1. General Description

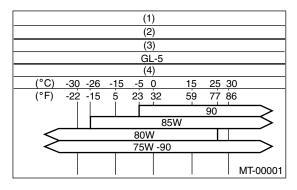
A: SPECIFICATION

1. MANUAL TRANSMISSION AND FRONT DIFFERENTIAL

Туре			6-forward speeds and 1-reverse		
		1st	3.636		
		2nd	2.375		
		3rd	1.761		
Transmission	gear ratio	4th	1.346		
		5th	0.971		
		6th	0.756		
		Reverse	3.545		
Front reduc-	Final	Type of gear	Hypoid		
tion gear	Filiai	Gear ratio	3.900		
	Transfer	Type of gear	Helical		
Rear reduc-	Hansiei	Gear ratio	1.000		
tion gear	Final	Type of gear	Hypoid		
	ГПа	Gear ratio	3.900		
Front differ- ential	Type and number of gear		AP TRAC		
Center differ-			Planetary gear		
ential	Type and	number of gear	(Internal gear: 1, Pinion gear: 6, Sun gear: 1 and Electromagnetic floating variable control multiple clutch)		
Transmission	gear oil		GL-5		
Transmission	gear oil ca	pacity	4.1 @ (4.3 US qt, 3.6 Imp qt)		

2. TRANSMISSION GEAR OIL

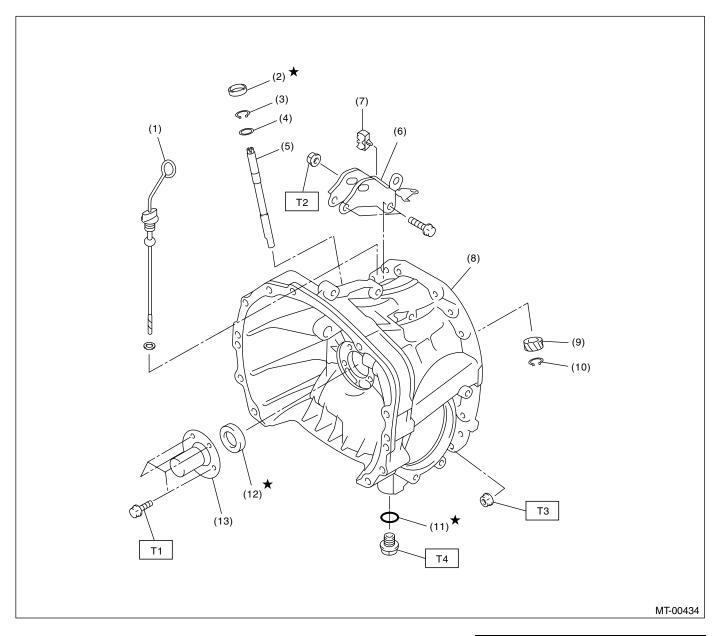
Recommended oil



- (1) Item
- (2) Transmission gear oil
- (3) API classification
- (4) SAE viscosity No. and applicable temperature

B: COMPONENT

1. CLUTCH HOUSING



- (1) Oil level gauge
- (2) Oil seal
- (3) Snap ring
- (4) Washer
- (5) Speedometer gear shaft
- (6) Pitching stopper bracket
- (7) Clip

- (8) Clutch housing
- (9) Speedometer driven gear
- (10) Snap ring
- (11) Gasket
- (12) Oil seal
- (13) Clutch release bearing guide

Tightening torque: N⋅m (kgf-m, ft-lb)

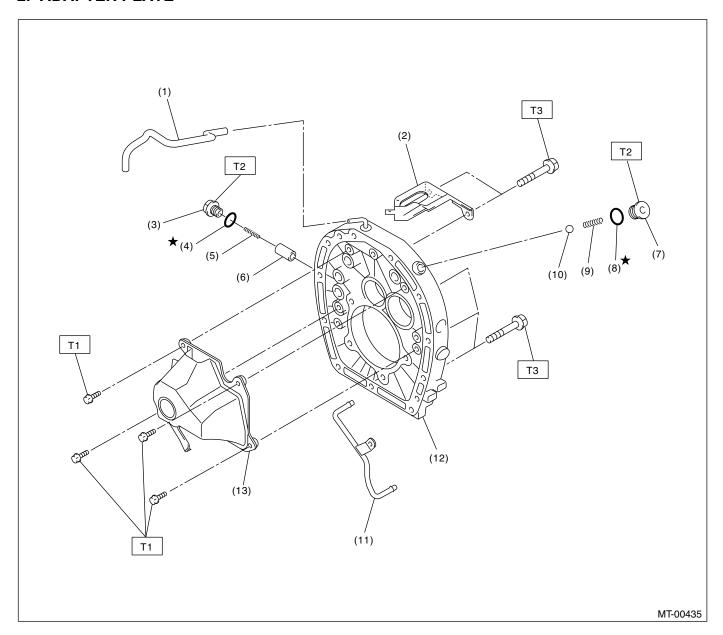
T1: 6.4 (0.65, 4.7)

