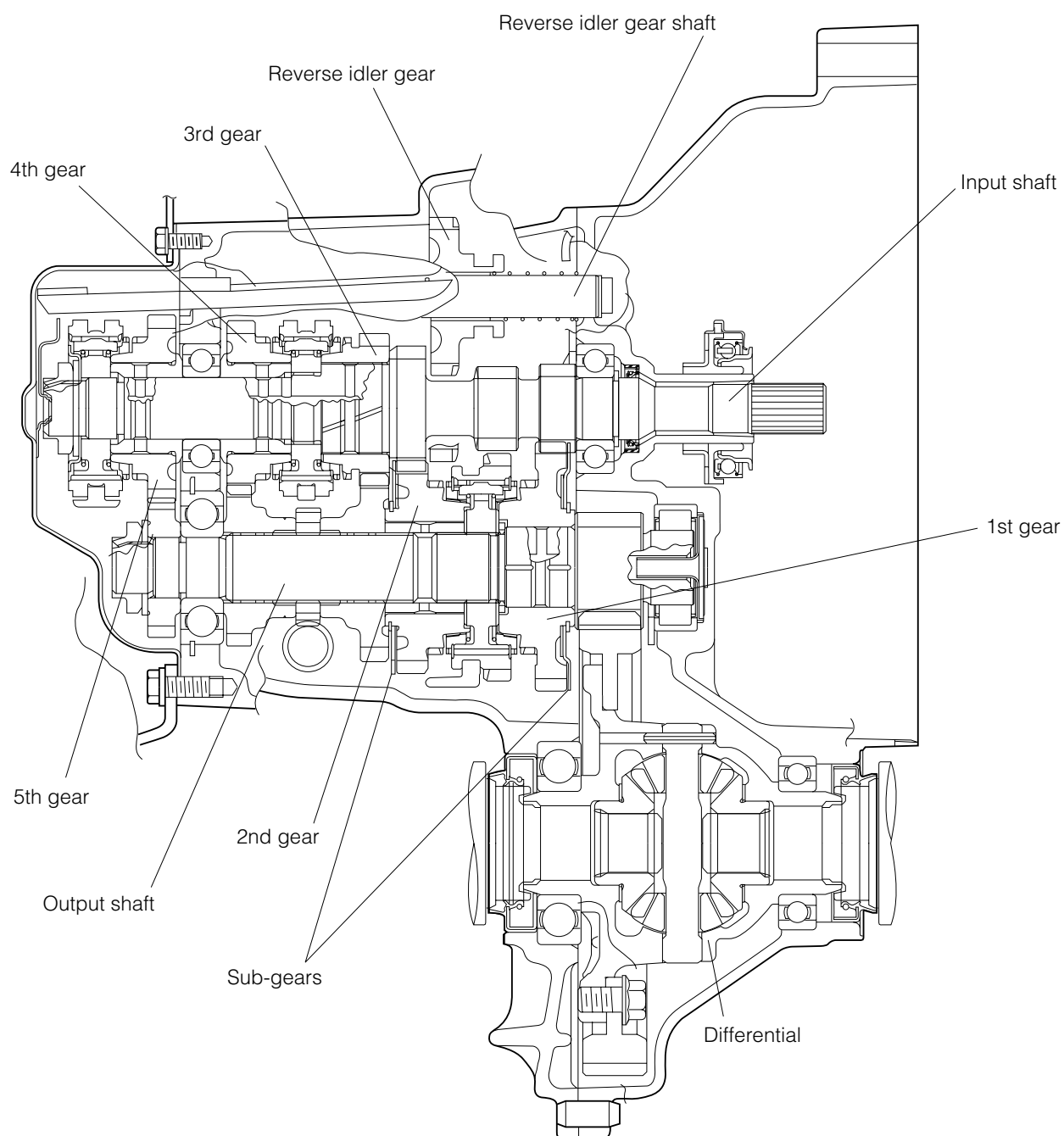


MANUAL TRANSMISSION (TYPE M5H Series)

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SECTIONAL VIEW



SPECIFICATIONS

Item		Specifications		
TRANSMISSION TYPE		M5H-B2	M5H-B3	5HA
Vehicle model		Cuore	Move	Sirion
Engine type		EJ-DE	←	←
Type	Forward gears	Constant-mesh type		
	Reverse gear	Selective sliding type		
Gear ratio	1st gear	3.181	←	←
	2nd gear	1.842	←	←
	3rd gear	1.250	←	←
	4th gear	0.864	0.916	←
	5th gear	0.707	0.750	←
	Reverse gear	3.142	←	←
Final reduction gear ratio		4.266	←	4.500
Number of differential side gear teeth		16	←	←
Number of differential pinion teeth		10	←	←
Speedometer gear ratio (driven/drive)		21/5	←	16/4
Oil used	Type	SAE 75W-85 or 75W-90, API GL-3 or GL-4		
	Capacity	liter 2.1 - 2.25		

LMT00003-00000

SERVICE INSTRUCTIONS

1. Keep your job site always clean. As for disassembled parts, first clean them before you proceed to the next operation.
2. During the disassembly, make sure not to lose any parts, such as balls, springs, keys and rollers.
3. Since some parts resemble in shape, identify each part by referring to parts catalogs. Furthermore, take precautionary measures, such as putting tags on the parts during disassembly so that no wrong assembly may occur.
4. Be very careful not to damage the lip section of an oil seal during operation.
5. Never reuse oil seals, slotted pins and bearings removed.
6. Care must be exercised to ensure that no pressing force is applied to the balls during the press-fitting of a ball bearing.
7. During the assembly, apply the designated gear oil to the rotating and sliding sections of gears and oil seals.

Designated Oil: SAE 75W-85 or 75W-90, API GL-3 or GL-4

8. After completion of assembling, make sure that all the following movements are smooth; the rotation of the input shaft, the shift & select operation in each gear, the movement of the clutch release lever, the movement of the clutch release hub.
9. After completion of assembling, make sure that no oil leakage or oozing is present at each of the mating surfaces and plug sections.
10. After mounting the transmission on the vehicle, fill the transmission with the specified amount of the designated oil.

Designated Oil: SAE 75W-85 or 75W-90, API GL-3 or GL-4

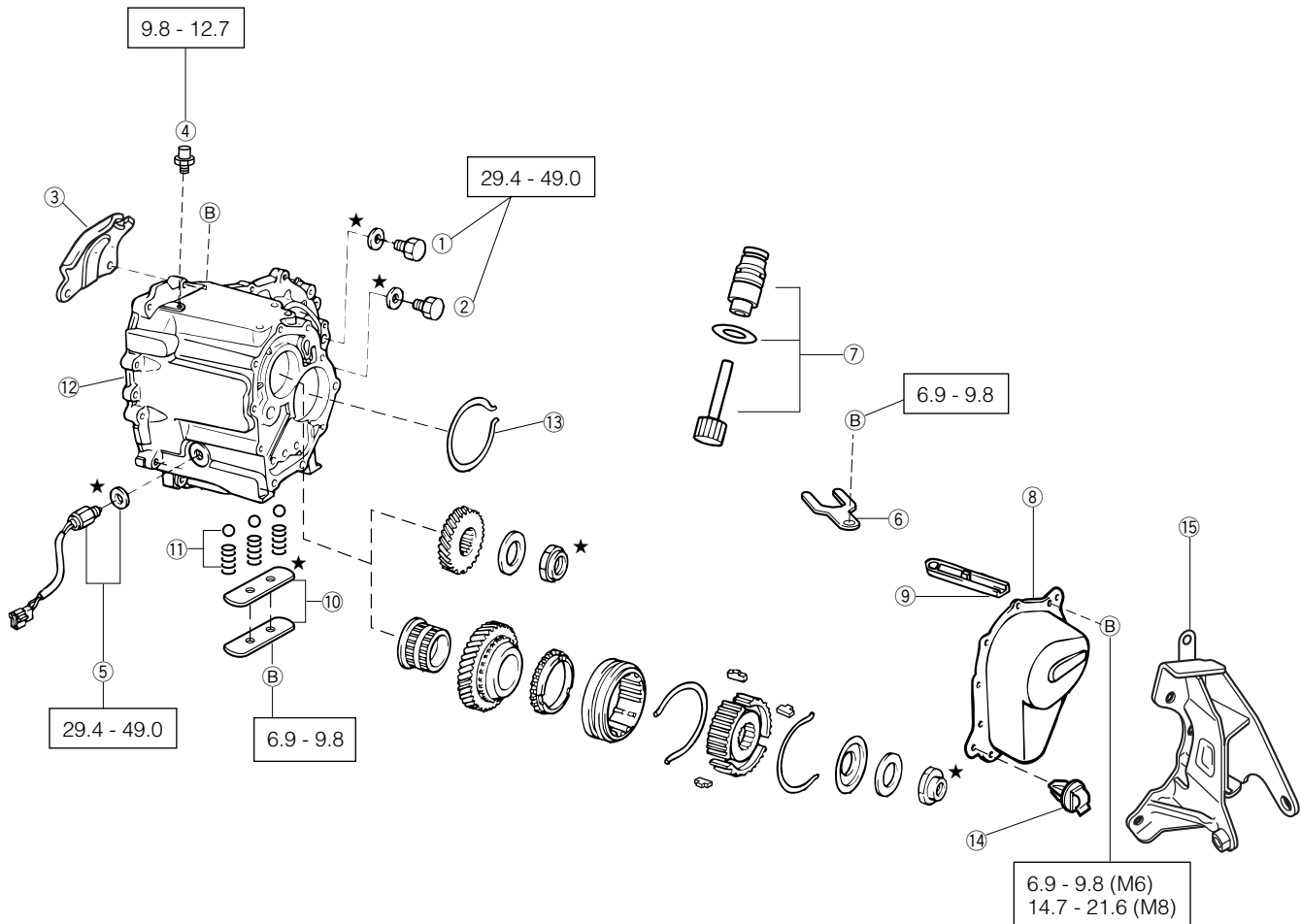
Specified Amount: 2.1 ~ 2.25 liter

NOTE:

- Refer to the MA section.

LMT00004-00000

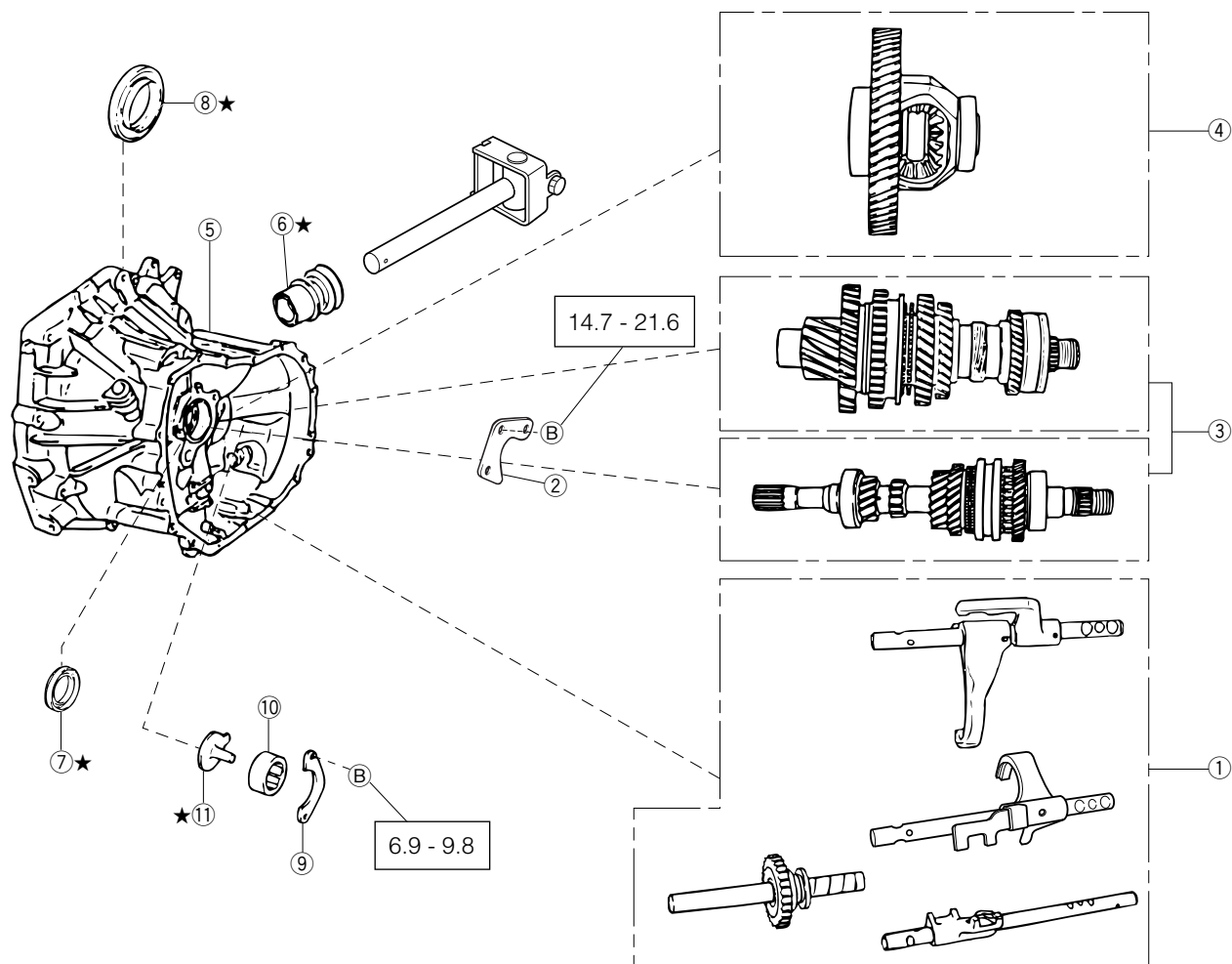
TRANSMISSION ASSEMBLY COMPONENTS (PART 1)



□ : Tightening torque
Unit : N·m
★ : Non-reusable parts

- | | |
|---|---------------------------------------|
| ① W/head straight screw plug & Gasket (filler side) | ⑧ Transmission case cover subassembly |
| ② W/head straight screw plug & Gasket (drain side) | ⑨ Case cover oil pipe |
| ③ Clutch cable bracket | ⑩ Gasket & Lock ball plate |
| ④ Breather plug | ⑪ Ball & Compression spring |
| ⑤ Backup lamp switch assembly & Gasket | ⑫ Transmission case |
| ⑥ Lock plate | ⑬ Hole snap ring |
| ⑦ Speedometer shaft sleeve subassembly | ⑭ Clamp |
| | ⑮ Left mount bracket |

COMPONENTS (PART 2)

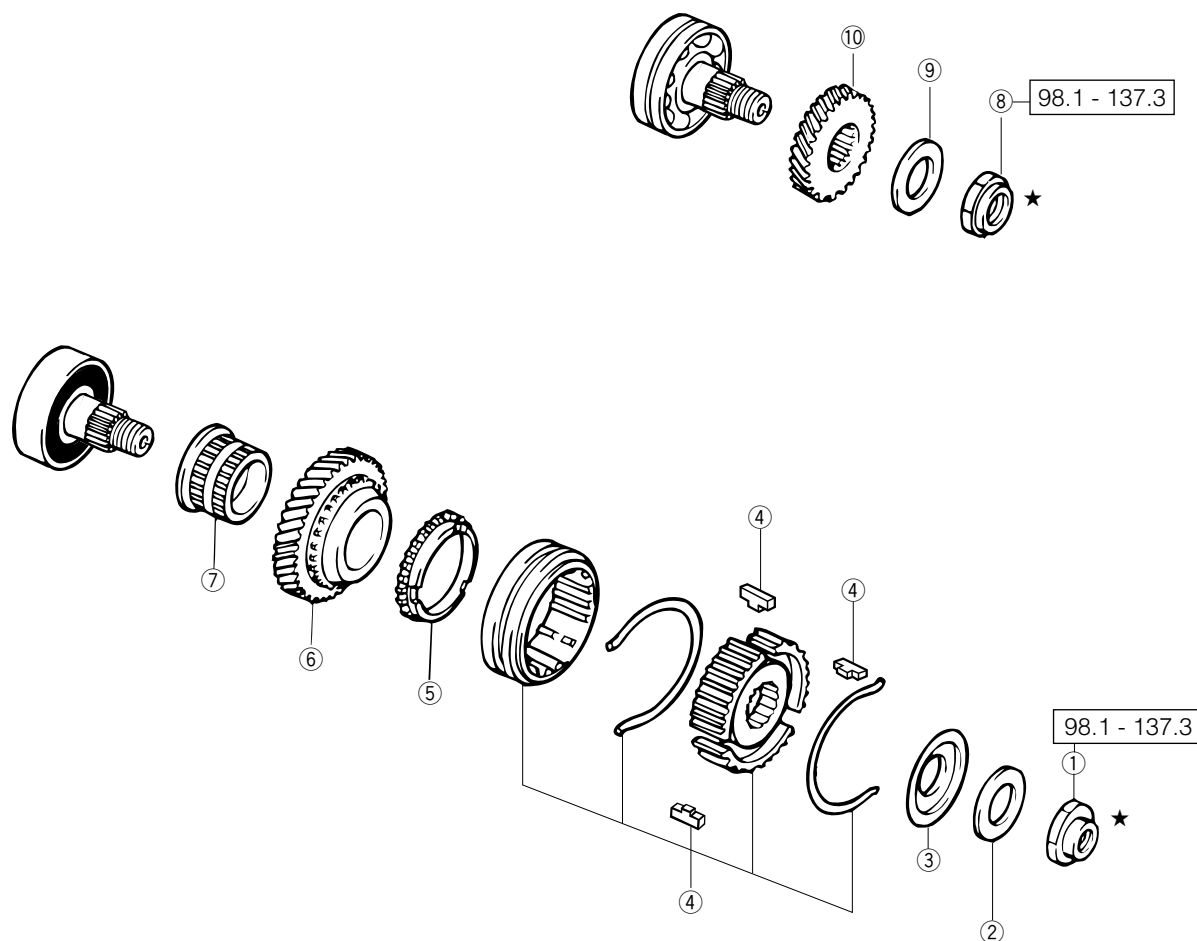


[] : Tightening torque
 Unit : N·m
 ★ : Non-reusable parts

- ① Control related parts
- ② Input shaft bearing lock plate
- ③ Input shaft assembly & output shaft assembly
- ④ Differential case assembly
- ⑤ Transaxle case

