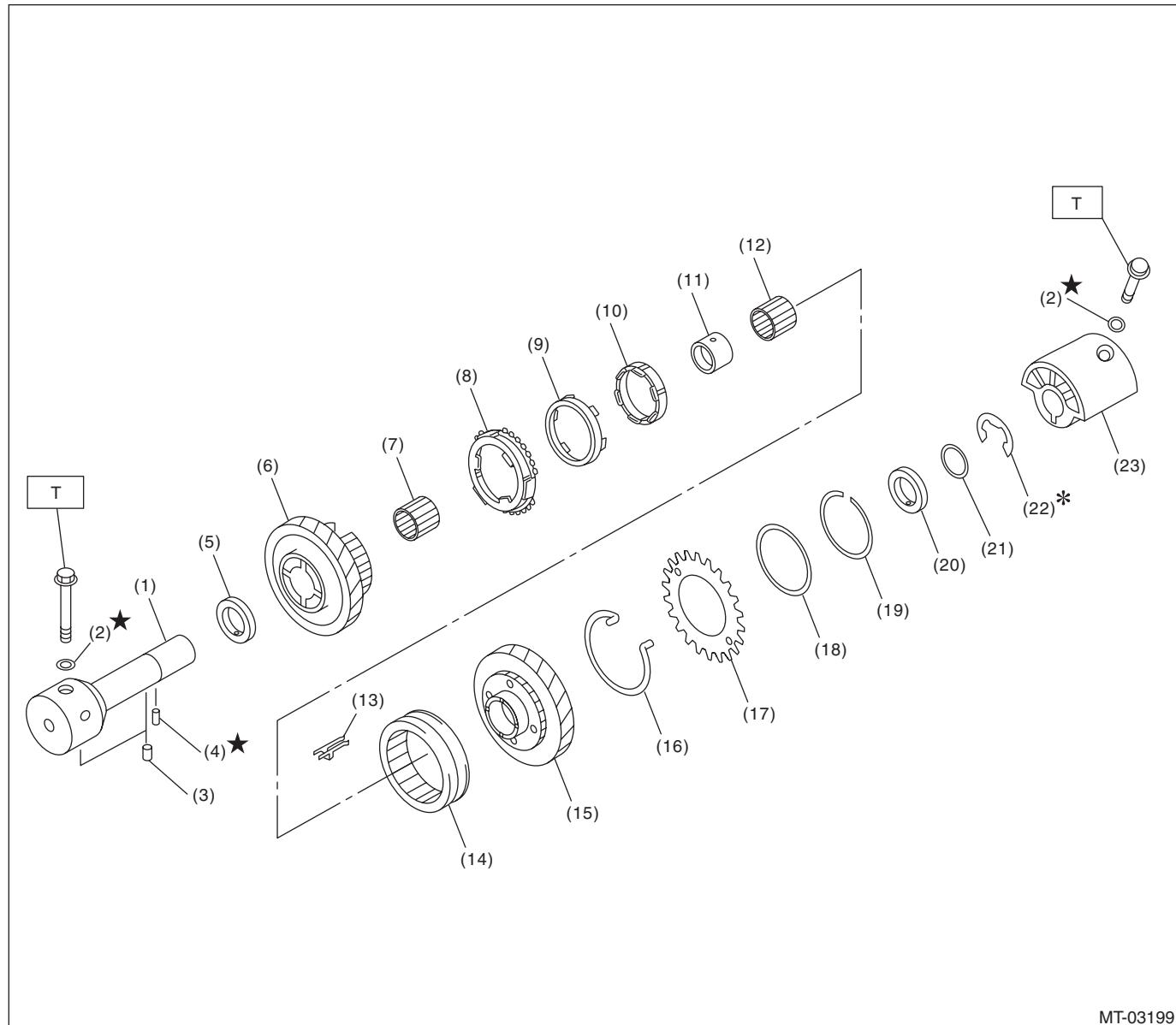
**T3: 54 (5.5, 39.8)**

\* Tightening torque when using the ST

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### 9. REVERSE IDLER GEAR ASSY