T2: 41 (4.2, 30.2)

T3: 50 (5.1, 36.9)

T4: 70 (7.1, 51.6)

2. ADAPTER PLATE



- (1) Breather hose
- (2) Transmission harness stay
- (3) Plug
- (4) Gasket
- (5) Spring
- (6) Plunger

- (7) Plug
- (8) Gasket
- (9) Spring
- (10) Ball
- (11) Lubrication pipe
- (12) Adapter plate

(13) Oil chamber

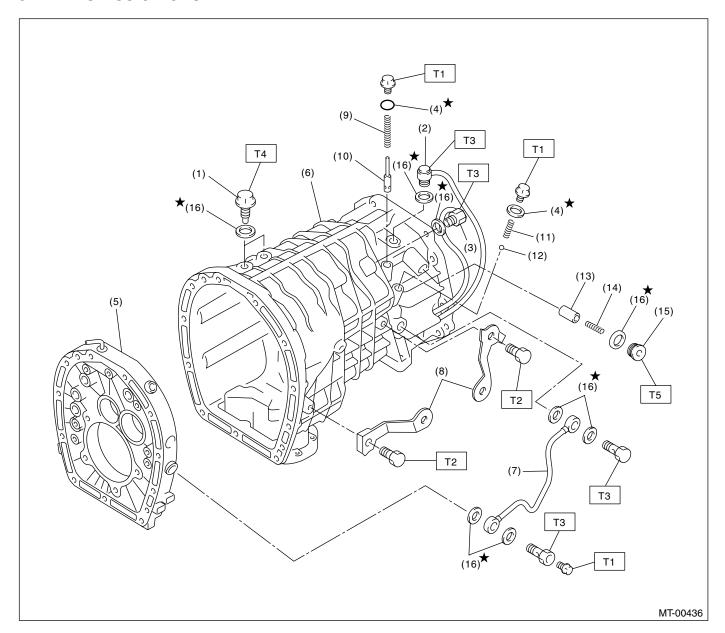
Tightening torque: N⋅m (kgf-m, ft-lb)

T1: 6.4 (0.65, 4.7)

T2: 37 (3.8, 27.3)

T3: 50 (5.1, 36.9)

3. TRANSMISSION CASE



- (1) Pilot bolt
- (2) Neutral switch
- (3) Back-up light switch
- (4) O-ring
- (5) Adapter plate
- (6) Transmission case
- (7) Oil pipe
- (8) Harness bracket

- (9) Return spring
- (10) Pressure relief valve
- (11) Return spring
- (12) Ball
- (13) Plunger
- (14) Spring
- (15) Plug
- (16) Gasket

Tightening torque: N⋅m (kgf-m, ft-lb)

T1: 13 (1.3, 9.6)

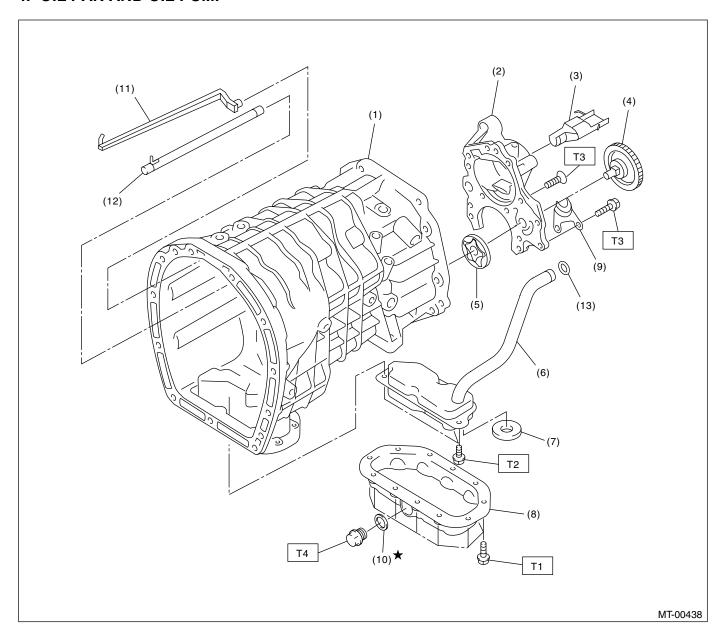
T2: 16 (1.6, 11.8)