- ⑥ Boot
- ⑦ Oil seal
- ⑧ Oil seal
- ⑨ Output shaft bearing lock plate
- ⑩ Needle roller bearing
- ⑪ Output shaft cover

COMPONENTS (PART 3)

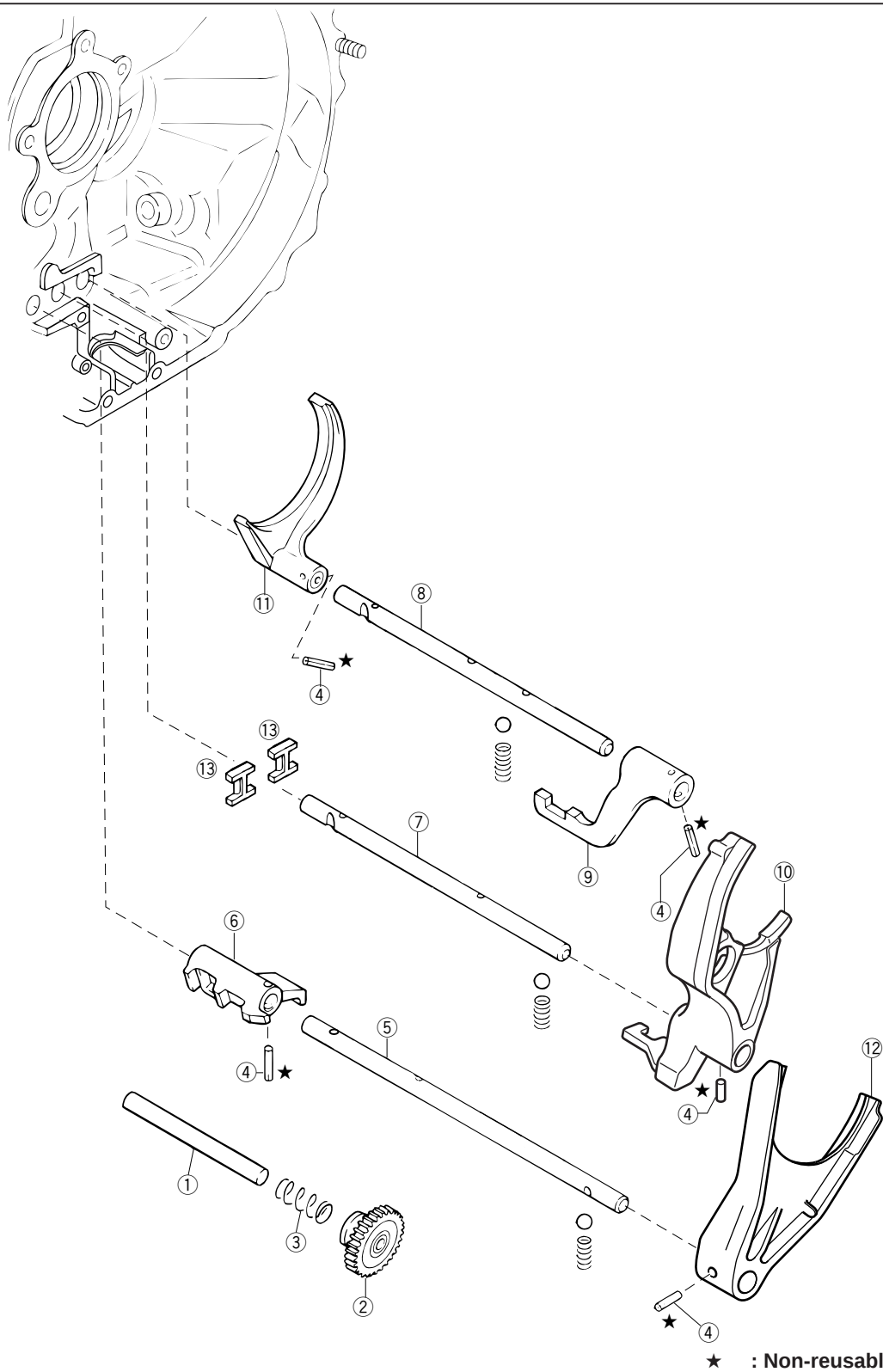


[] : Tightening torque
 Unit : N·m
 ★ : Non-reusable parts

- ① Lock nut
- ② Conical spring washer
- ③ Transmission hub sleeve stopper
- ④ Transmission clutch No. 3 hub assembly
- ⑤ Synchronizer ring

- ⑥ 5th gear
- ⑦ 5th gear bushing
- ⑧ Lock nut
- ⑨ Conical spring washer
- ⑩ Output 5th gear

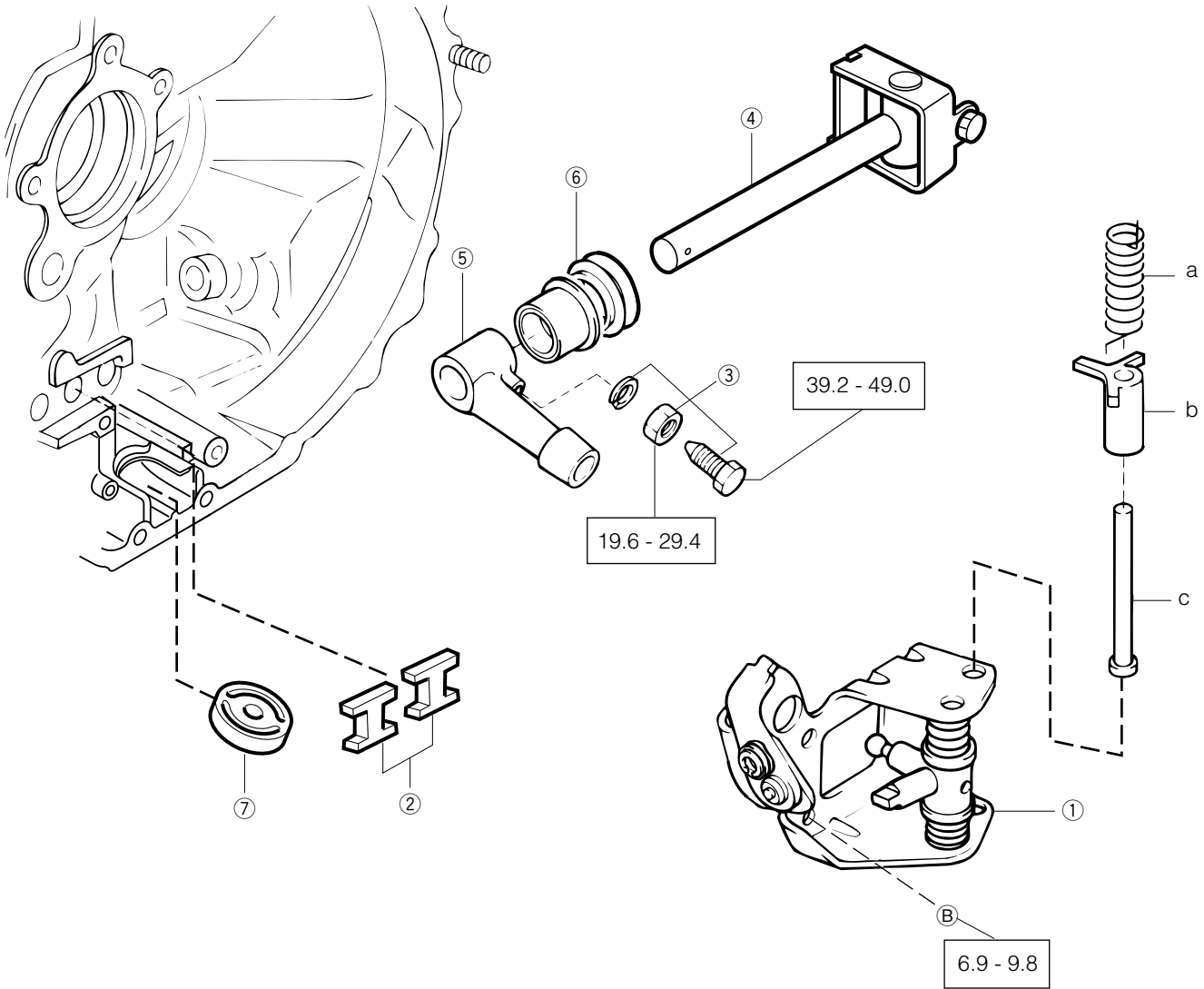
COMPONENTS (PART 4)



- ① Reverse idler shaft
- ② Reverse idler gear
- ③ Compression spring
- ④ Slotted spring pin x 5
- ⑤ 5th & reverse shift fork shaft
- ⑥ Reverse shift arm head
- ⑦ 3rd & 4th shift fork shaft

- ⑧ 1st & 2nd shift fork shaft
- ⑨ 1st & 2nd shift head
- ⑩ 3rd & 4th shift fork
- ⑪ 1st & 2nd shift fork
- ⑫ 5th shift fork
- ⑬ Shift interlock plate

CONTROL LINKAGE-RELATED PARTS COMPONENTS



 : Tightening torque
 Unit : N·m
 ★ : Non-reusable parts

- ① Select support assembly & shifting bell crank
 - a. Compression spring
 - b. Reverse restrict cam
 - c. Reverse restrict shaft
- ② Shift inter lock plate

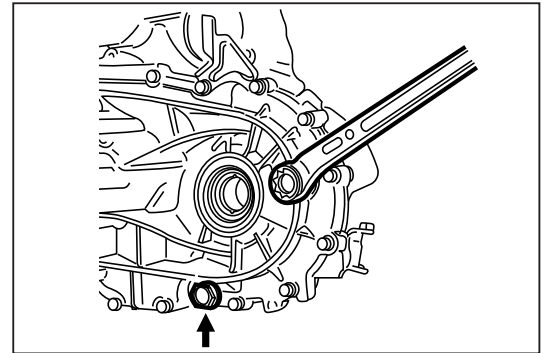
- ③ Wave washer, bolt and nut set
- ④ Shift & selector shaft
- ⑤ Shift inner lever
- ⑥ Control shaft boot
- ⑦ Magnet

DISASSEMBLY

1. Remove the screw plugs (at the drain and filler sides).

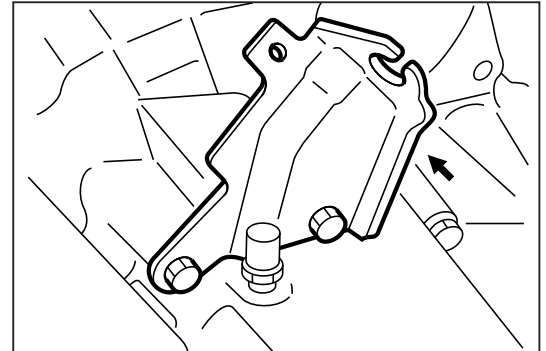
NOTE:

- Never reuse the removed gaskets.



LMT00077-00070

2. Remove the clutch cable bracket.

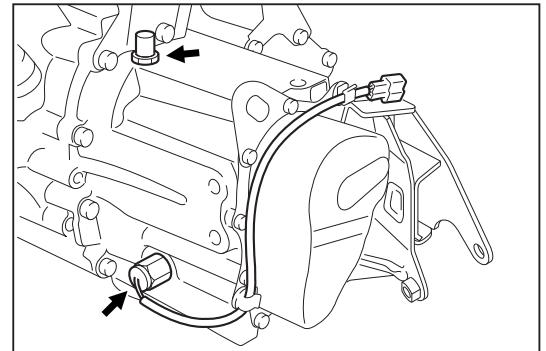


LMT00078-00071

3. Remove the backup lamp switch assembly and breather plug.

NOTE:

- Never reuse the removed gasket.



LMT00079-00072

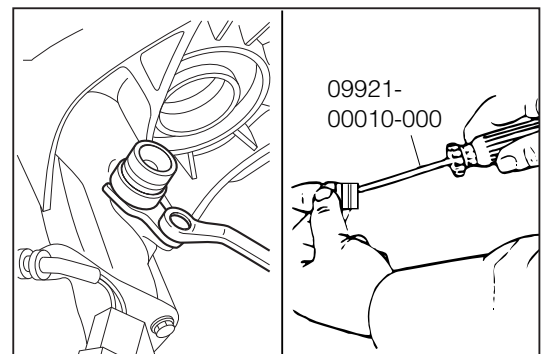
4. Remove the lock plate and speedometer shaft sleeve sub-assembly.

5. Remove the oil seal, using the SST given below.

SST: 09921-00010-000

NOTE:

- Never reuse the removed oil seal.



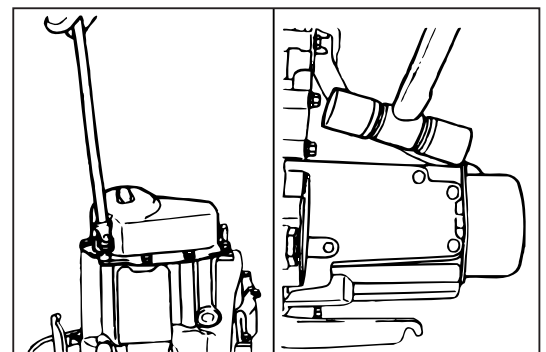
LMT00080-00073

6. Remove the transmission case cover subassembly as follows:

- (1) To drive out the case cover subassembly, tap the flange section lightly in the axial direction, using a plastic hammer.

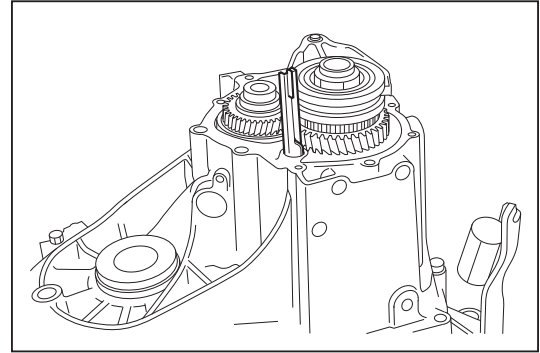
NOTE:

- Never tap the case cover at its side.



LMT00081-00074

7. Remove the case cover oil pipe.

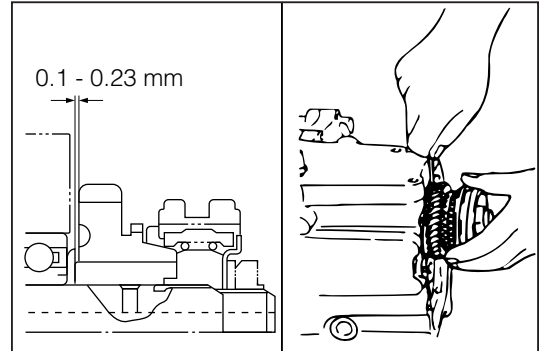


LMT00082-00075

8. Measure the end play of the 5th gear.

Specified Value: 0.1 - 0.23 mm

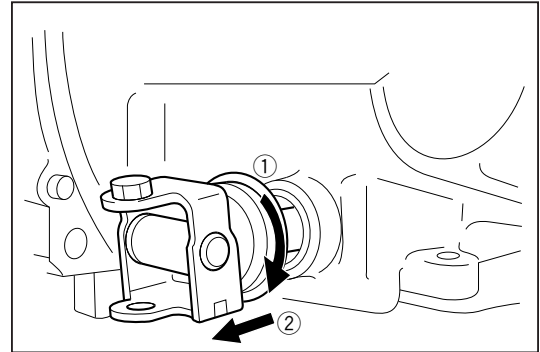
Limit: 0.4 mm



LMT00083-00076

9. Removal of lock nut

(1) Operate the shift & selector shaft so that the gear may be in the 5th position.