MT-03199

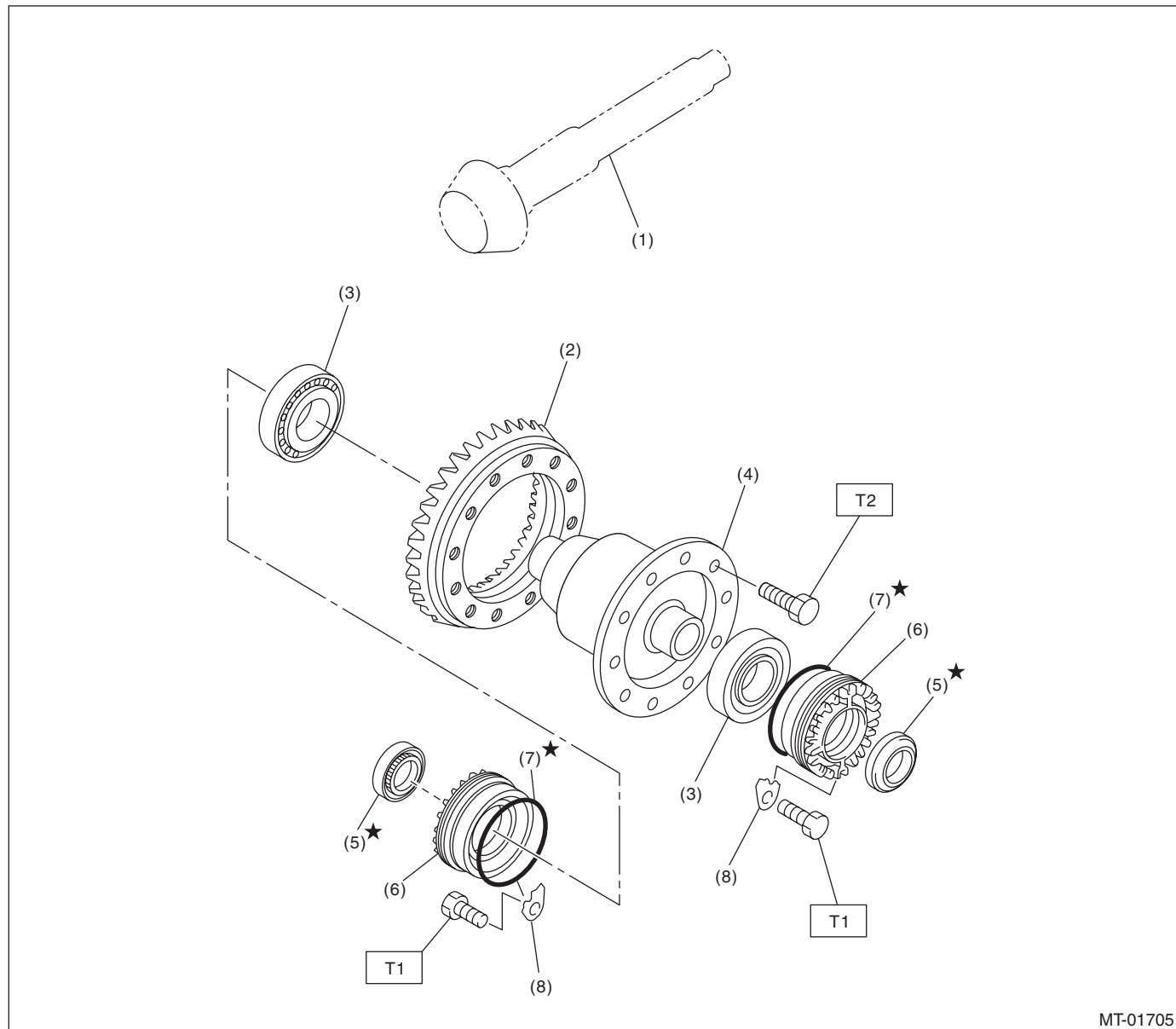
|                                 |                                 |                                  |
|---------------------------------|---------------------------------|----------------------------------|
| (1) Reverse idler gear shaft    | (10) Reverse inner baulk ring   | (19) Snap ring                   |
| (2) Gasket                      | (11) Reverse idler gear bushing | (20) Counter high and low washer |
| (3) Knock pin                   | (12) Needle bearing             | (21) Washer                      |
| (4) Straight pin                | (13) Shifting insert            | (22) Snap ring                   |
| (5) Counter high and low washer | (14) Reverse coupling sleeve    | (23) Reverse idler holder        |
| (6) Reverse idler gear No. 2    | (15) Reverse idler gear         |                                  |
| (7) Needle bearing              | (16) Spring                     |                                  |
| (8) Reverse outer baulk ring    | (17) Reverse idler sub gear     |                                  |
| (9) Reverse synchro cone        | (18) Friction plate             |                                  |