T3: 32 (3.3, 23.6)

T4: 34 (3.5, 25.1)

T5: 41 (4.2, 30.2)

4. OIL PAN AND OIL PUMP



- (1) Main case
- (2) Oil pump cover
- (3) Oil guide
- (4) Oil pump driven gear ASSY
- (5) Oil pump rotor ASSY
- (6) Strainer ASSY
- (7) Magnet

- (8) Oil pan
- (9) Plate
- (10) Gasket
- (11) Oil guide
- (12) Oil pipe
- (13) O-ring

Tightening torque: N⋅m (kgf-m, ft-lb)

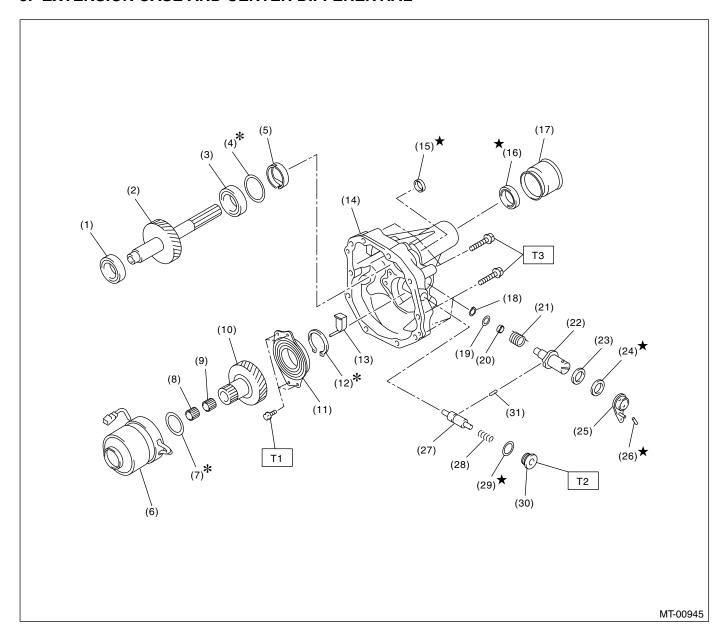
T1: 6.4 (0.65, 4.7)

T2: 10 (1.0, 7.4)

T3: 25 (2.5, 18.1)

T4: 44 (4.5, 32.5)

5. EXTENSION CASE AND CENTER DIFFERENTIAL



- (1) Taper roller bearing
- (2) Transfer driven gear
- (3) Taper roller bearing
- (4) Shim
- (5) Oil plate
- (6) Center differential
- (7) Shim
- (8) Needle bearing
- (9) Needle bearing
- (10) Transfer drive gear
- (11) Ball bearing (with flange)
- (12) Snap ring

- (13) Extension guide
- (14) Extension case
- (15) Oil seal
- (16) Oil seal
- (10) On scar
- (17) Dust cover
- (18) Snap ring
- (19) Washer
- (20) Bush
- (21) Spring
- (22) Reverse check shaft
- (23) Ball bearing
- (24) Oil seal

- (25) Reverse check lever COMPL
- (26) Straight pin
- (27) Reverse check plug
- (28) Spring
- (29) Gasket
- (30) Plug
- (31) Plunger

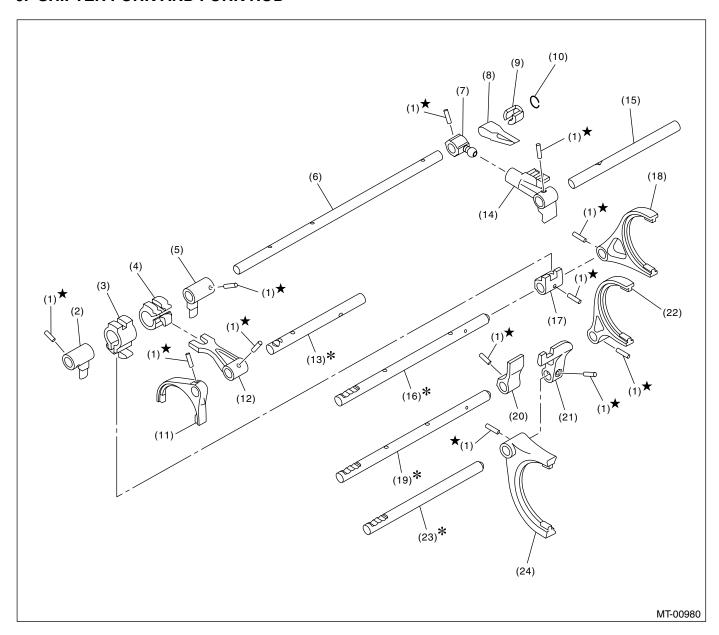
Tightening torque: N⋅m (kgf-m, ft-lb)