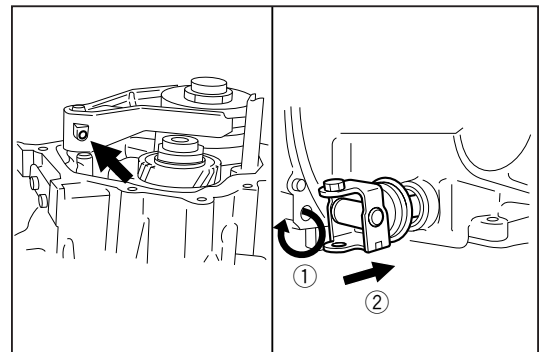
LMT00084-00077

(2) Remove the slotted spring, using a knock pin punch.

(3) With the 5th shift fork held, place the shift & selector shaft in the neutral position once. Then, place the shaft in the reverse position so as to set the gear to an inter-locked state.

NOTE:

- Never reuse the removed slotted spring pin.

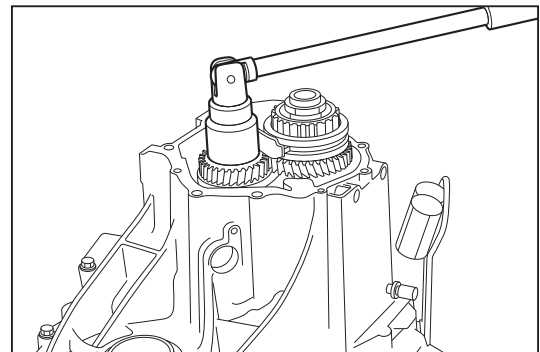


LMT00085-00078

(4) Release the staked condition at the input shaft side and the output shaft side, respectively, using a chisel and a hammer. Then, remove the nut.

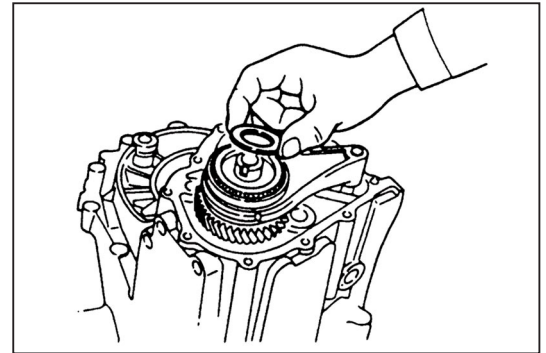
NOTE:

- Never reuse the removed nuts.



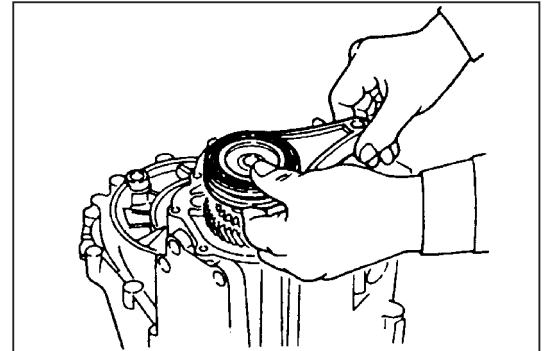
LMT00086-00079

10. Remove the conical spring washer and transmission hub sleeve stopper at the input shaft side.



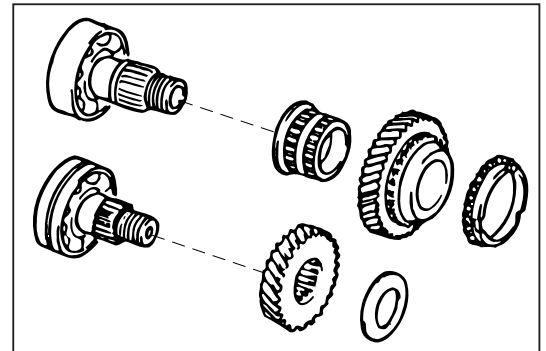
LMT00087-00080

11. Remove the 5th shift fork and transmission clutch hub assembly No. 3 at the same time.



LMT00088-00081

12. Remove the synchronizer ring, 5th gear and 5th gear bush at input shaft side.
Remove the conical spring washer and remove the output 5th gear at the output shaft side.

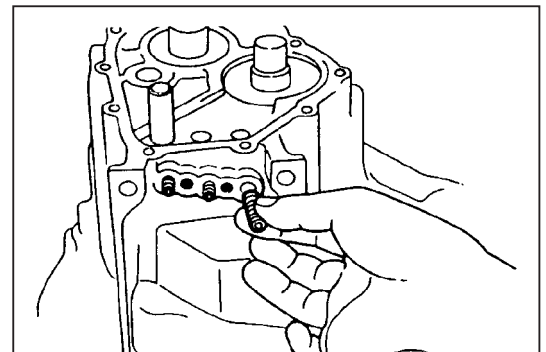


LMT00089-00082

13. Remove the lock ball plate and gasket. Take out the compression springs and balls.

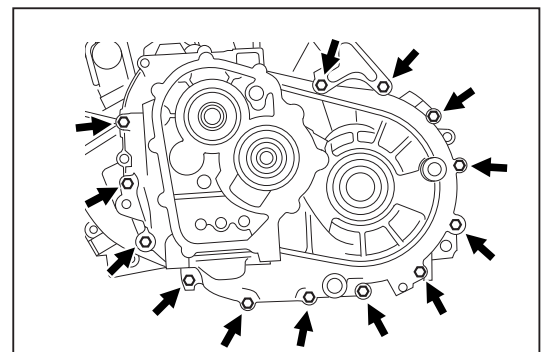
NOTE:

- Never reuse the removed gasket.



LMT00090-00083

14. Remove the transmission case attaching bolts.



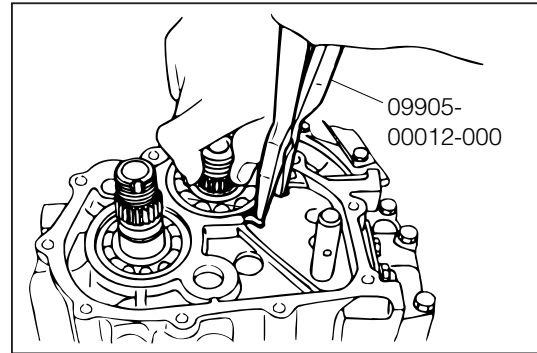
LMT00091-00084

15. Transmission case removal

- (1) Expand the snap ring, using the following SST and drop the shaft.

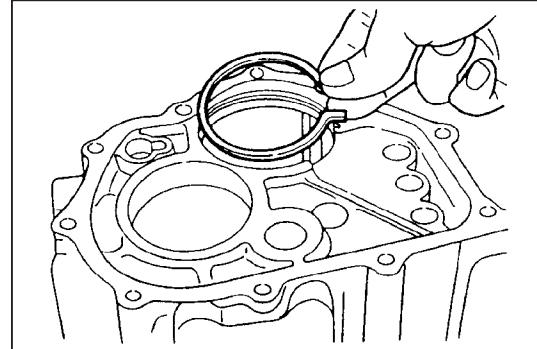
SST: 09905-00012-000

- (2) To drive out the transmission case, tap the case rib with a plastic hammer.



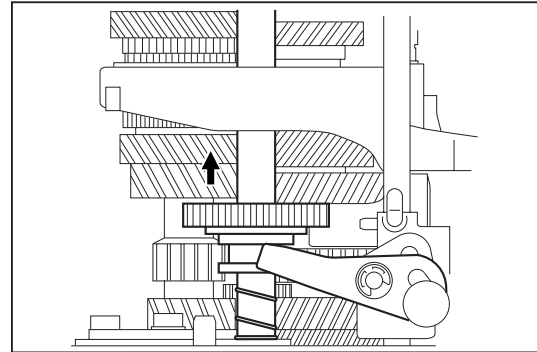
LMT00092-00085

16. Detach the hole snap ring.



LMT00093-00086

17. Pull out the reverse idler gear shaft. Remove the reverse idler gear together with the compression spring.



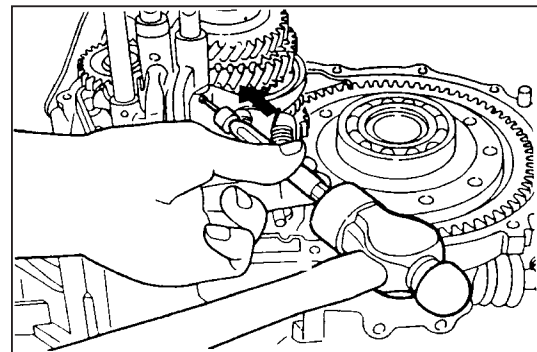
LMT00094-00087

18. Slotted spring pin removal

- (1) Working from the arrow-headed direction in the figure, drive out the slotted spring pins by means of a punch pin. (Four points)

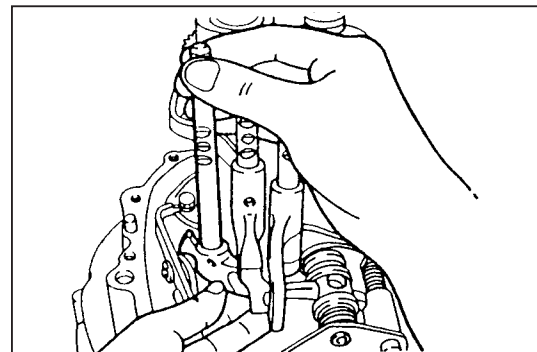
NOTE:

- Never reuse the removed slotted spring pins.



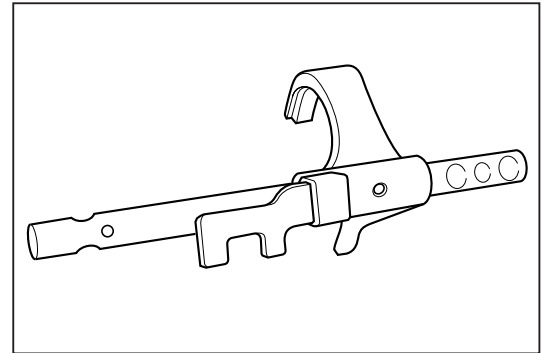
LMT00095-00088

19. Pull out the 5th & reverse shift fork shaft. Remove the reverse shift arm head.



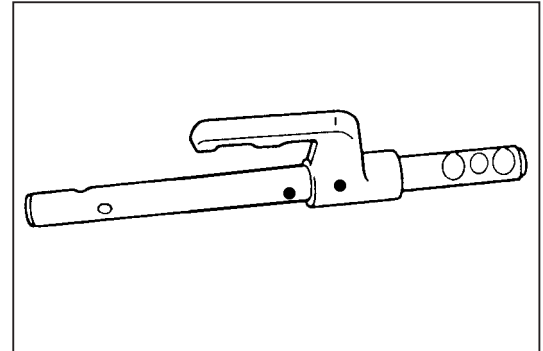
LMT00096-00089

20. Remove the 3rd & 4th shift fork shaft and the 3rd & 4th shift fork.



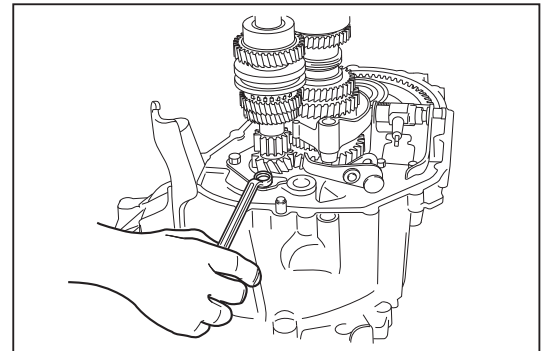
LMT00008-00005

21. Pull out the 1st & 2nd shift fork shaft. Remove the 1st & 2nd shift head.



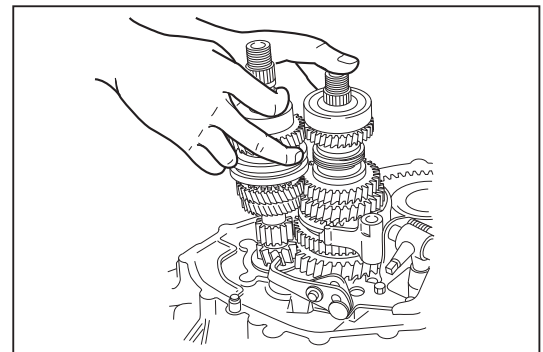
LMT00009-00006

22. Remove the input shaft bearing lock plate.



LMT00010-00007

23. Remove the input shaft assembly and output shaft assembly including the 1st and 2nd shift fork at the same time.



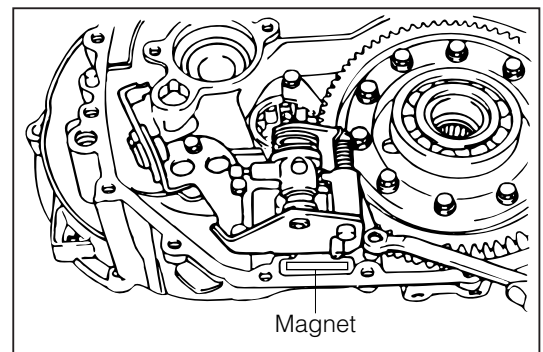
LMT00011-00008

24. Remove the selecting & shifting bell crank support assembly and magnet.

NOTE:

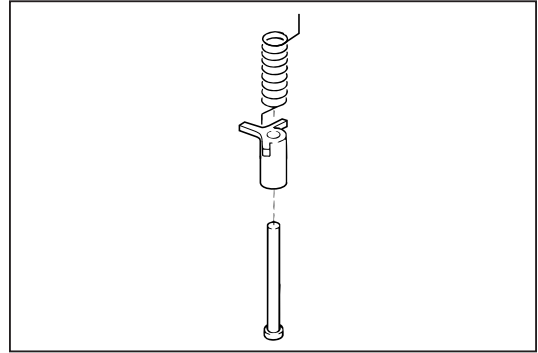
- Be sure not to release the staked section of the bell crank.
- Replacement parts are supplied only as those with the bell crank support assembly. (The reverse restricting cam is excluded.)

Furthermore, it should be noted that the reverse restricting cam can not be disassembled.



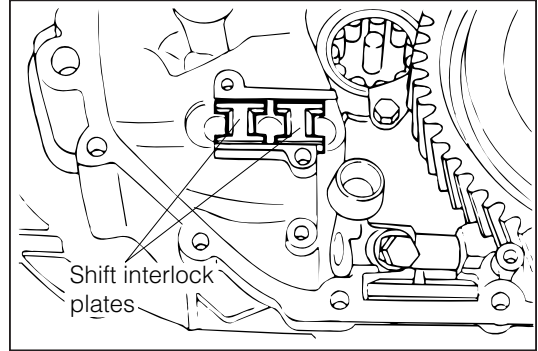
LMT00012-00009

25. Disassemble the bell crank support assembly, as required.



LMT00097-00090

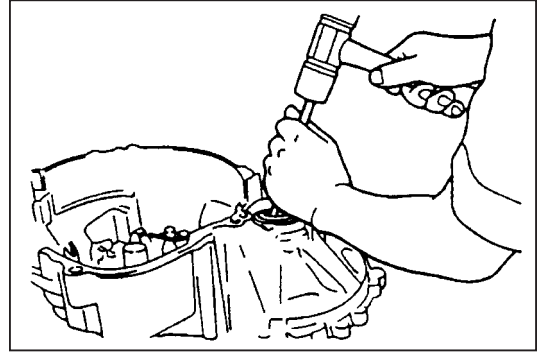
26. Remove the shift interlock plates.



LMT00098-00091

27. Differential case removal

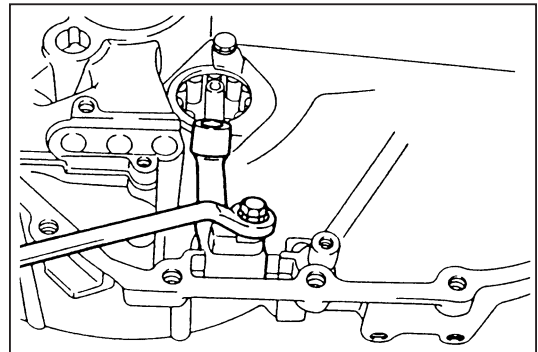
- (1) With a brass bar placed on the inner race of the side bearing, lightly tap the bar so that the differential case may be driven out from the transaxle case.