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

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## MANUAL TRANSMISSION AND DIFFERENTIAL

### 10.FRONT DIFFERENTIAL ASSY



MT-01705

|                          |                                |
|--------------------------|--------------------------------|
| (1) Drive pinion shaft   | (5) Oil seal                   |
| (2) Hypoid driven gear   | (6) Differential side retainer |
| (3) Taper roller bearing | (7) O-ring                     |
| (4) Differential ASSY    | (8) Retainer lock plate        |

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

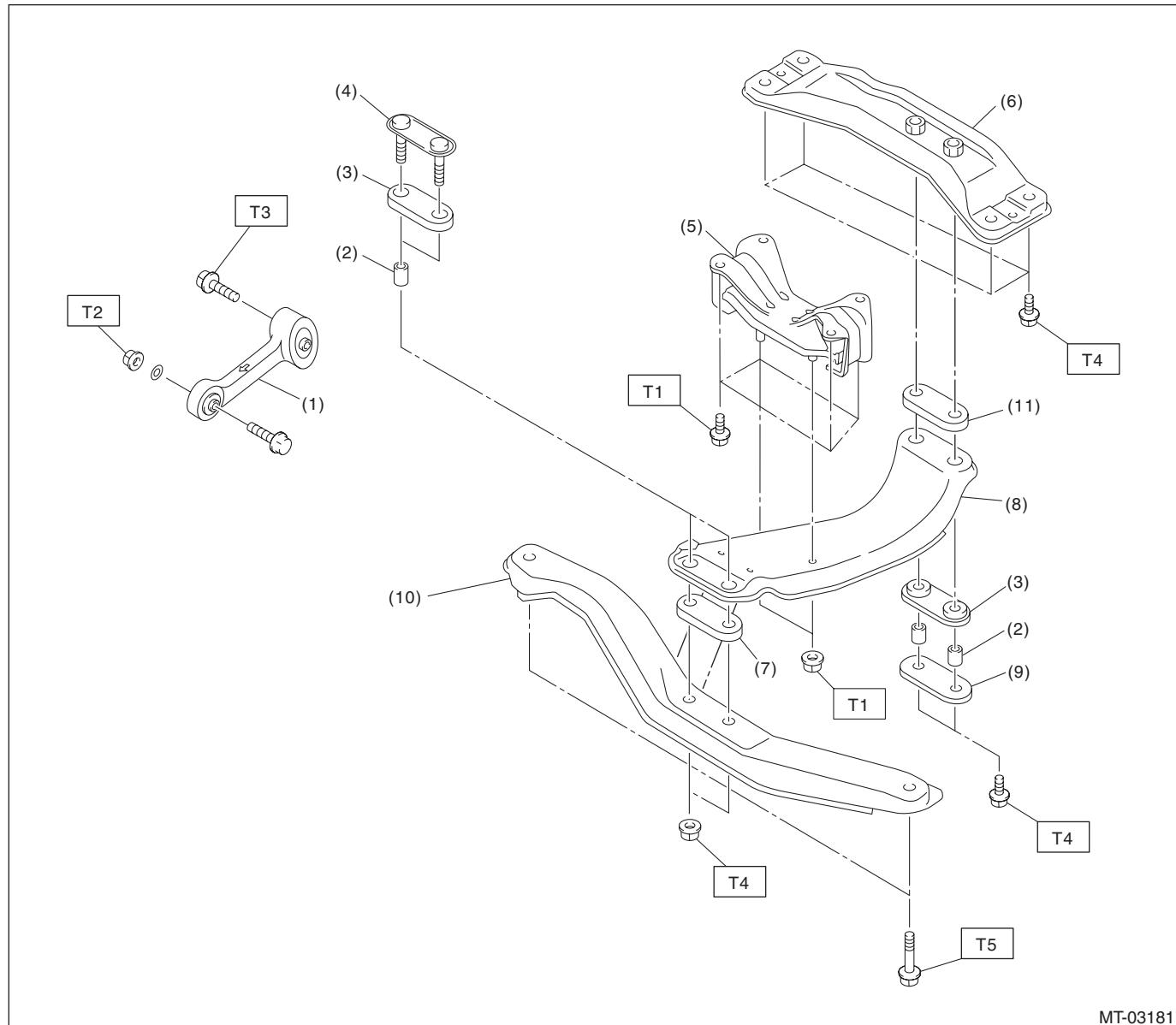
***T1: 25 (2.5, 18.4)***

***T2: 69 (7.0, 50.9)***

# General Description

## MANUAL TRANSMISSION AND DIFFERENTIAL

### 11. TRANSMISSION MOUNTING



MT-03181

|                                 |                          |
|---------------------------------|--------------------------|
| (1) Pitching stopper            | (7) Upper cushion rubber |
| (2) Spacer                      | (8) Center crossmember   |
| (3) Lower cushion rubber        | (9) Rear plate           |
| (4) Front plate                 | (10) Front crossmember   |
| (5) Transmission cushion rubber | (11) Rear cushion rubber |
| (6) Rear crossmember            |                          |

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

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

**T2: 50 (5.1, 36.9)**

**T3: 58 (5.9, 42.8)**

**T4: 70 (7.1, 51.6)**

**T5: 140 (14.3, 103.3)**

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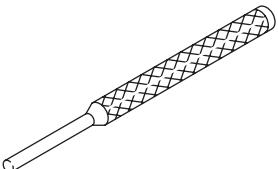
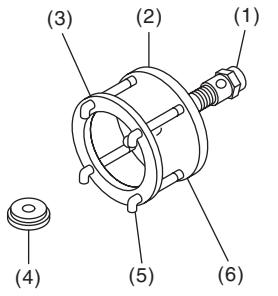