T1: 25 (2.5, 18.1)

T2: 41 (4.2, 30.2)

T3: 48 (4.9, 35.4)

6. SHIFTER FORK AND FORK ROD

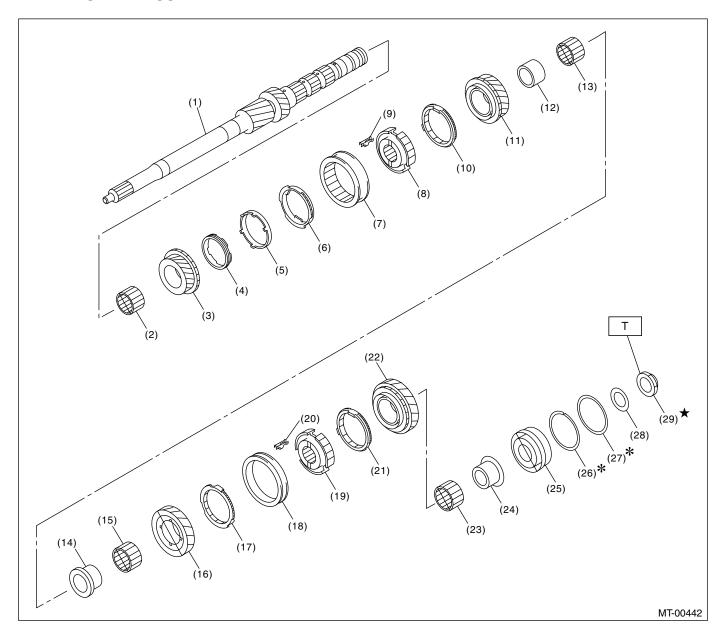


- (1) Spring pin
- (2) Interlock arm
- (3) Interlock block
- (4) Reverse interlock block
- (5) Interlock arm
- (6) Striking rod
- (7) Selector arm No. 2
- (8) Neutral set spring

- (9) Support
- (10) Snap ring
- (11) Reverse fork COMPL
- (12) Reverse shifter arm
- (13) Reverse fork rod
- (14) Selector arm COMPL
- (15) Shifter arm shaft
- (16) 5th-6th fork rod

- (17) 5th-6th shifter arm
- (18) 5th-6th fork COMPL
- (19) 3rd-4th fork rod
- (20) 3rd-4th shifter arm
- (21) 1st-2nd shifter arm
- (22) 3rd-4th fork COMPL
- (23) 1st-2nd fork rod
- (24) 1st-2nd fork COMPL

7. MAIN SHAFT ASSY



- (1) Main shaft
- (2) Needle bearing
- (3) 3rd drive gear
- (4) Inner baulk ring
- (5) Synchro cone
- (6) Outer baulk ring
- (7) 3rd-4th sleeve
- (8) 3rd-4th hub
- (9) Shifting insert
- (10) 4th baulk ring
- (11) 4th gear

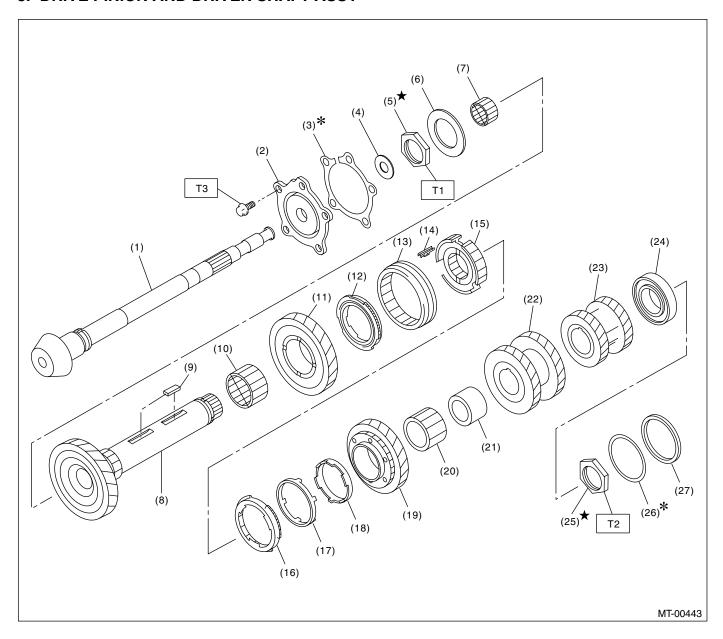
- (12) 4th bush
- (13) Needle bearing
- (14) 5th bush
- (15) Needle bearing
- (16) 5th drive gear
- (17) 5th baulk ring
- (18) 5th-6th sleeve
- (19) 5th-6th hub
- (20) Shifting sleeve
- (21) 6th baulk ring
- (22) 6th drive gear