LMT00099-00092

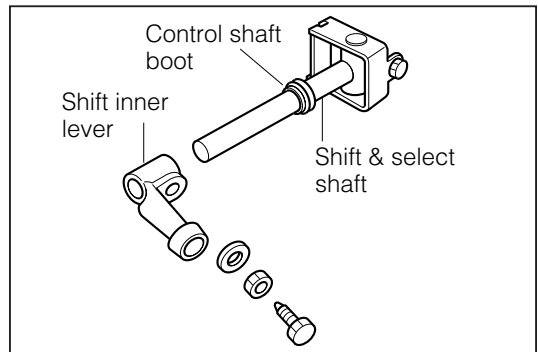
28. Removal of wave washer, nut and set bolt

- (1) After the nut has been loosened, proceed to loosen the set bolt.



LMT00100-00093

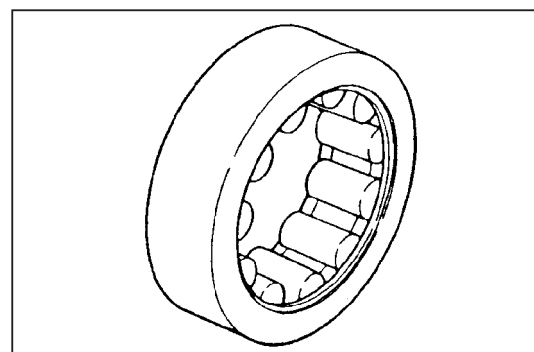
29. Remove the shift & select shaft, shift inner lever and control shaft boot.



LMT00101-00094

INSPECTION

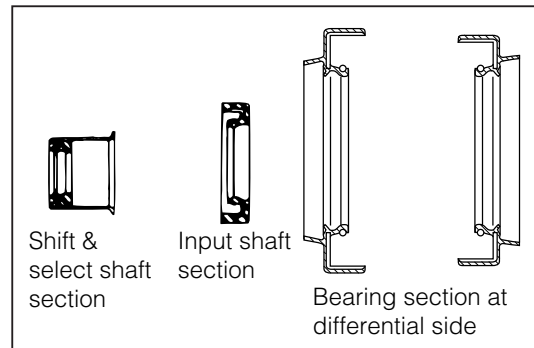
1. Check the needle roller bearing for wear or damage under the assembled state.



LMT00102-00095

2. Check each oil seal for wear or damage.

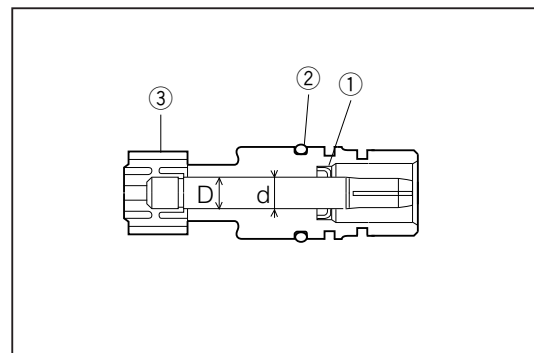
Part	Inspection criteria
Lip section of oil seal	Visually inspect to see if the lip section exhibits excessive damage or wear.



LMT00103-00096

3. Check the speedometer shaft sleeve subassembly for wear or damage.

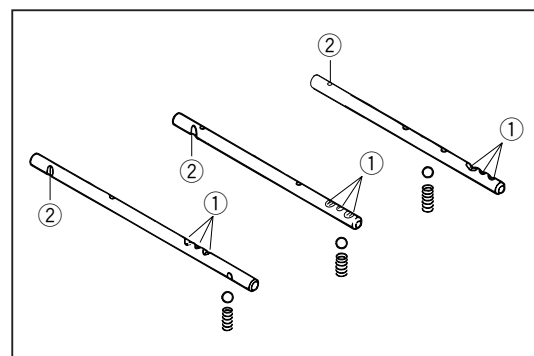
Part	Specified value mm	Limit mm
Driven gear shaft diameter d	7.972 - 7.987	7.96
Shaft sleeve bore D	8.029 - 8.065	8.10
Oil seal lip section ①	Visually inspect the section for excessive wear or damage.	
O-ring ②		
Driven gear tooth surface ③		



LMT00104-00097

4. Check the shift fork shafts, balls and springs for damage or wear.

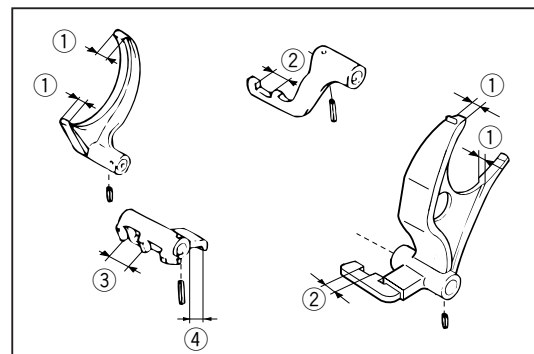
Part	Inspection criteria
Ball lock section ① and interlock section of fork shaft ②	Visually inspect the section for excessive damage or wear.



LMT00105-00098

5. Check the 1st shift fork, the 2nd shift fork and the reverse shift head for damage or wear.

Part	Specified value mm	Limit mm
Thickness at tip-section of fork ①	6.8 - 7.0	6.3
Groove width of shift inner lever-contact-section ②	12.2 - 12.3	12.8
Groove width of reverse shift arm pin-contact-section ③	15.0 - 15.043	15.1
Groove width of shift inner lever-contact-section ④	12.1 - 12.2	12.7

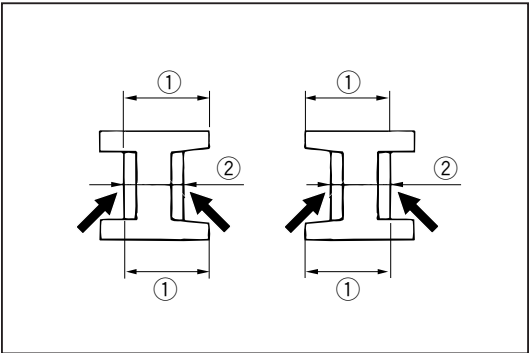


LMT00106-00099

6. Check the interlock plate for damage or wear.

Part		Specified value mm	Limit mm
Length of lock plate	①	16.15 - 16.45	16.0
	②	11.1 - 11.3	11.0
Roller section		Check the section for excessive damage or wear.	

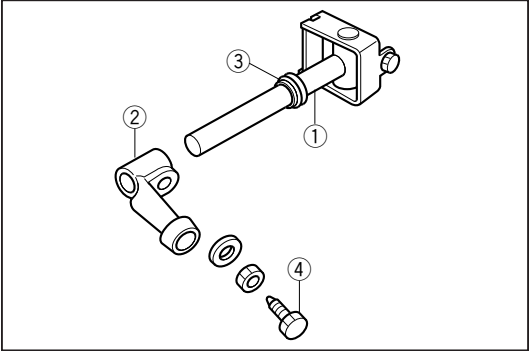
* Two lock plates must be replaced at the same time.



LMT00107-00100

7. Check the control shaft and inner lever for damage or wear.

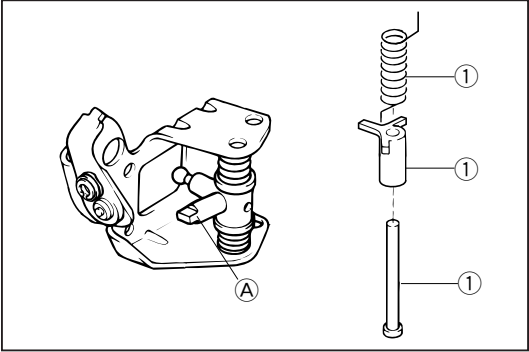
Part	Inspection criteria
Control shaft ①	Visually inspect the following items given below. • Shaft for bend • Recessed section of inner lever and shaft inserting section for wear or damage. • Dust boot for cracks or wear • Tip-end of lock bolt for wear
Inner lever recessed section and shaft inserting section ②	
Sliding section of dust boot and breakage ③	
Tip-end of lock bolt ④	



LMT00108-00101

8. Check the reverse restricting cam and shaft for damage or wear.

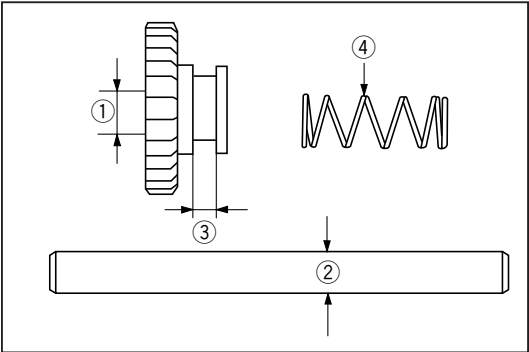
Part	Inspection criteria
Operation of restricting cam	• Ensure that the miss operation preventing mechanism functions at the support assembly. ① The cam should be raised at the same time when the section ① is lifted. ② When turned to the left, ensure that the cam drops and the section ① is locked.
Each part of reverse restricting cam and shaft ①	Visually inspect each part for damage or wear.



LMT00109-00102

9. Check the reverse idler gear and shaft for wear or damage.

Part	Specified value mm	Limit mm
Bush inner diameter ①	17.000 - 17.027	17.050
Shaft outer diameter ②	16.941 - 16.968	16.900
Groove width ③	8.000 - 8.058	8.2
Wear or damage of spring ④	Visually inspect the spring for flattened condition	



LMT00110-00103

REPLACEMENT

Replace any parts that exhibit abnormality, following the procedure given below.

- Oil seal for control shaft use

Disassembly:

Remove the oil seal by pinching its flange section with pliers.

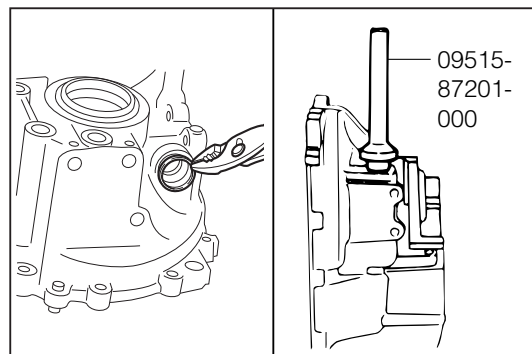
NOTE:

- Never reuse the removed oil seal.

Assembly:

Drive the oil seal into position, until it comes into contact with the axle case.

SST: 09515-87201-000



LMT00111-00104

- Oil seal for input shaft use

Disassembly:

Remove the oil seal with a common screwdriver.

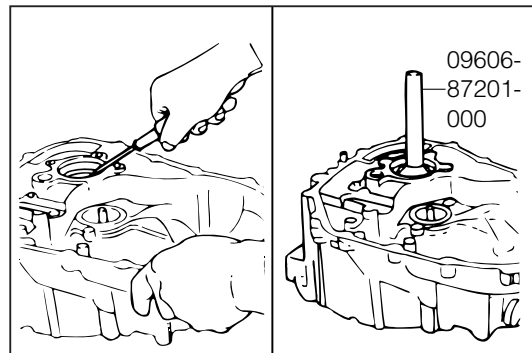
NOTE:

- Never reuse the removed oil seal.

Assembly:

Drive the oil seal into position, until it becomes flush with the edge surface of the transaxle case.

SST: 09606-87201-000



LMT00112-00105

- Needle Roller Bearing.

Disassembly:

After the output shaft bearing lock plate has been removed, remove the roller bearing, using the following SST.

SST: 09308-00010-000

NOTE:

- Never reuse the removed needle roller bearing.

Assembly:

- Assemble the roller bearing, using the following SST.

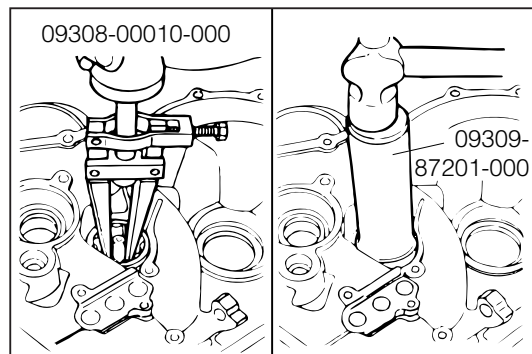
SST: 09309-87201-000

NOTE:

- Visually check to see if the output shaft cover exhibits severe distortion or clogging.

- Install the bearing lock plate.

Tightening Torque: 6.9 - 9.8 N·m



LMT00113-00106

4. Oil seal for differential use

Disassembly:

Remove the oil seal with a common screwdriver.

NOTE:

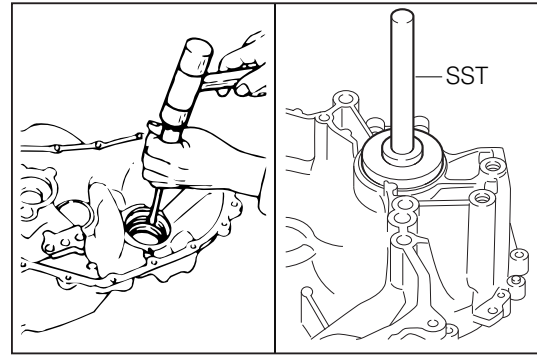
- Never reuse the removed oil seal.

Assembly:

Drive the oil seal into position, until it comes into contact with the rib of the transaxle case (case side) contact with the differential side bearing (housing side).

SST: 09517-87705-000 (Case side)

09517-87706-000 (Housing side)



LMT00027-00024

5. Oil seal for speedometer shaft sleeve

Disassembly:

Remove the oil seal, using the SST given below.

SST: 09921-00010-000

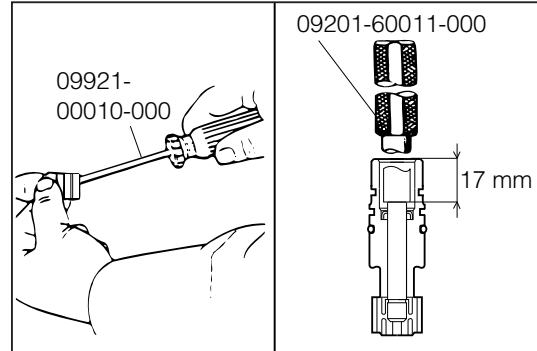
NOTE:

- Never reuse the removed oil seal.

Assembly:

Assembly the oil seal, using the SST given below.

SST: 09201-60011-000



LMT00028-00025

ASSEMBLY

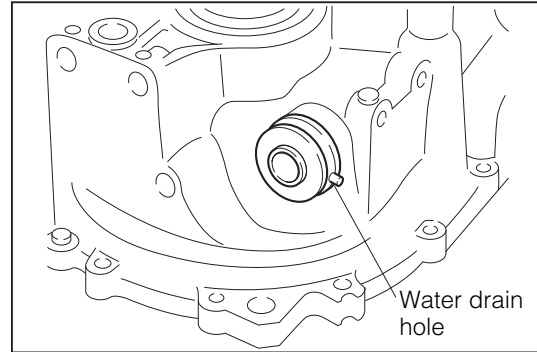
NOTE:

- Apply gear oil to the entire surfaces of the rotary or sliding sections.

1. Assemble the boot on the case.

NOTE:

- Be very careful not to scratch the boot
- Install the water drain hole in such a direction that the hole faces toward the lower side of the vehicle.



LMT00029-00026

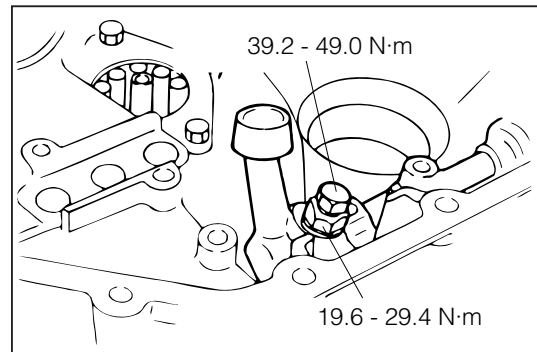
2. Assemble the shift & selector shaft in the case.

3. Assemble the shift inner lever on the control shaft.

4. Assemble of wave washer, nut and setting bolt.

(1) Align the hole of the shift inner lever with the cut-out section of the shift & selector shaft. Proceed to tighten the set bolt to the specified torque.

Tightening Torque: 39.2 - 49.0 N·m

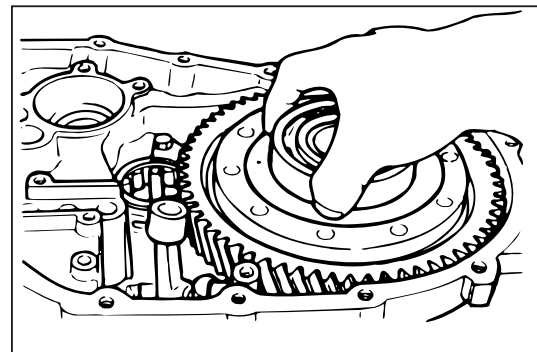


LMT00030-00027

(2) Tighten the nut to the specified torque.