## MANUAL TRANSMISSION AND DIFFERENTIAL

### C: CAUTION

- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust and dirt.
- 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, disassemble by using a plastic hammer. Do not pry apart with screwdrivers or other tools.
- Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.
- Use SUBARU genuine transmission gear oil, grease or equivalent. Do not mix transmission gear oil, grease etc. of different grades or 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 transmission gear oil onto sliding or revolving surfaces before installation.
- Always replace deformed or damaged snap rings.
- Before installing O-rings or oil seals, apply sufficient amount of transmission gear oil 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 materials such as wood blocks, aluminum plates, or waste cloth between the part and the vise.
- Avoid damaging the mating surface of the case.
- Before applying liquid gasket, completely remove and clean the old liquid gasket.
- Be careful of handling the oil seal, O-ring and gasket. If the contact surface of them is damaged, oil leakage may occur.
- When pressing-in the oil seal, make sure that the oil seal lip portion and outer surface are not damaged or tilted.
- When replacing the taper roller bearing, replace the outer race and inner race as a set.
- When replacing the hypoid gear, replace the ring gear and pinion gear as a set.
- Replace the bolts if the seating surface or the thread surface is excessively rusted.

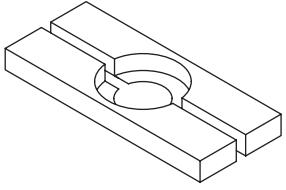
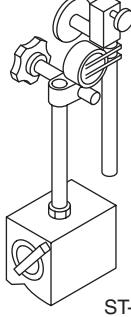
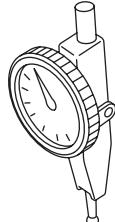
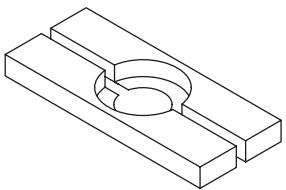
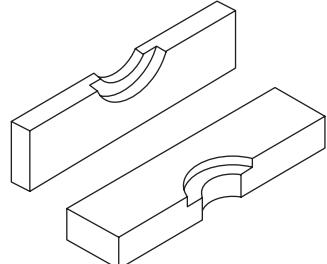
### D: PREPARATION TOOL