- (23) Needle bearing
- (24) 6th bush
- (25) Taper roller bearing
- (26) Snap ring
- (27) Washer
- (28) Washer
- (29) Lock nut

Tightening torque: N·m (kgf-m, ft-lb)

T: 392 (40.0, 289)

8. DRIVE PINION AND DRIVEN SHAFT ASSY



- (1) Drive pinion shaft
- (2) Taper roller bearing
- (3) Shim
- (4) Washer
- (5) Lock nut
- (6) Thrust bearing
- (7) Needle bearing
- (8) Driven shaft
- (9) Key
- (10) Needle bearing
- (11) 1st driven gear
- (12) 1st synchro ring ASSY

- (13) 1st-2nd sleeve
- (14) Shifting insert
- (15) 1st-2nd hub
- (16) Outer baulk ring
- (17) Synchro cone
- (18) Inner baulk ring
- (19) 2nd driven gear
- (20) Needle bearing
- (21) 2nd bush
- (22) 3rd-4th driven gear
- (23) 5th-6th driven gear
- (24) Ball bearing

- (25) Lock nut
- (26) Shim
- (27) Collar

Tightening torque: N⋅m (kgf-m, ft-lb)

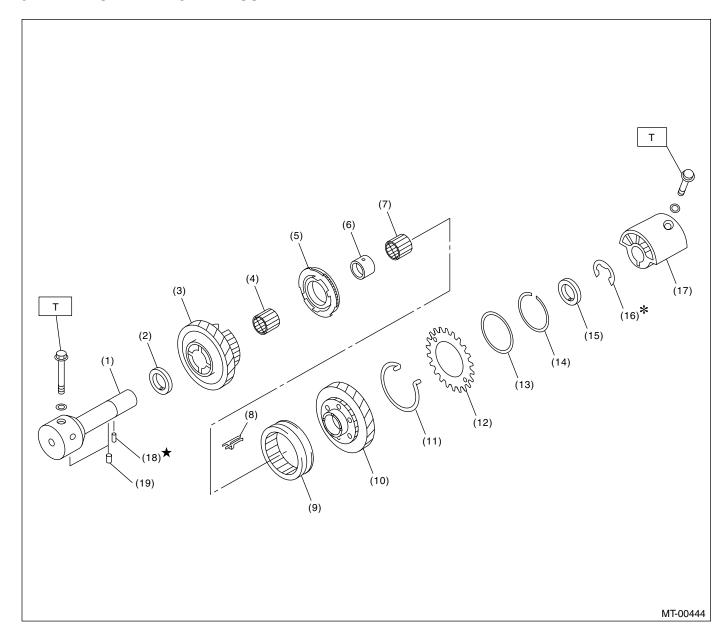
T1: 285 (29.1, 210) * 265 (27.0, 195)

T2: 570 (58.1, 420) * 530 (54.0, 391)

T3: 54 (5.5, 39.8)

^{*} Tightening torque when using ST.

9. REVERSE IDLER GEAR ASSY



- (1) Base
- (2) Washer
- (3) Reverse idler gear No. 2
- (4) Needle bearing
- (5) Reverse idler synchro set
- (6) Reverse idler gear bush
- (7) Needle bearing
- (8) Shifting insert