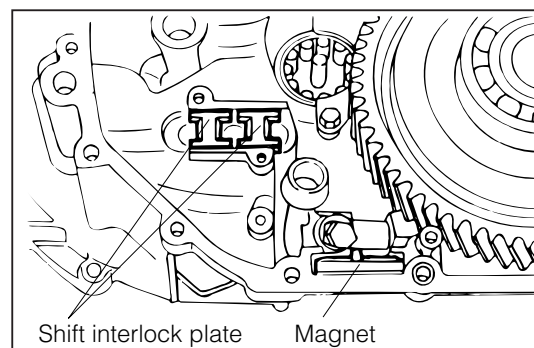
Tightening Torque: 19.6 - 29.4 N·m

5. Assemble the differential case Assy.



LMT00031-00028

6. Assemble the shift interlock plate in the neutral position.
7. Install the magnet into position.



LMT00032-00029

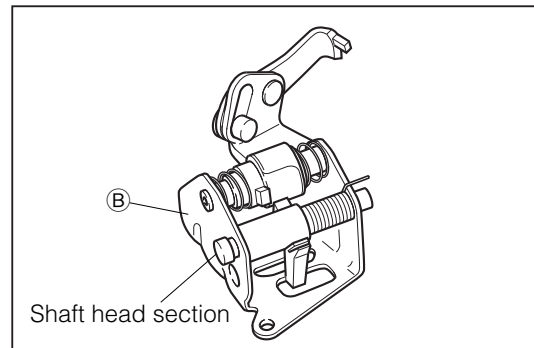
8. Assembly of selecting & shifting bell crank support assembly

- (1) Assemble the restricting cam.

Assemble the restricting cam in such a way that the slotted spring pin may be inserted into the hole ⑧

NOTE:

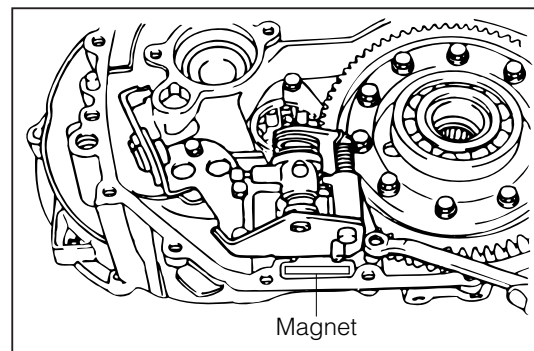
- Be sure not to forget to attach the spring in place.
- Assemble the restricting cam in such a way that the forward end of the restricting cam may be fitted into the bracket hole.



LMT00033-00030

- (2) Assemble the magnet and selecting & shifting bell crank support assembly.

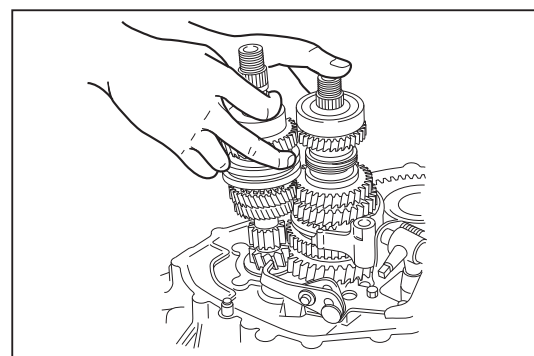
Tightening Torque: 6.9 - 9.8 N·m



LMT00034-00031

9. Assemble the input shaft assembly and output shaft assembly, including the 1st and 2nd shift fork at the same time.

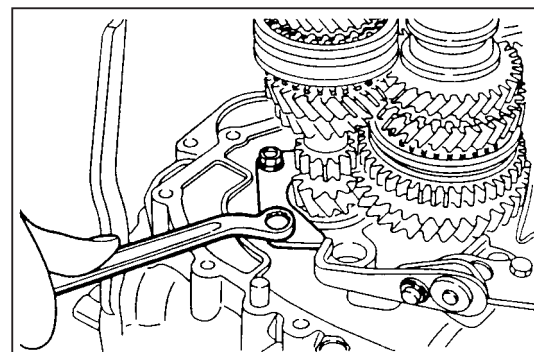
- (1) Assemble the 1st & 2nd shift fork onto the synchronizer sleeve for the 1st & 2nd gear use provided at the output shaft side.



LMT00035-00032

10. Assemble the input shaft bearing lock plate.

Tightening Torque: 14.7 - 21.6 N·m



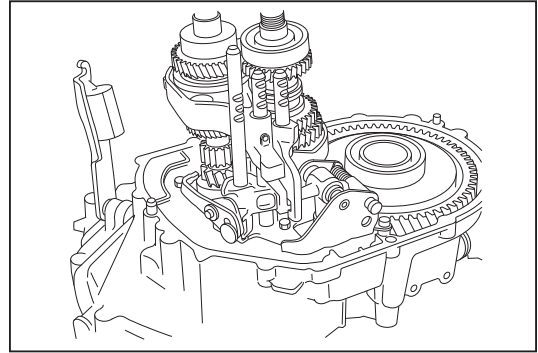
LMT00036-00033

11. Assembly of the 3rd & 4th shift fork.

NOTE:

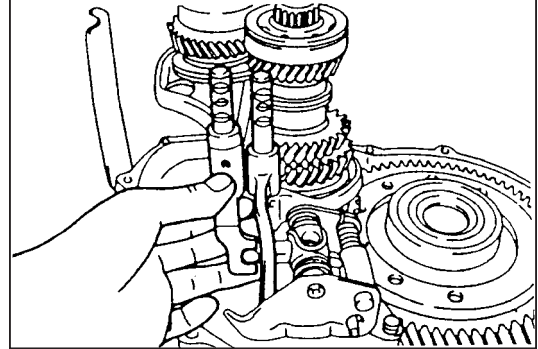
- Prior to the assembling, apply gear oil to the sliding section of each shift fork.

- (1) Assemble the 3rd & 4th shift fork onto the synchronizer sleeve for the 3rd & 4th gear use provided at the input shaft side.



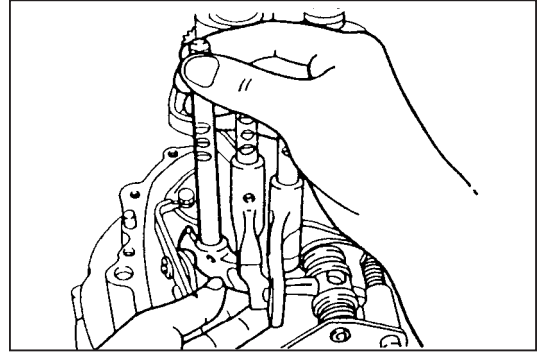
LMT00114-00107

12. Assemble the 1st & 2nd shift head, the 1st & 2nd shift fork shaft and the 3rd & 4th shift fork shaft.



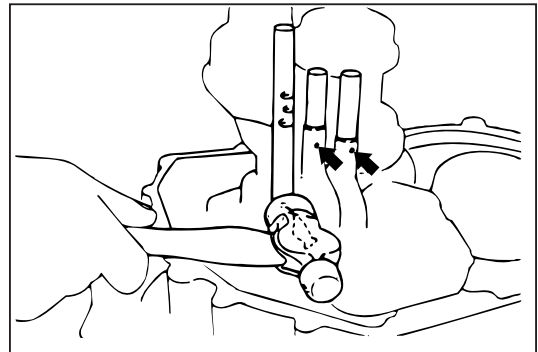
LMT00115-00108

13. Assemble the reverse shift arm head
Assemble the 5th & reverse shift fork shaft.



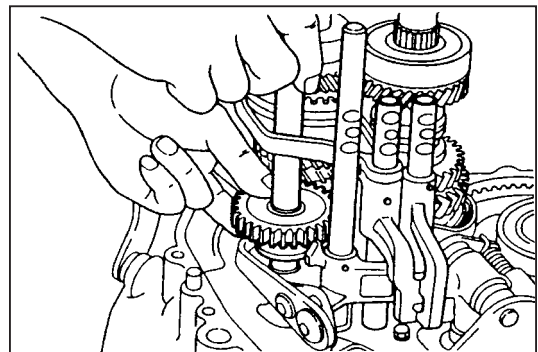
LMT00116-00109

14. Working from the direction as indicated in the figure, drive the slotted spring pin into position, until it becomes flush with the edge surface of the shift fork.



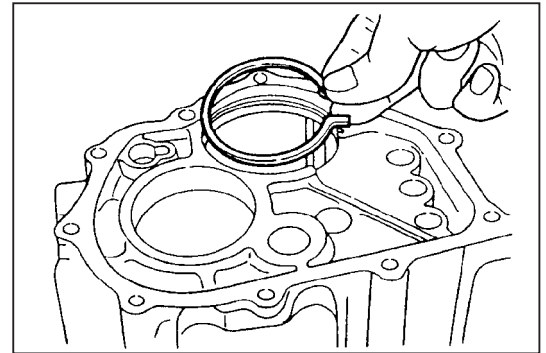
LMT00117-00110

15. Assemble the compression spring, reverse idler gear and reverse idler gear shaft.



LMT00118-00111

16. Install the hole snap ring in the transmission case.



LMT00119-00112

17. Transmission case assembly

- (1) Apply the Three Bond sealer 1216 or 1217 to the mating surface of the housing. While the hole snap ring of the bearing is held in an expanded state, assemble the transmission case in the transaxle case.

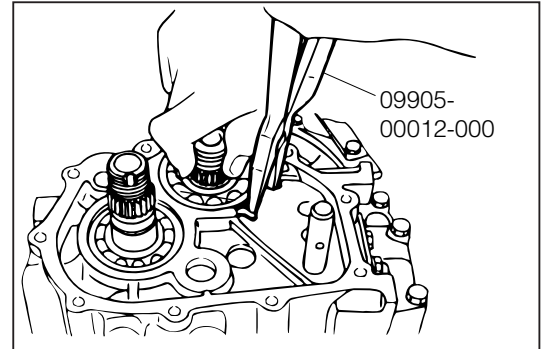
SST: 09905-00012-000

NOTE:

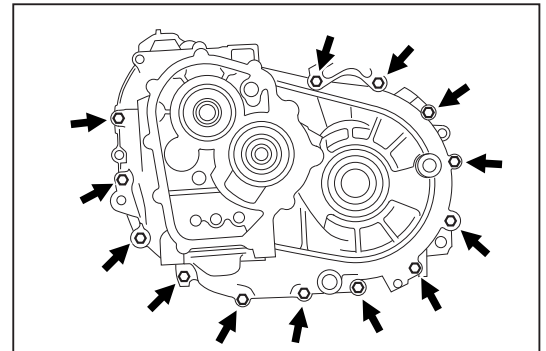
- Make sure that the snap ring is fitted positively in the bearing, by raising the output shaft by your hand.

- (2) Tighten the housing attaching bolts.

Tightening Torque: 14.7 - 21.6 N·m

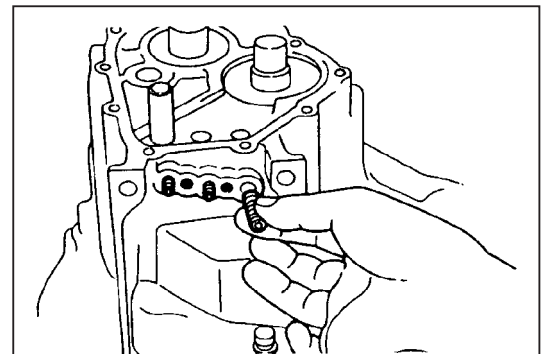


LMT00120-00113



LMT00121-00114

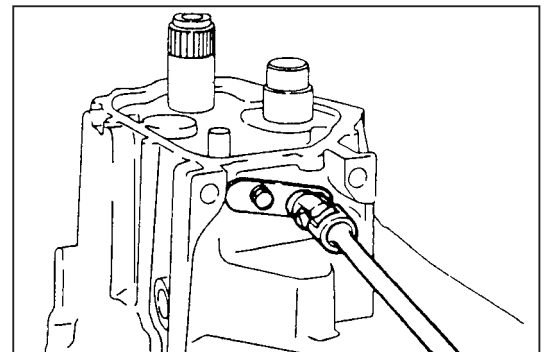
18. Assemble the balls and compression springs.



LMT00122-00115

19. Assemble the lock ball plate and gasket.

Tightening Torque: 6.9 - 9.8 N·m

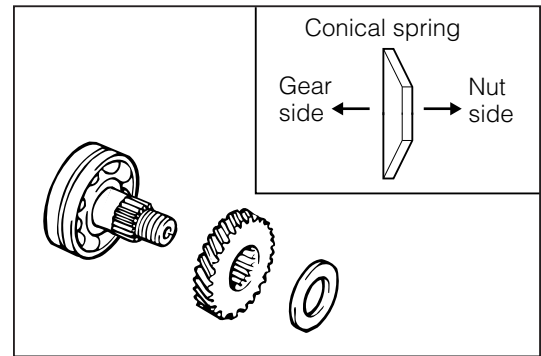


LMT00123-00116

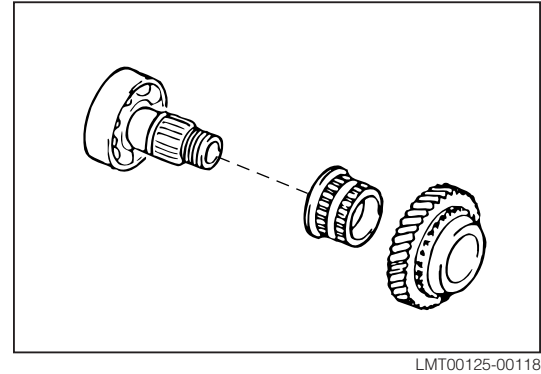
20. Assemble the output 5th gear and the conical spring washer for the output shaft.

NOTE:

- Tighten a new lock nut temporarily.

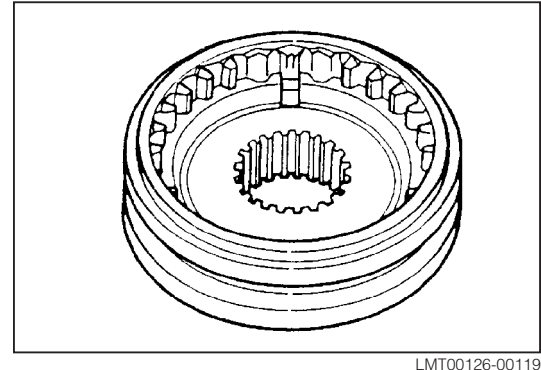


21. Assemble the 5th gear bush.
22. Assemble the 5th gear.

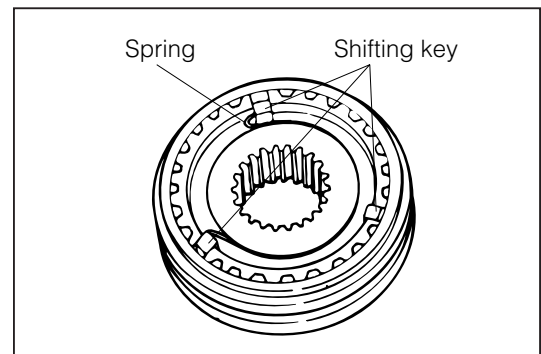


23. Assembly of transmission clutch hub

- (1) Assemble the clutch hub, aligning the spline-missing section of the clutch with the key installing section (in which teeth are missing at both sides) of the hub.



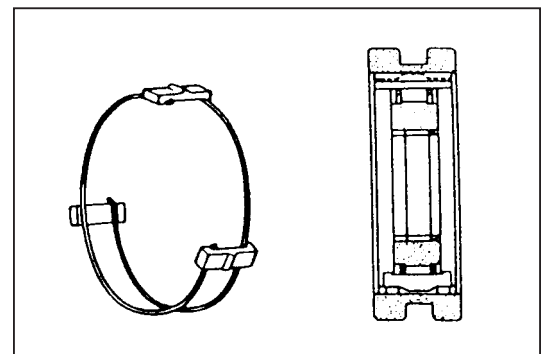
- (2) Assemble the synchronizer ring at one side of the clutch hub. Place the clutch hub on a level bench in such a way that the side where synchronizer ring has been assembled may come at the lower side.
(3) Assemble the three shifting keys and spring in place.
(4) Install the synchronizer ring. Turn over the hub assembly.



- (5) Detach the synchronizer ring that has been installed in the step (2). Install the other spring.

NOTE:

- Make sure that this spring does not come at the same position as the spring at the opposite side.



- (6) Install the synchronizer ring in place. Push the synchronizer ring in both directions by your both hands. Check to see if the synchronizing action takes place smoothly.