#### 1. SPECIAL TOOL

| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION | REMARKS   |
|---|-------------|-------------|---|
|  | 398791700   | REMOVER     | Used for removing and installing the straight pin (6 mm).   |
|  | 399527700   | PULLER SET  | Used for removing and installing the roller bearing (differential).<br>(1) BOLT (899521412)<br>(2) PULLER (399527702)<br>(3) HOLDER (399527703)<br>(4) ADAPTER (398497701)<br>(5) BOLT (899520107)<br>(6) NUT (021008000) |

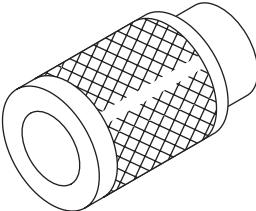
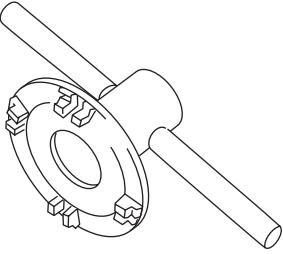
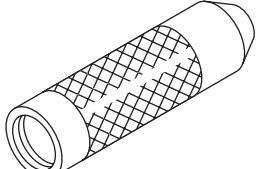
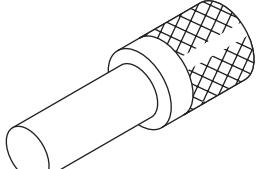
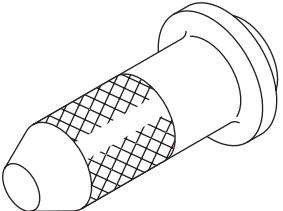
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| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION | REMARKS   |
|---|-------------|-------------|---|
| <br>ST-498515700   | 498515700   | REMOVER     | Used for removing the roller bearing of the transfer driven gear.   |
| <br>ST-498247001   | 498247001   | MAGNET BASE | <ul style="list-style-type: none"> <li>Used for measuring the backlash between hypoid gears.</li> <li>Used with DIAL GAUGE (498247100).</li> </ul>  |
| <br>ST-498247100  | 498247100   | DIAL GAUGE  | <ul style="list-style-type: none"> <li>Used for measuring the backlash between hypoid gears.</li> <li>Used with MAGNET BASE (498247001).</li> </ul> |
| <br>ST-498077000 | 498077000   | REMOVER     | Used for removing the differential taper roller bearing.  |
| <br>ST-899858600 | 899858600   | REMOVER     | Used for removing the roller bearing.   |

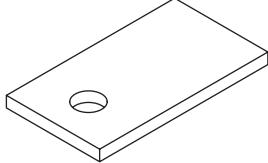
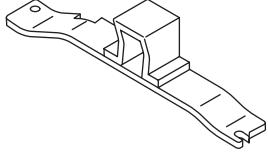
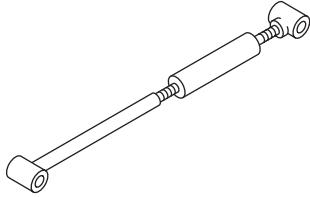
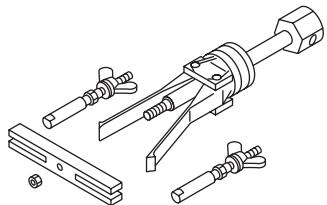
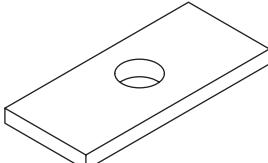
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| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION           | REMARKS  |
|---|-------------|-----------------------|--|
| <br>ST-499757002   | 499757002   | INSTALLER             | Used for installing the bearing cone of transfer driven gear (transmission case side).   |
| <br>ST18630AA010   | 18630AA010  | WRENCH COMPL RETAINER | <ul style="list-style-type: none"> <li>Used for removing and installing the differential side retainer RH.</li> <li>WRENCH ASSY (499787000) can also be used.</li> </ul> |
| <br>ST-499877000  | 499877000   | RACE 4-5 INSTALLER    | Used for disassembling the driven shaft and transfer driven gear.  |
| <br>ST-899864100 | 899864100   | REMOVER               | Used for removing the transmission main shaft and drive pinion parts.  |
| <br>ST-498057300 | 498057300   | INSTALLER             | Used for installing the extension oil seal.  |