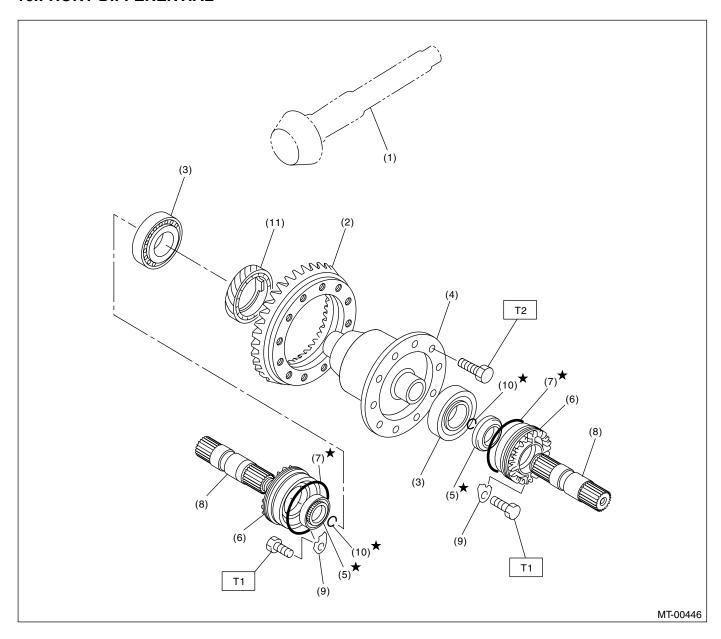
- (9) Reverse coupling sleeve
- (10) Reverse idler gear
- (11) Spring
- (12) Sub gear
- (13) Friction plate
- (14) Snap ring
- (15) Washer
- (16) Snap ring

- (17) Reverse idler holder
- (18) Spring pin
- (19) Knock pin

Tightening torque: N⋅m (kgf-m, ft-lb)

T: 25 (2.5, 18.1)

10.FRONT DIFFERENTIAL



- (1) Drive pinion shaft
- (2) Hypoid driven gear
- (3) Roller bearing
- (4) Differential ASSY
- (5) Oil seal

- (6) Differential side retainer
- (7) O-ring
- (8) Axle drive shaft
- (9) Retainer lock plate
- (10) Circlip

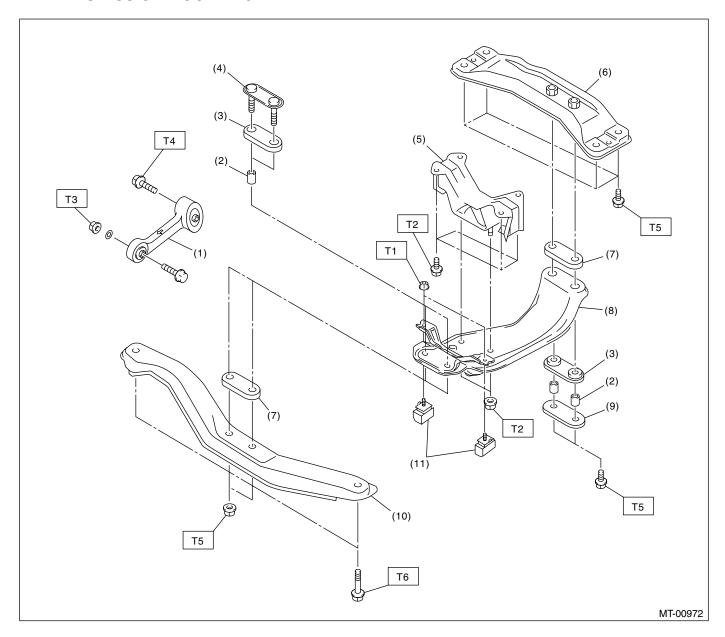
(11) Speedometer drive gear

Tightening torque: N⋅m (kgf-m, ft-lb)

T1: 25 (2.5, 18.1)

T2: 69 (7.0, 50.9)

11.TRANSMISSION MOUNTING



- (1) Pitching stopper
- (2) Spacer
- (3) Cushion C
- (4) Front plate
- (5) Rear cushion rubber
- (6) Rear crossmember

- (7) Cushion D
- (8) Center crossmember
- (9) Rear plate
- (10) Front crossmember
- (11) Dynamic dumper

Tightening torque: N⋅m (kgf-m, ft-lb)

T1: 7.5 (0.76, 5.5)

T2: 35 (3.6, 25.8)

T3: 50 (5.1, 36.9)

T4: 58 (5.9, 42.8)

T5: 70 (7.1, 51.6)

T6: 140 (14.3, 103)

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.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.
- When disassembling the case and other light alloy parts, use a plastic hammer to force it apart. Do not pry it apart with a screwdriver or other tool.
- Be careful not to burn your hands, because each part on the vehicle is hot after running.
- Use SUBARU genuine gear oil, grease etc. or the equivalent. Do not mix gear oil, grease etc. with that of another grade or from other manufacturers.

- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Apply gear oil onto sliding or revolution surfaces before installation.
- Replace deformed or otherwise damaged snap rings with new ones.
- Before installing O-rings or oil seals, apply sufficient amount of 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 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.