NOTE:

- The hub assembly for the 3rd and 4th gear use differs from the hub assembly for the 5th gear use only in the inner diameter of the clutch hub. Other parts are shared in common.
- The sleeve and clutch do not have any installing direction to be observed during their assembly.

24. Assemble the transmission clutch hub assembly and the 5th gear shift fork and the synchronizer ring at the same time.

25. Assemble the transmission hub sleeve stopper.
26. Assemble the conical spring washer in such a way that its expanded side may face toward the transmission side.

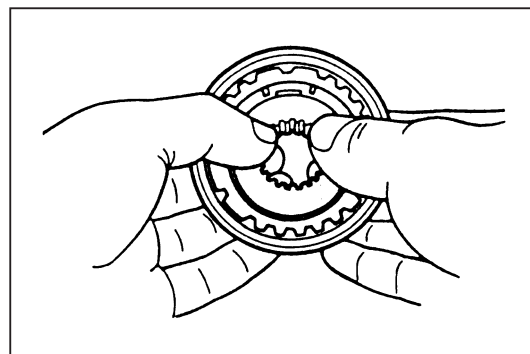
27. New lock nut installation.
(1) Make the gears in an interlocked state. (See page MT-10.)

- (2) Tighten the lock nut at the input shaft to the specified torque, using a socket whose width across flats is 32 mm.

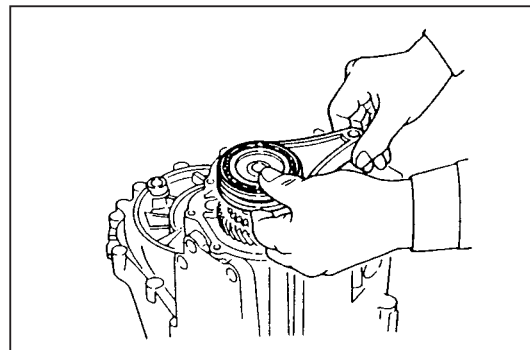
Tightening Torque: 98.1 - 137.3 N·m

- (3) Tighten the lock nut at the output shaft to the specified torque.

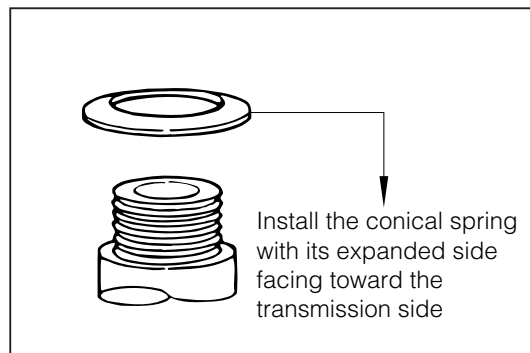
Tightening Torque: 98.1 - 137.3 N·m



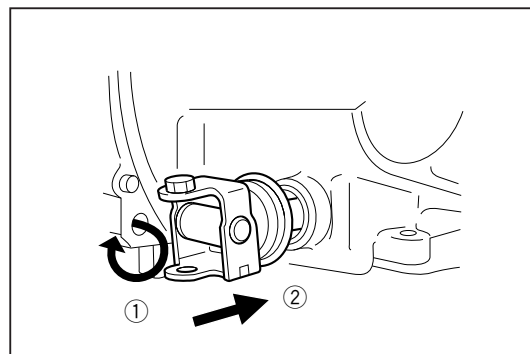
LMT00129-00122



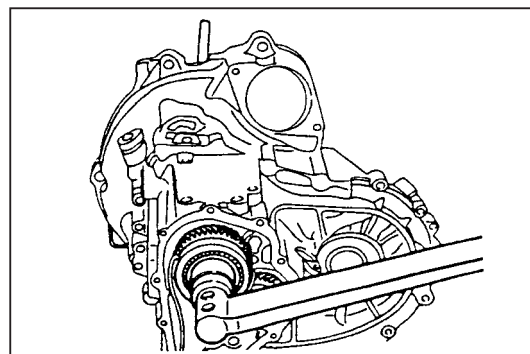
LMT00130-00123



LMT00131-00124



LMT00132-00125

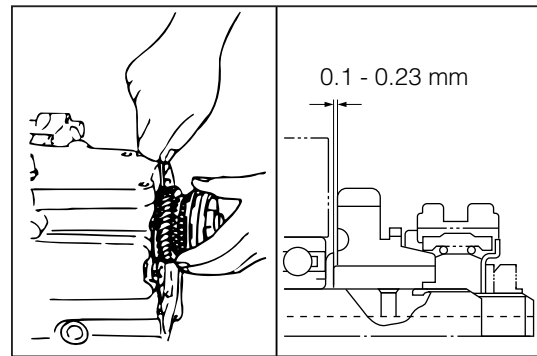


LMT00133-00126

- (4) Before the lock nut is staked, measure the end play of the 5th gear.

Specified Value: 0.1 - 0.23 mm

Limit: 0.4 mm



LMT00134-00127

- (5) Stake the lock nut, using a punch and a hammer.

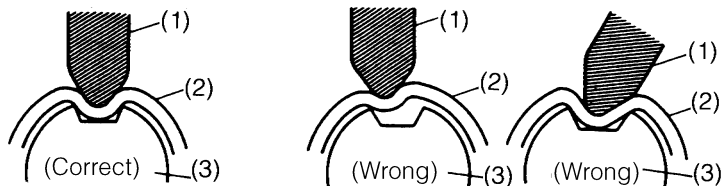
NOTE:

- When staking the lock nut, point a suitable staking tool toward the output shaft axis center and stake the lock nut securely, as shown in the figure below. (Poor staking may cause abnormal noise.)

(1) Suitable staking tool

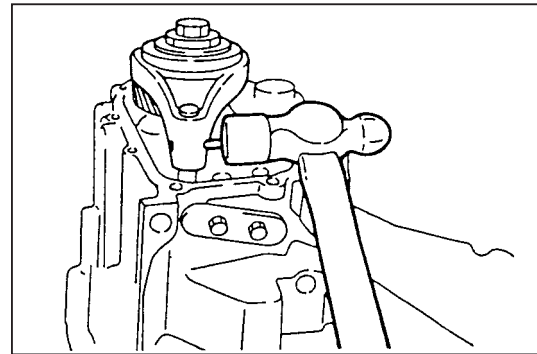
(2) New nut

(3) Shaft



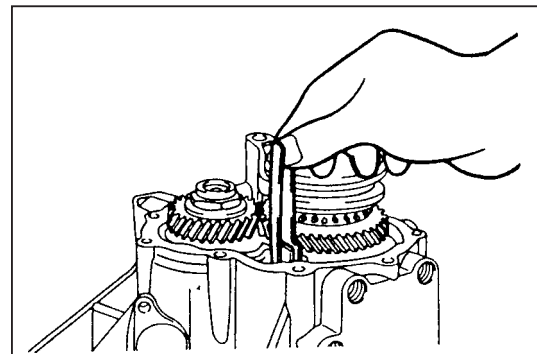
LMT00135-00128

28. Drive the slotted spring pin into position, until it becomes flush with the edge surface of the shift fork.



LMT00136-00129

29. Install the case cover oil pipe until its rib section comes into contact with the case.



LMT00137-00130

30. Assembly of transmission case cover

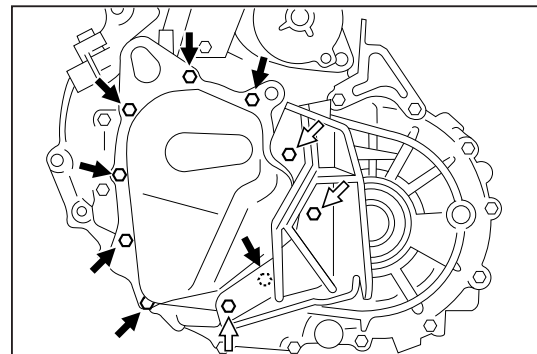
- (1) Apply the liquid gasket sealer (Three Bond 1216 or 1217) to the mating surfaces of the case, except for those hole areas.

- (2) Tighten the transmission case installing bolts. (M6 bolts)

Tightening Torque: 6.9 - 9.8 N·m ... 7 M6 bolts (↔)

- (3) Tighten the transmission installing bolts together with the left mounting. (M8 bolts)

Tightening Torque: 14.7 - 21.6 N·m ... 3 M8 bolts (↔)



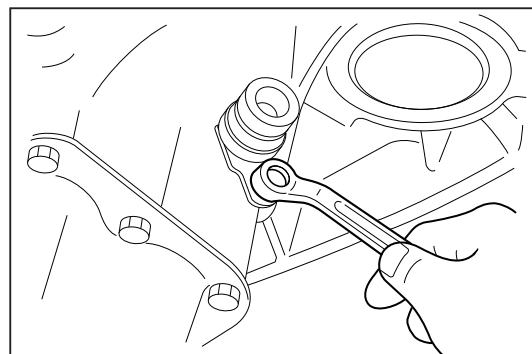
LMT00138-00131

31. Assemble the speedometer shaft sleeve subassembly and lock plate.

(1) Insert the lock plate into the speedometer shaft sleeve subassembly. Then, insert the subassembly into the transmission case by hand.

(2) Tighten the bolts.

Tightening Torque: 6.9 - 9.8 N·m



LMT00139-00132

32. Install the backup lamp switch w/gasket and breather plug.

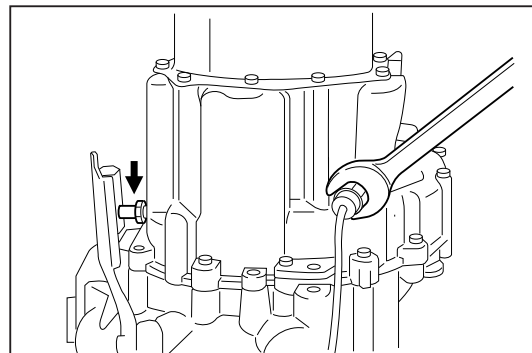
Tightening Torques:

29.4 - 49.0 N·m (Back up Lamp Switch)

9.8 - 12.7 N·m (Breather Plug)

NOTE:

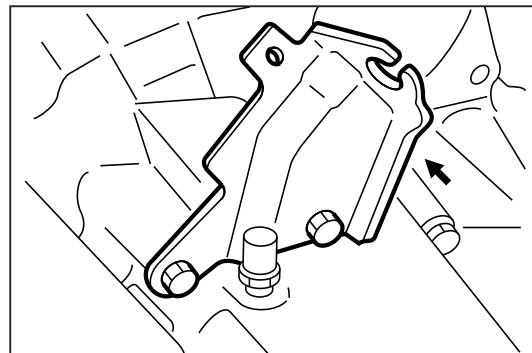
- Never reuse the removed gasket.



LMT00140-00133

33. Install the clutch cable bracket.

Tightening Torque: 14.7 - 21.6 N·m



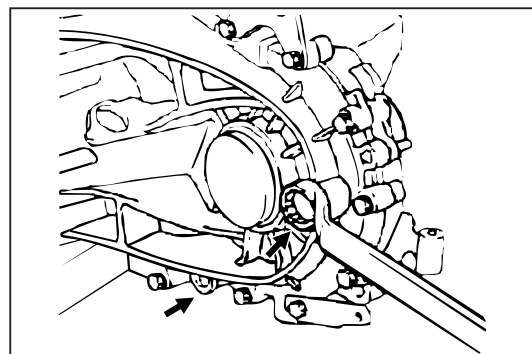
LMT00141-00134

34. Install the screw plugs (at the drain and filler sides).

Tightening Torque: 29.4 - 49.0 N·m

NOTE:

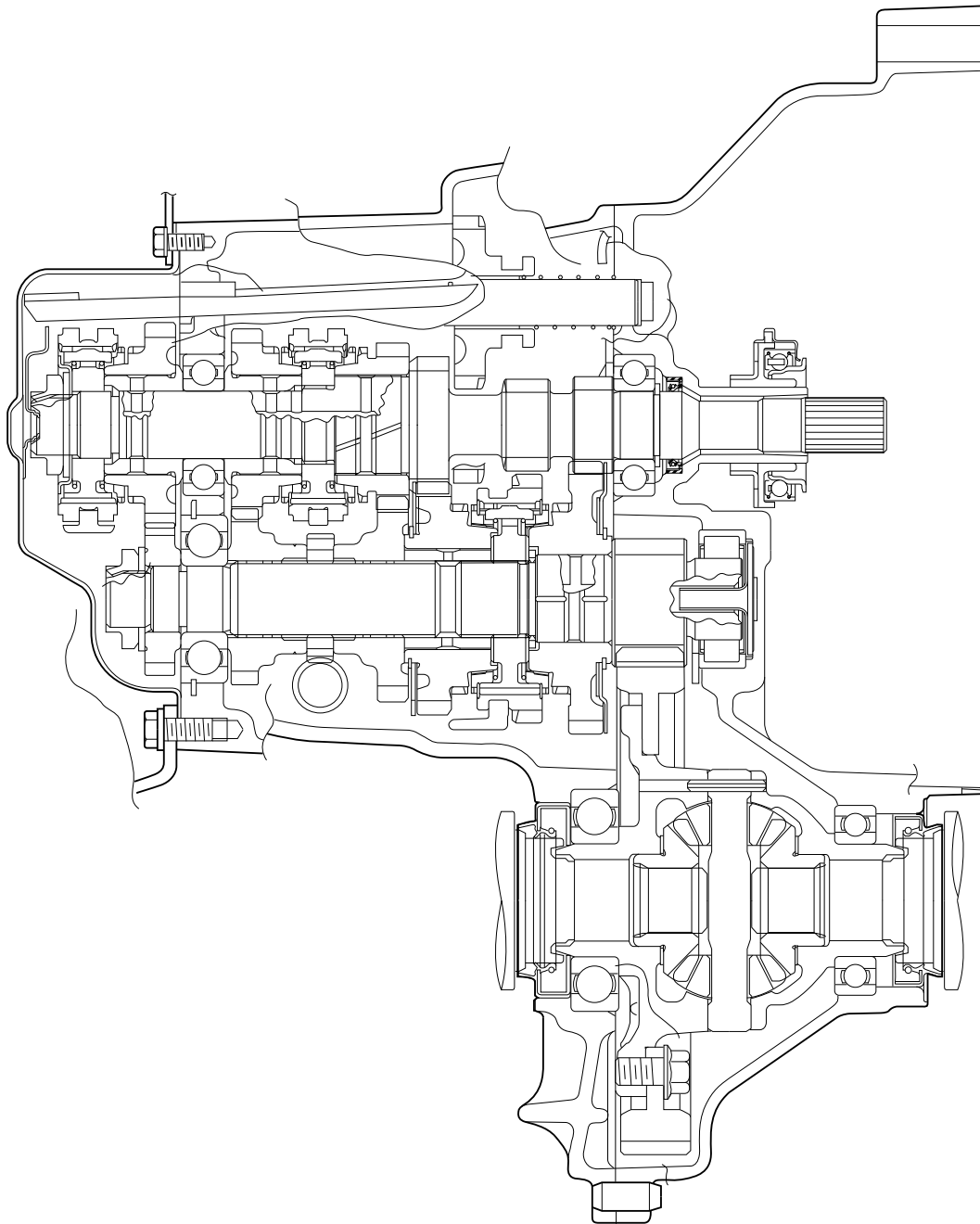
- Never reuse the removed gaskets.



LMT00142-00135

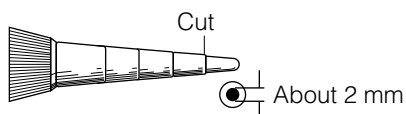
APPLICATION POINTS OF GREASE & BOND AND APPLICATION PROCEDURE

- ① **NOTE:**
As for each gear clustered
on the input and output shafts
and the rotary and sliding
sections of the oil seals,
apply gear oil to the entire
surface of each part.

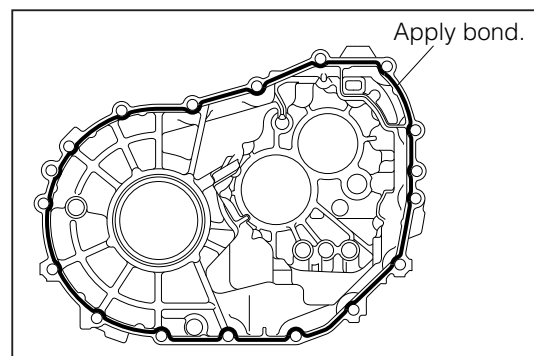


Application Procedure for Liquid Gasket Sealer (Three Bond 1216 Or 1217)

1. Cut the first stage of the nozzle of the sealer (Three Bond 1216 or 1217) that is furnished in accessories.



2. Remove any remaining trace of the liquid gasket that may be found on the housing or the case with thinner or a scraper. Care must be exercised not to scratch the surfaces during the cleaning.