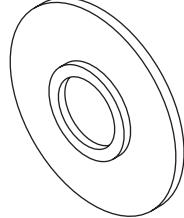
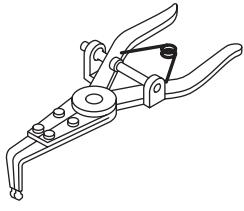
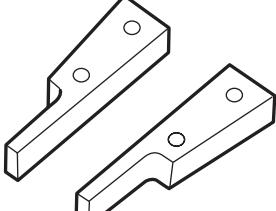
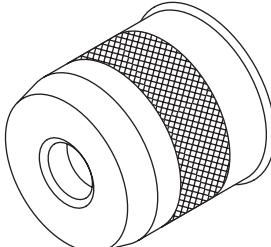
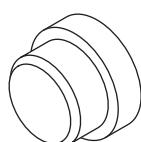
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| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION            | REMARKS   |
|---|-------------|------------------------|---|
| <br>ST-498255400   | 498255400   | PLATE                  | Used for measuring backlash.  |
| <br>ST41099AA011   | 41099AA011  | ENGINE SUPPORT BRACKET | <ul style="list-style-type: none"> <li>Used for supporting engine.</li> <li>ENGINE SUPPORT BRACKET (41099AA010) can also be used.</li> </ul>  |
| <br>ST41099AA020  | 41099AA020  | ENGINE SUPPORT         | Used for supporting engine.   |
| <br>ST-398527700 | 398527700   | PULLER ASSY            | <ul style="list-style-type: none"> <li>Used for removing the extension case oil seal.</li> <li>Used for removing the front differential side bearing outer race. (Used together with 18760AA000 (CLAW).)</li> </ul> |
| <br>ST-398643600 | 398643600   | GAUGE                  | Used for adjusting total end play, extension end play and drive pinion shim.  |

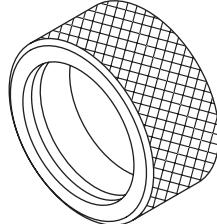
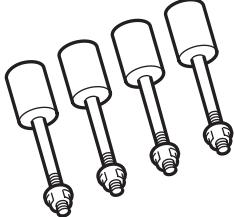
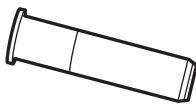
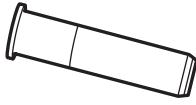
## General Description

### MANUAL TRANSMISSION AND DIFFERENTIAL

| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION | REMARKS  |
|---|-------------|-------------|--|
|    | 398177700   | INSTALLER   | <ul style="list-style-type: none"> <li>Used for assembling the main shaft.</li> <li>Used for installing the roller bearing of transfer driven gear (extension case side).</li> </ul> |
|    | 399893600   | PLIER       | <ul style="list-style-type: none"> <li>Used for removing and installing the neutral set spring.</li> <li>Used together with CLAW (18756AA000).</li> </ul>                            |
|   | 18756AA000  | CLAW        | <ul style="list-style-type: none"> <li>Used for removing and installing the neutral set spring.</li> <li>Used together with PLIER (399893600).</li> </ul>                            |
|  | 499247400   | INSTALLER   | Used for installing the ball bearing of the transfer drive gear.   |
|  | 398497701   | SEAT        | <ul style="list-style-type: none"> <li>Used for installing the ball bearing of the transfer drive gear.</li> <li>Used for installing the front differential side bearing.</li> </ul> |

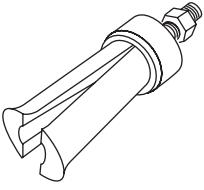
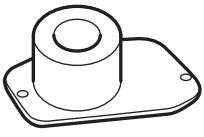
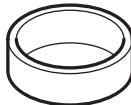
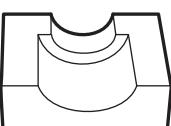
## General Description