D: PREPARATION TOOL

1. SPECIAL TOOLS

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	398791700	REMOVER	Used for removing and installing spring pin (6 mm).
ST-398791700 (3) (2) (1) (4) (5) (6) ST-399527700	399527700	PULLER SET	Used for removing and installing roller bearing (Differential). (1) BOLT (2) PULLER (3) HOLDER (4) ADAPTER (5) BOLT (6) NUT

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	498515700	REMOVER	Used for removing roller bearing of drive pinion shaft.
ST-498515700			
	498147000	DEPTH GAUGE	Used for adjusting main shaft axial end play.
ST-49814700			
	498247001	MAGNET BASE	 Used for measuring backlash between side gear and pinion, and hypoid gear. Used with DIAL GAUGE (498247100).
ST-498247001			
	498247100	DIAL GAUGE	 Used for measuring backlash between side gear and pinion, and hypoid gear. Used with MAGNET BASE (498247001).
ST-498247100			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	498077000	REMOVER	Used for removing differential taper roller bear-
			ing.
ST-498077000	000050000	DEMOVED	Llood for your oring wellow be a vine
	899858600	REMOVER	Used for removing roller bearing.
ST-899858600			
	399513600	INSTALLER	Used for installing oil seal.
ST-399513600	100	INIOTAL: ==	
	499757002	INSTALLER	Used for installing bearing cone of transfer driven gear (extension core side).
ST-499757002			
31 100707002]	

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	499787000	WRENCH ASSY	Used for removing and installing differential side retainer.
			retainer.
ST-499787000			
	499827000	PRESS	Used for installing speedometer oil seal when installing speedometer cable to transmission.
ST-499827000	499877000	RACE 4-5	Used for disassembling driven shaft and transfer
	100077000	INSTALLER	driven gear.
ST-499877000			
355577660	899864100	REMOVER	Used for removing parts on transmission main
			shaft and drive pinion.
ST-899864100			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	899904100	REMOVER	Used for removing and installing straight pin.
ST-899904100			
	899824100	PRESS	Used for installing speedometer shaft oil seal.
ST-899824100	400057000	INICTALLED	Ligad for installing systemsiss oil and
	498057300	INSTALLER	Used for installing extension oil seal.
ST-498057300			
51-49005/300	498255400	PLATE	Used for measuring backlash.
ST-498255400			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
(1) (2) ST41099AA000	41099AA000	ENGINE SUPPORT BRACKET	Used for supporting engine. (1) ENGINE SUPPORT BRACKET (41099AA010) (2) ENGINE SUPPORT (41099AA020)
	398527700	PULLER ASSY	Used for removing extension case oil seal and
ST-398527700			clutch housing oil seal.
	499575500	GAUGE	Used for measuring total end play, extension end play and drive pinion height.
			one play and drive pinion neight.
ST-499575500	398177700	INSTALLER	Used for assembling main shaft.
ST-398177700	555177700		Sood for accombing main chart.