LMT00039-00036

3. Apply the liquid sealer to the entire periphery of the cover subassembly transmission case and the case without any unapplied spot, as indicated in the illustration at the right.

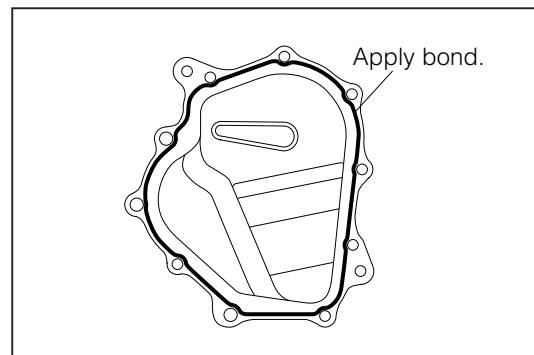
NOTE:

- Apply the liquid sealer to the inside of each hole, excluding those bolts holes.
- Be sure to perform the assembling within five minutes after the application of the liquid sealer.
- Make sure to dry the thinner completely.

NOTE:

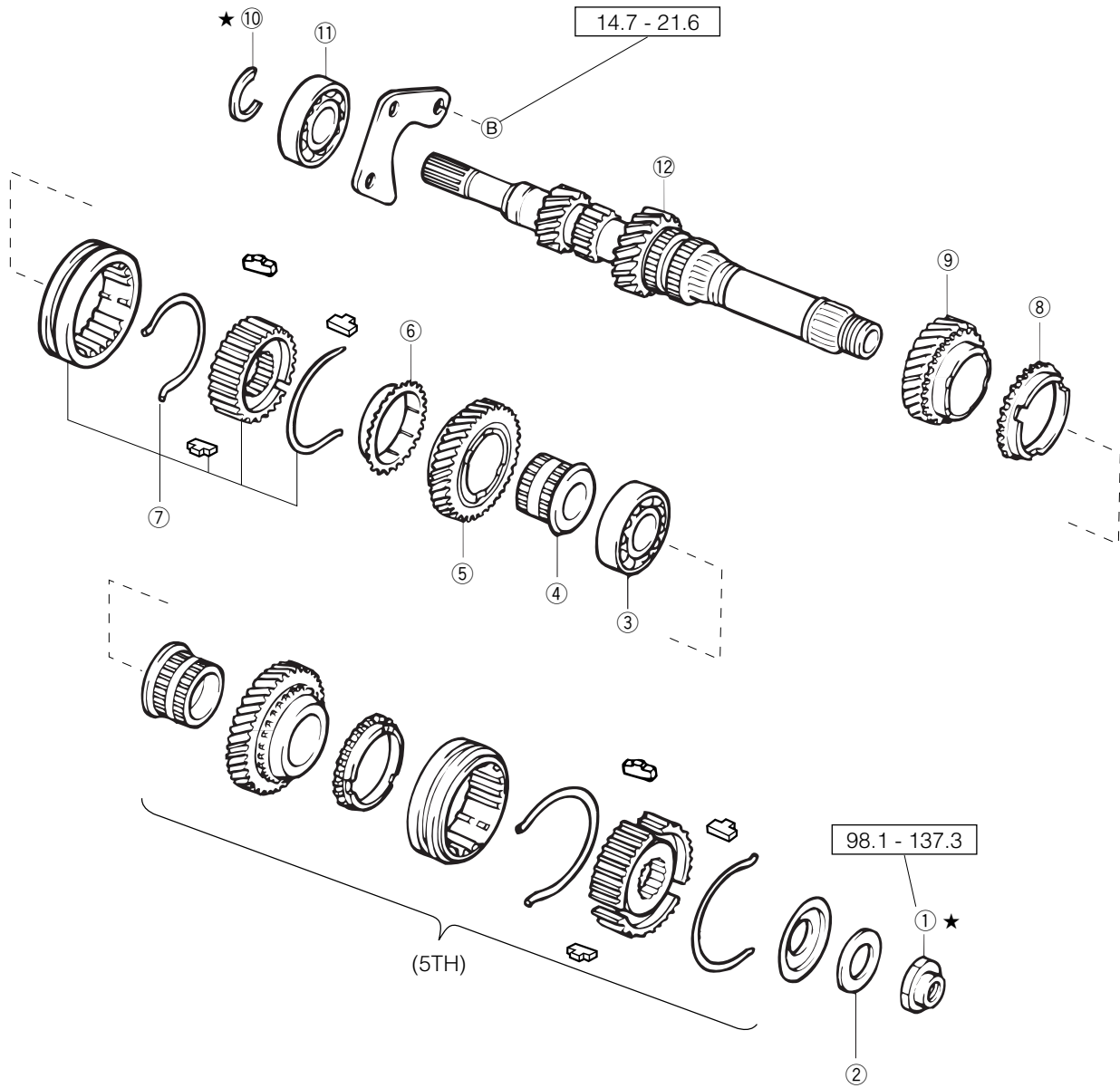
< Handling Instructions on Liquid gasket >

- The liquid gasket starts to cure when it reacts with the moisture in the atmosphere. Hence, upon completion of the work, be sure to expel any air trapped in the tube and tighten the tube cap securely.
- As regards the storage place for this liquid gasket, avoid such places where high temperature or high humidity prevails or those exposed to direct sunrays. Make sure to store it in a dry, cold and dark place. (The allowable limit for use is approximately six months.)



LMT00040-00037

INPUT SHAFT COMPONENTS



□ : Tightening torque
Unit : N·m
★ : Non-reusable parts

- ① Lock nut
- ② Conical washer
- ③ Bearing
- ④ 4th gear bushing
- ⑤ 4th gear
- ⑥ Synchronizer ring

- ⑦ Synchronizer hub assembly No. 2
- ⑧ Synchronizer ring
- ⑨ 3rd gear
- ⑩ Shaft snap ring
- ⑪ Bearing
- ⑫ Input shaft

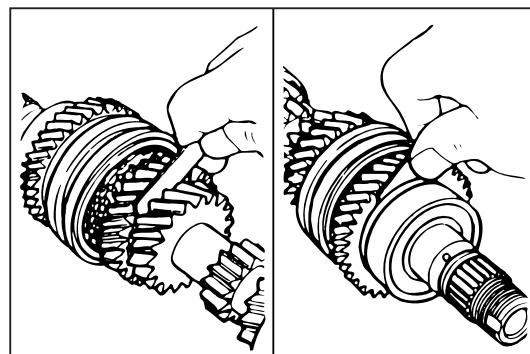
Operation Prior to Disassembly

1. Pull out the input shaft and the output shaft at the same time from the transmission case.
2. Measure the end play of the 3rd gear and 4th gear.

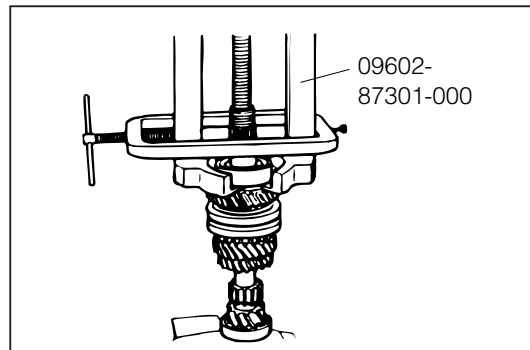
Part	Specified value mm	Limit mm
3rd gear	0.1 - 0.37	0.5
4th gear	0.1 - 0.23	0.4

DISASSEMBLY

1. Remove the bearing, using the following SST.
SST: 09602-87301-000

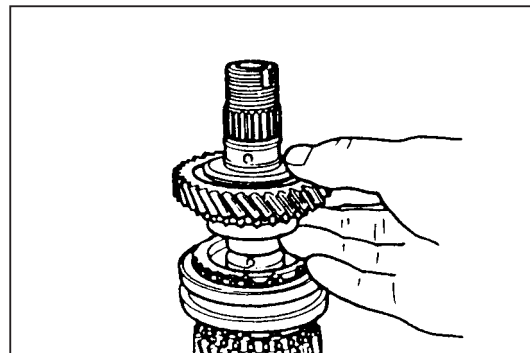


LMT00144-00137



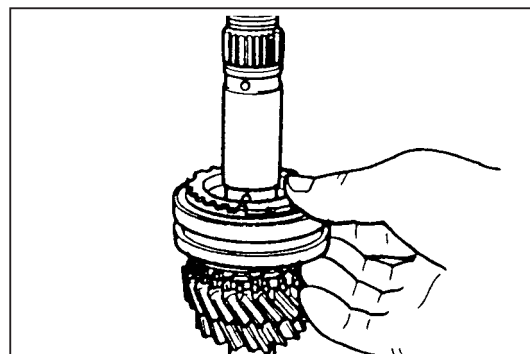
LMT00145-00138

2. Remove the 4th gear and 4th gear bush.



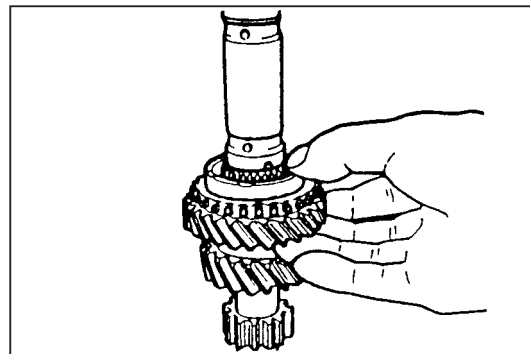
LMT00146-00139

3. Remove the synchronizer ring. Then, remove the synchronizer hub assembly No. 2. Detach the two synchromesh shifting springs and three synchromesh shifting keys.



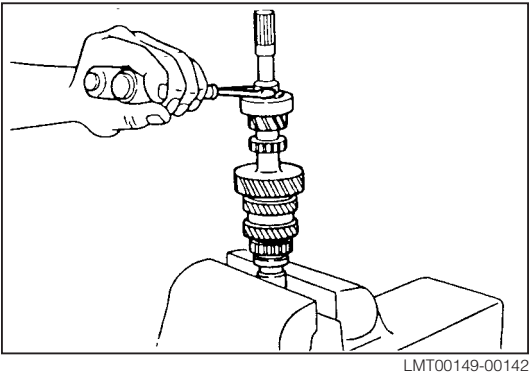
LMT00147-00140

4. Remove the synchronizer ring and 3rd gear.

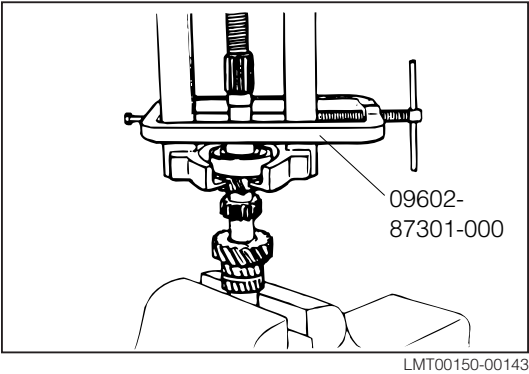


LMT00148-00141

5. Detach the shaft snap ring, using two screwdrivers.
- NOTE:
- Special care must be exercised as to the snap ring which may be lost during the disassembly.
 - Never reuse the shaft snap ring.



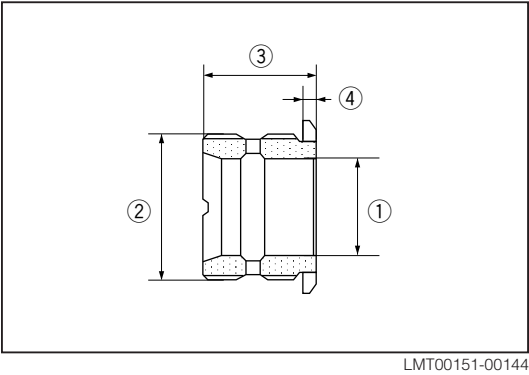
6. Remove the bearing, using the following SST.
- SST: 09602-87301-000



INSPECTION

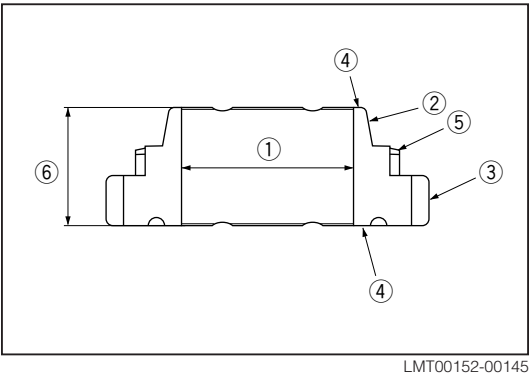
1. Check the 4th and 5th gear bush for wear or damage.

Part	Specified value mm	Limit mm
Bore ①	25.027 - 25.042	25.050
Outer diameter ②	36.940 - 36.960	36.890
Overall length ③	28.97 - 29.03	28.97
Thickness of flange section ④	2.94 - 3.06	2.94



2. Check each gear for wear or damage.

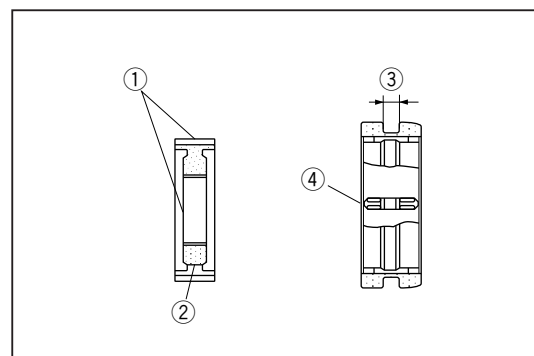
Part	Specified value mm		Limit mm	
	Bore ①	Width ⑥	Bore ①	Width ⑥
3rd gear (input)	37.000 - 37.025	27.23 - 27.30	37.25	27.2
4th gear (input)	37.000 - 37.025	25.80 - 25.87	37.25	25.7
Splined section	Visually inspect the section for excessive damage or wear.			
Gear section ③				
Tapered section ②				
Both edge surfaces of gear ④	Inspect the section for excessive play, nick or rounded edge.			
Fitting section with hub sleeve ⑤				



3. Check the clutch hub and sleeve for the 3rd & 4th gear use for wear or damage.

Clutch Hub

Part	Limit
Splined section ①	Visually inspect the section for excessive damage or wear.
Synchromesh shifting key fitting groove ②	
With the hub fitted into the sleeve, check for excessive looseness in up-&-down direction and slant of the hub and sleeve.	



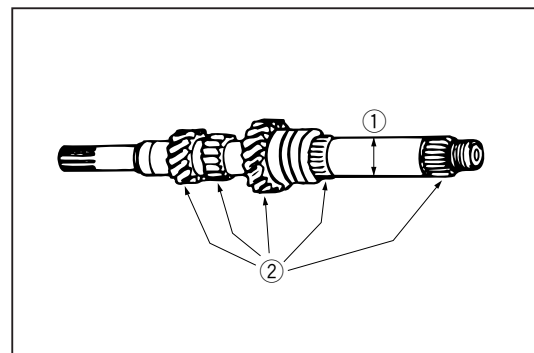
LMT00153-00146

Sleeve

Part	Specified value mm	Limit mm
Shift fork groove width ③	7.05 - 7.12	7.3
Fitting section with gear ④	Visually inspect the section for excessive damage, wear, nick or rounded edge.	

4. Check the input shaft for wear or damage.

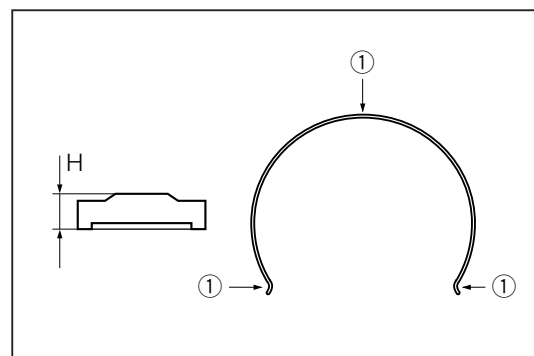
Part	Specified value mm	Limit mm
Outer diameter of bush bore-contact-section ①	25.002 - 25.017	24.99
Tooth surfaces of gear and spline ②	Visually inspect the surface for excessive damage, wear, nick or rounded edge.	



LMT00154-00147

5. Check the synchromesh shifting key and key spring for wear or damage.

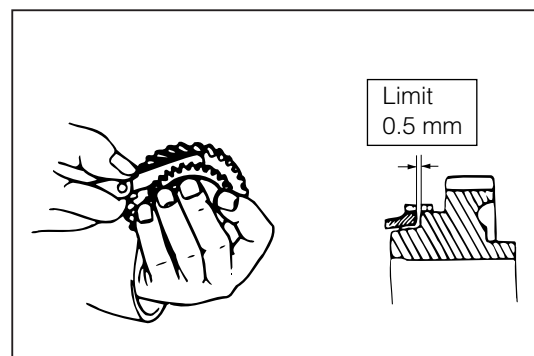
Part	Specified value mm	Limit mm
Key for 3rd & 4th gear (dimension H)	4.6 - 4.8	4.3
Spring ①	Visually inspect the spring for damage or distortion.	