### MANUAL TRANSMISSION AND DIFFERENTIAL

| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION    | REMARKS  |
|---|-------------|----------------|--|
| <br>ST-398437700   | 398437700   | INSTALLER      | Used for installing the front differential side bearing.   |
| <br>ST18632AA000   | 18632AA000  | STAND ASSY     | Used for disassembling and assembling the transmission.  |
| <br>ST18671AA000 | 18671AA000  | OIL SEAL GUIDE | <ul style="list-style-type: none"> <li>Used for installing the reverse check shaft oil seal.</li> <li>Used for installing the shifter arm oil seal.</li> <li>Used together with INSTALLER (18657AA010).</li> </ul> |
| <br>ST18657AA010 | 18657AA010  | INSTALLER      | <ul style="list-style-type: none"> <li>Used for installing the reverse check shaft oil seal.</li> <li>Used together with OIL SEAL GUIDE (18671AA000).</li> </ul>   |
| <br>ST18657AA000 | 18657AA000  | INSTALLER      | <ul style="list-style-type: none"> <li>Used for installing the shifter arm oil seal.</li> <li>Used together with OIL SEAL GUIDE (18671AA000).</li> </ul>   |

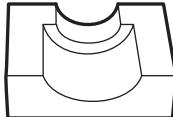
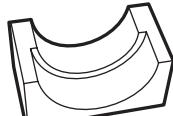
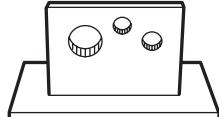
## General Description

### MANUAL TRANSMISSION AND DIFFERENTIAL

| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION | REMARKS  |
|---|-------------|-------------|--|
|    | 18758AA000  | PULLER      | Used for removing the transfer driven gear rear bearing outer race.  |
|    | 18831AA000  | GAUGE       | Used for selecting the transfer driven gear bearing adjusting washer.  |
|  | 18631AA000  | HANDLE      | Used for measuring the front differential backlash.  |
|  | 18754AA000  | REMOVER     | Used to remove parts of the driven gear.   |
|  | 18665AA000  | HOLDER      | <ul style="list-style-type: none"> <li>• Used for removing and installing the main shaft lock nut.</li> <li>• Used together with BASE (18664AA000).</li> </ul> |

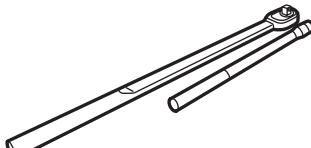
## General Description

### MANUAL TRANSMISSION AND DIFFERENTIAL

| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION | REMARKS   |
|---|-------------|-------------|---|
| <br>ST18666AA000   | 18666AA000  | HOLDER      | <ul style="list-style-type: none"> <li>Used for removing and installing the driven shaft lock nut.</li> <li>Used together with BASE (18664AA000).</li> </ul>  |
| <br>ST18667AA000   | 18667AA000  | HOLDER      | <ul style="list-style-type: none"> <li>Used for removing and installing the drive pinion shaft lock nut.</li> <li>Used together with BASE (18664AA000).</li> </ul>  |
| <br>ST18664AA000 | 18664AA000  | BASE        | <ul style="list-style-type: none"> <li>Used for removing and installing the main shaft lock nut.</li> <li>Used for removing and installing the drive pinion shaft lock nut.</li> <li>Used for removing and installing the driven shaft lock nut.</li> </ul> |
| <br>ST18722AA010 | 18722AA010  | REMOVER     | Used for disassembling the main shaft.  |
| <br>ST18651AA000 | 18651AA000  | INSTALLER   | Used for assembling the main shaft.   |

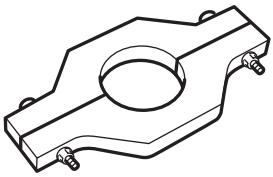
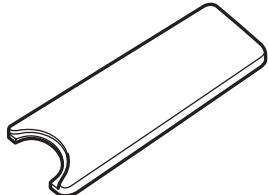
## General Description

### MANUAL TRANSMISSION AND DIFFERENTIAL

| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION    | REMARKS  |
|---|-------------|----------------|--|
|    | 18852AA000  | TORQUE WRENCH  | <ul style="list-style-type: none"> <li>Used to tighten the main shaft lock nut.</li> <li>Used to tighten the drive pinion shaft lock nut.</li> <li>Used to tighten the driven shaft lock nut.</li> </ul> |
|    | 18668AA000  | PUNCH          | Used to crimp the main shaft lock nut.   |
|   | 18669AA000  | PUNCH          | Used to crimp the driven shaft lock nut.   |
|  | 18670AA000  | PUNCH          | Used to crimp the drive pinion shaft lock nut.   |
|  | 18620AA000  | ADAPTER WRENCH | Used for removing and installing the driven gear shaft lock nut.   |