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	399893600	PLIERS	Used for removing and installing neutral set spring.
			Used with CLAW (18756AA000).
ST-399893600	499247300	INSTALLER	Used for removing axle shaft.
	499247300	INSTALLER	Used with REMOVER ASSY (499095500).
ST-499247300			
	499095500	REMOVER ASSY	Used for removing axle shaft.Used with INSTALLER (499247300).
			GSGG WITH INCTALLETT (455247666).
05			
ST-499095500			
	499247400	INSTALLER	Used for installing transfer drive gear ball bear-
			ing.
ST-499247400			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	499797000	OIL SEAL INSTALLER	Used for installing differential side retainer oil seal.
		INOTALLIT	Seal.
ST-499797000			
	398497701	SEAT	Used for installing transfer drive gear ball bearing.
			ing.
ST-398497701			
	398437700	INSTALLER	Used for installing front differential side bearing.
ST-398437700	18632AA000	STAND ASSY	Used for disassembling and assembling trans-
	(Newly adopted tool)	STAIND AGGT	mission.
ST18632AA000			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	18671AA000	OIL SEAL GUIDE	Used for installing oil seal to reverse check.
	(Newly adopted tool)		Used with INSTALLER (18657AA010).
ST18671AA000	1005511010	NIOTAL LED	
	18657AA010 (Newly adopted tool)	INSTALLER	 Used for installing oil seal to reverse check. Used with OIL SEAL GUIDE (18671AA000).
			·
ST18657AA010			
3110037AA010	18657AA000	INSTALLER	Used for installing oil seal to shift rod.
	(Newly adopted tool)		
_			
ST18657AA000			
	18758AA000 (Newly adopted tool)	PULLER	Used for removing extension taper roller bearing outer race.
	(.1511) adopted (501)		33.5300.
_ ~			
ST18758AA000			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	18831AA000 (Newly adopted tool)	GAUGE	Used for measuring extension taper roller bearing.
ST18831AA000			
	18631AA000 (Newly adopted tool)	HANDLE	Used for measuring front differential backlash.
	(comy adopted tool)		
ST18631AA000			
	18756AA000 (Newly adopted tool)	CLAW	 Used for installing and removing neutral set spring. Used with PLIERS (399893600).
Ŭ .			
ST18756AA000			
	18754AA000 (Newly adopted tool)	REMOVER	Used for removing each parts of driven gear.
-			
ST18754AA000			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	18757AA000	STRAIGHT PIN	Used for installing reverse idler gear.
	(Newly adopted tool)	REMOVER	
ST18757AA000			
	18665AA000	HOLDER	Used for installing and removing main shaft
	(Newly adopted tool)		lock nut. • Used with BASE (18664AA000).
			0364 With Bride (166047 (1660)).
ST18665AA000			
	18666AA000 (Newly adopted tool)	HOLDER	Used for installing and removing driven shaft lock nut.
	(Newly adopted tool)		Used with BASE (18664AA000).
ST18666AA000			
	18667AA000 (Newly adopted tool)	HOLDER	Used for installing and removing drive pinion shaft lock nut.
	(1211) adopted (301)		Used with BASE (18664AA000).
ST18667AA000			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	18664AA000	BASE	Used for installing and removing main shaft
	(Newly adopted tool)		lock nut. • Used for installing and removing drive pinion
			shaft lock nut.
			Used for installing and removing driven shaft lock nut.
99			
ST18664AA000			
S110004AA000	18722AA010	REMOVER	Used for disassembling main shaft.
	(Newly adopted tool)		Č
ST18722AA010	18651AA000	INSTALLER	Used for assembling main shaft.
	(Newly adopted tool)	INSTALLEN	Osed for assembling main shart.
ST18651AA000			
	18852AA000 (Newly adopted tool)	TORQUE WRENCH	Used for tightening main shaft lock nut.Used for tightening drive pinion shaft lock nut.
	() adopted tool)		Used for tightening driven shaft lock nut.
ST18852AA000			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	18668AA000	PUNCH	Used for caulking main shaft lock nut.
	(Newly adopted tool)		
ST18668AA000			
	18669AA000	PUNCH	Used for caulking driven shaft lock nut.
	(Newly adopted tool)		
ST18669AA000	18670AA000	PUNCH	Used for caulking drive pinion shaft lock nut.
	(Newly adopted tool)	PUNCH	osed for catiking three pinion shall lock flut.
-			
ST18670AA000			
233.3.4.000	18620AA000	ADAPTER	Used for installing and removing driven gear
	(Newly adopted tool)	WRENCH	shaft lock nut.
ST18620AA000			

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	18621AA000	ADAPTER WRENCH	Used for installing and removing drive pinion shaft lock nut.
	(Newly adopted tool)	WHENCH	Shart lock nut.
ST18621AA000			
	18723AA000 (Newly adopted tool)	REMOVER	Used for disassembling the driven shaft.
	(Newly adopted tool)		
ST18723AA000			
	18630AA000 (Newly adopted tool)	WRENCH ASSY	Used for removing and installing differential side retainer (left side).
ST18630AA000	18672AA000	GUIDE CLIP	Used for installing reverse idler gear snap ring.
	(Newly adopted tool)	GOIDE GEIF	Osed for installing reverse fuller gear strap fillig.
ST18672AA000			

ILLUSTRATION TOOL NUMBER DESCRIPTION REMARKS 18720AA000 (Newly adopted tool) REMOVER Used for disassembling main shaft.	
(Newly adopted tool)	
074077044000	
ST18720AA000	
(Newly adopted tool)	
ST18654AA000	
18663AA000 SOCKET Used for installing and removing oil pum (Newly adopted tool)	p cover.
ST18663AA000	
18853AA000 HEIGHT GAUGE Used for selecting shift rod.	
(Newly adopted tool)	
ST18853AA000	

GENERAL DESCRIPTION

MANUAL TRANSMISSION AND DIFFERENTIAL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	18760AA000 (Newly adopted tool)	CLAW	Used for removing front side retainer bearing outer race. Used with PULLER ASSEMBLY (398527700).
ST18760AA000			

2. GENERAL PURPOSE TOOLS

TOOL NAME	REMARKS
Circuit Tester	Used for measuring resistance, voltage and ampere.