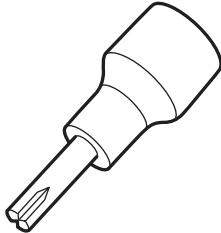
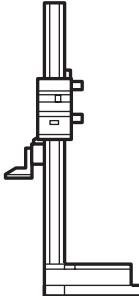
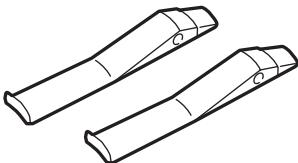
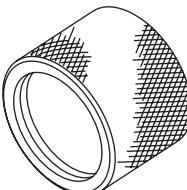
## General Description

### MANUAL TRANSMISSION AND DIFFERENTIAL

| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION    | REMARKS   |
|---|-------------|----------------|---|
|    | 18621AA000  | ADAPTER WRENCH | Used for removing and installing the drive pinion shaft lock nut.   |
|    | 18723AA000  | REMOVER        | Used for disassembling the driven shaft.                            |
|  | 18630AA000  | WRENCH ASSY    | Used for removing and installing the differential side retainer LH. |
|  | 18672AA000  | GUIDE CLIP     | Used for installing the reverse idler snap ring.                    |
|  | 18720AA000  | REMOVER        | Used for disassembling the main shaft.                              |

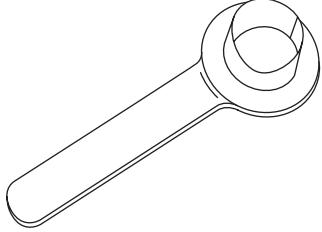
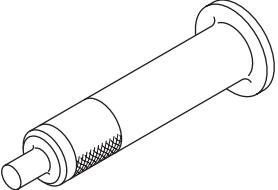
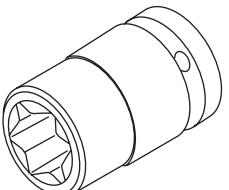
## General Description

### MANUAL TRANSMISSION AND DIFFERENTIAL

| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION                          | REMARKS  |
|---|-------------|--------------------------------------|--|
| <br>ST18654AA000   | 18654AA000  | INSTALLER                            | Used for assembling the driven shaft.  |
| <br>ST18663AA000   | 18663AA000  | SOCKET                               | Used for removing and installing the transfer bearing holder.  |
| <br>ST18853AA000  | 18853AA000  | HEIGHT GAUGE                         | <ul style="list-style-type: none"> <li>Used for selecting the shift rod.</li> <li>Used for selecting the snap ring and washer of the main shaft.</li> </ul>              |
| <br>ST18760AA000 | 18760AA000  | CLAW                                 | <ul style="list-style-type: none"> <li>Used for removing the front differential side bearing outer race.</li> <li>Used together with PULLER ASSY (398527700).</li> </ul> |
| <br>ST18675AA000 | 18675AA000  | DIFFERENTIAL SIDE OIL SEAL INSTALLER | Used for installing the differential side retainer oil seal.   |

## General Description

### MANUAL TRANSMISSION AND DIFFERENTIAL

| ILLUSTRATION   | TOOL NUMBER | DESCRIPTION        | REMARKS   |
|--|-------------|--------------------|---|
| <br>ST28399SA010  | 28399SA010  | OIL SEAL PROTECTOR | Used for protecting oil seal when installing front drive shaft. |
| <br>ST18657AA020  | 18657AA020  | OIL SEAL INSTALLER | Used for installing the oil seal.                               |
| <br>ST18270KA020 | 18270KA020  | SOCKET (E20)       | Used for removing and installing the hypoid driven gear.        |

## 2. GENERAL TOOL

| TOOL NAME      | REMARKS  |
|----------------|--|
| Circuit tester | Used for measuring resistance, voltage and current.                |
| TORX® bit T70  | Used for removing and installing transmission gear oil drain plug. |
| Depth gauge    | Used for measuring the transmission end play.                      |