LMT00155-00148

6. Check the synchronizer ring for wear or damage.

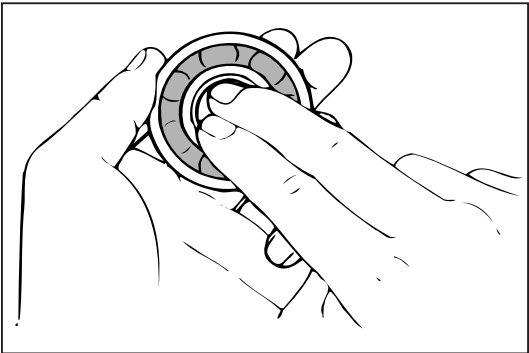
Part	Specified value mm	Limit mm
Gap when synchronizer ring is pressed to gear	3rd and 4th gears	0.85 - 1.45
Damage at inner tapered section	Visually inspect the section for excessive damage.	
Damage at spline		



LMT00156-00149

7. Check the bearing for wear or damage.

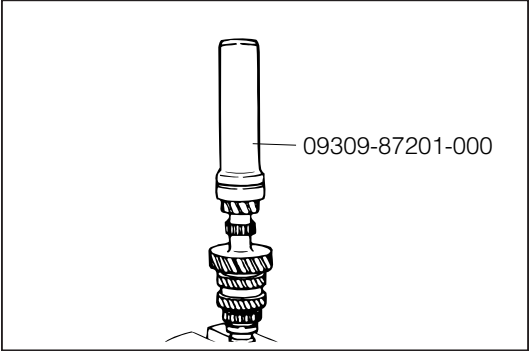
Part	Inspection criteria
Bearing	When the inner race is turned by your fingers, it should turn smoothly without any binding.



LMT00157-00150

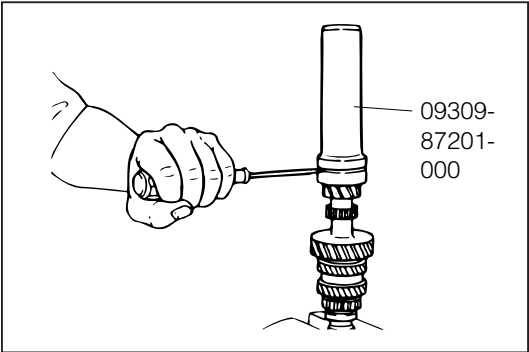
ASSEMBLY

- 1. Apply gear oil to the entire surface of the rotary or sliding section of each gear of the input shaft.
- 2. Assemble the bearing, using the following SST.
SST: 09309-87201-000



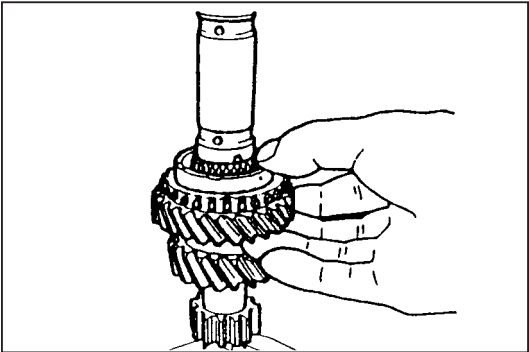
LMT00158-00151

- 3. Drive a new snap ring into position, using a screwdriver. For easier installation, hold the snap ring with the following SST.
SST: 09309-87201-000



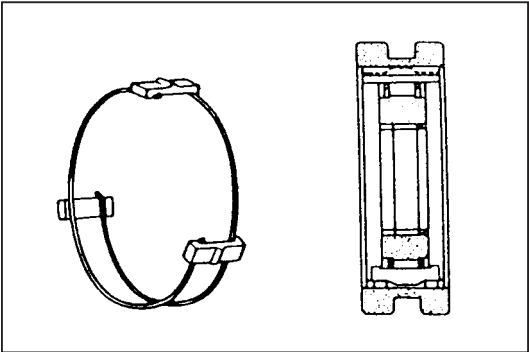
LMT00159-00152

- 4. Assemble the 3rd gear.



LMT00160-00153

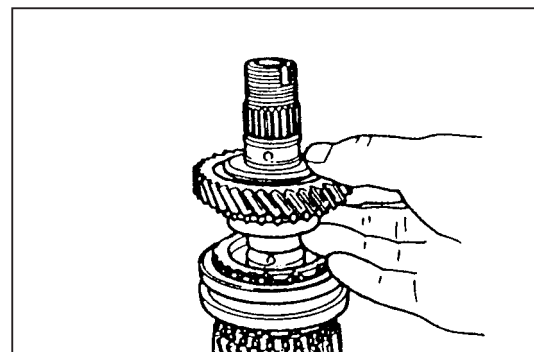
- 5. Assemble the synchronizer ring and synchronizer hub assembly No. 2.
(1) Assemble the clutch and sleeve. Ensure that both parts can slide smoothly.
(2) Assemble the shifting keys and springs.



LMT00161-00154

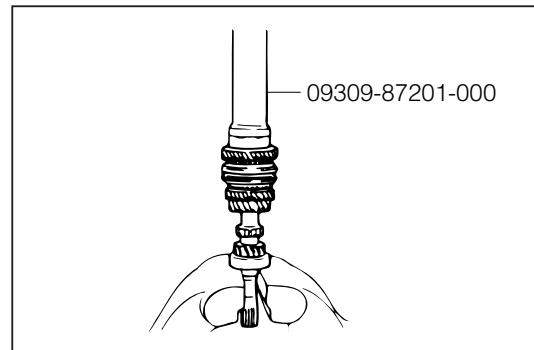
- NOTE:
- Hook the key springs to the synchromesh shifting keys during the assembly, as shown in the right figure.

6. Assemble the synchronizer ring and 4th gear.
7. Assemble the 4th gear bushing.



LMT00162-00155

8. Assemble the bearing, using the following SST.
SST: 09309-87201-000



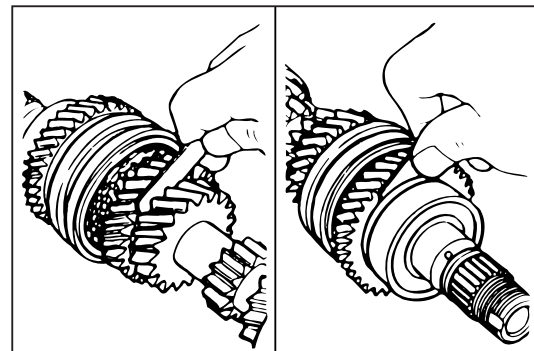
LMT00163-00156

9. Upon completion of the assembly, measure the end play of each part of the input shaft.

Part	Specified value mm	Limit mm
3rd gear	0.1 - 0.37	0.5
4th gear	0.1 - 0.23	0.4

NOTE:

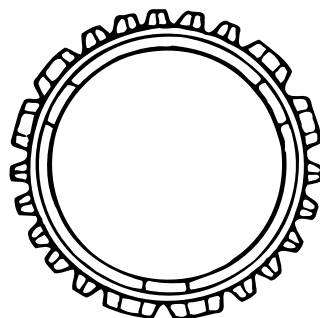
- If the end play does not comply with the specification, check the gear, bushing and clutch hub sliding section. Replace any parts which exhibit abnormality.



LMT00164-00157

DISCRIMINATION

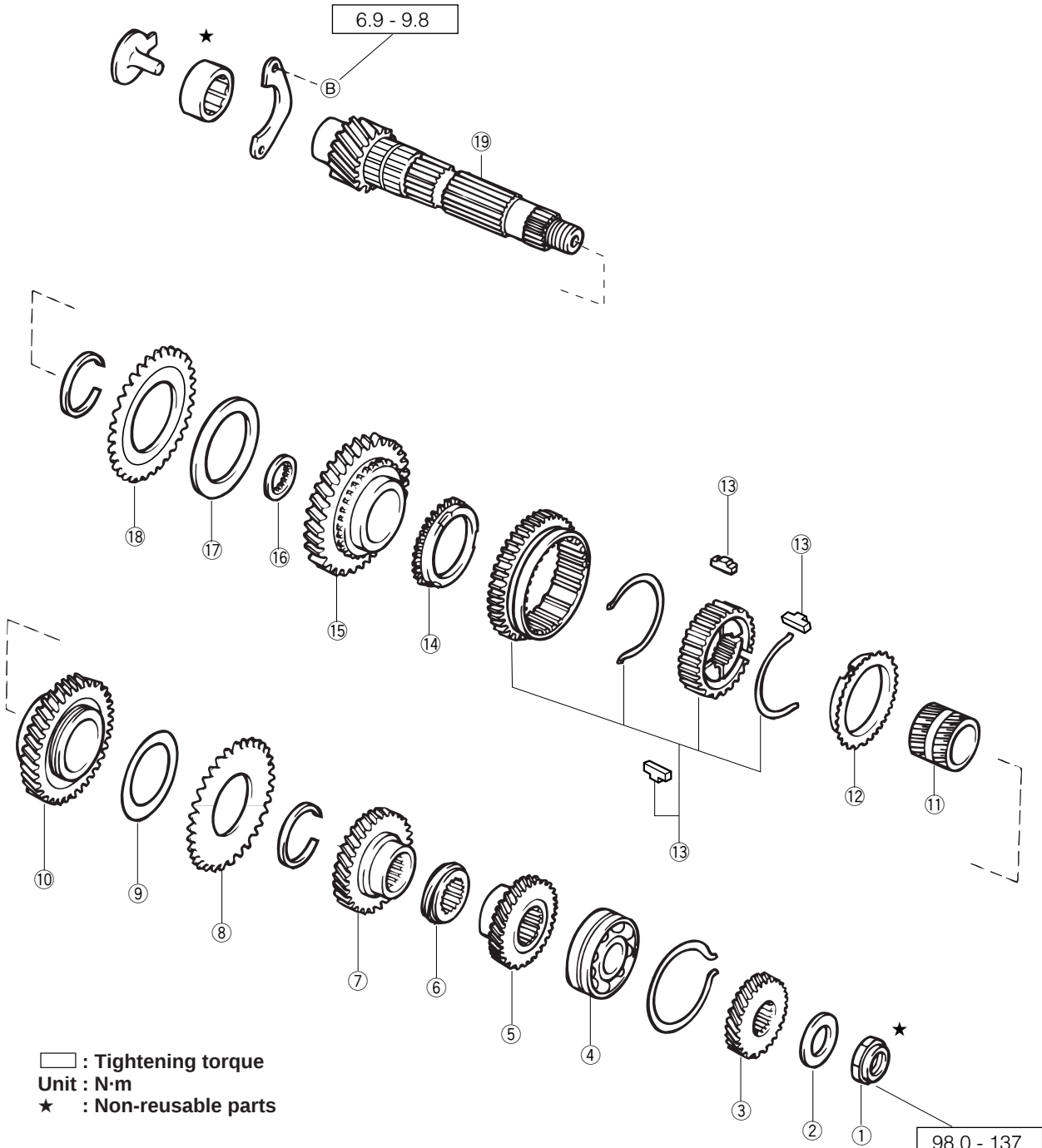
1. Discrimination of synchronizer ring



Synchronizer ring No. 1
(For 3rd, 4th and 5th gear)

LMT00165-00158

OUTPUT SHAFT COMPONENTS



- ① Lock nut
- ② Conical spring washer
- ③ Output 5th gear
- ④ Bearing
- ⑤ Output 4th gear
- ⑥ Speedometer drive gear
- ⑦ Output 3rd gear
- ⑧ Scissors gear
- ⑨ Spring plate
- ⑩ 2nd gear assembly

- ⑪ Bushing
- ⑫ Synchronizer ring No. 3
- ⑬ Synchronizer hub assembly
- ⑭ Synchronizer ring No. 2
- ⑮ 1st gear assembly
- ⑯ Washer
- ⑰ Spring plate
- ⑱ Scissors gear
- ⑲ Output shaft

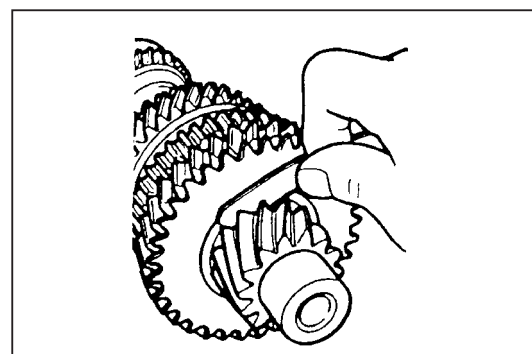
Operation Prior to Disassembly

1. Pull out input and output shaft at the same time from transmission case.
2. Measure the end play of the 1st and 2nd gear of the output shaft.

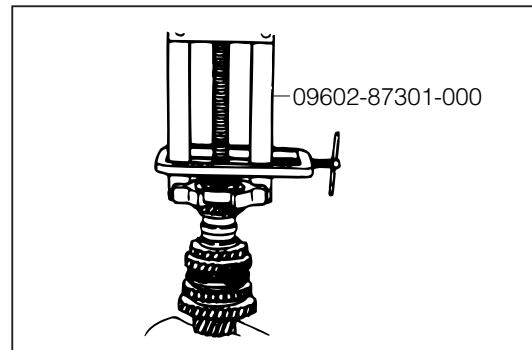
Part	Specified value mm	Limit mm
1st gear	0.1 - 0.4	0.5
2nd gear	0.1 - 0.23	0.4

DISASSEMBLY

1. Remove bearing, using following SST.
SST: 09602-87301-000

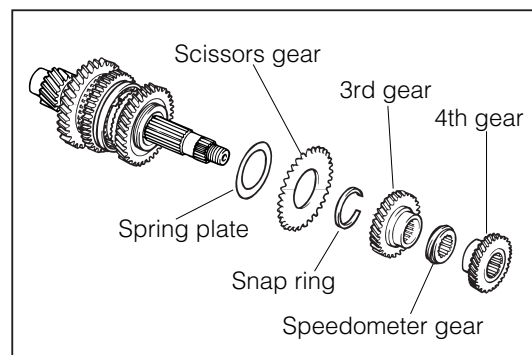


LMT00042-00039



LMT00043-00040

2. Remove output 4th gear, speedometer drive gear, output 3rd gear, snap ring, scissors gear and spring plate.

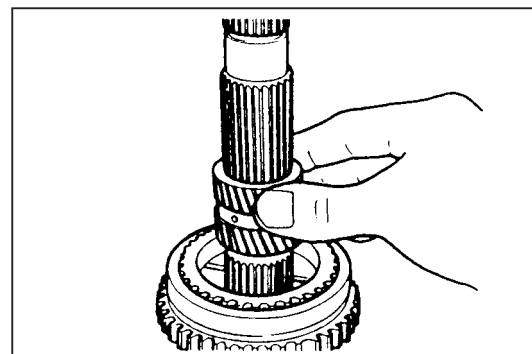


LMT00044-00041

3. Remove 2nd gear.

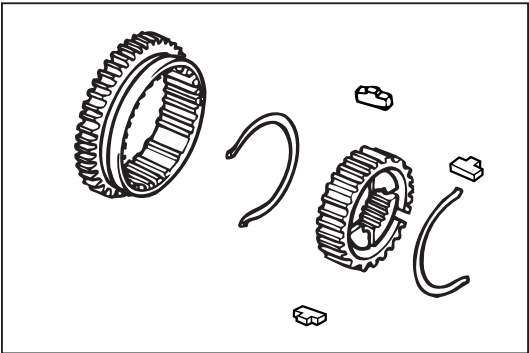
LMT00045-00000

4. Remove 2nd gear bush and synchronizer ring No. 3.



LMT00046-00042

- 5. Removal of synchronizer hub assembly.
(1) Remove the two synchromesh shifting key springs and three synchromesh shifting keys.
- 6. Remove the synchronizer ring No. 2 and the 1st gear.



LMT00166-00159

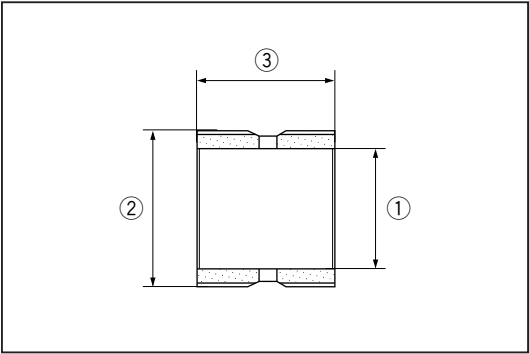
- 7. Remove the washer.

LMT00167-00000

INSPECTION

- 1. Check the 2nd gear bushing for wear or damage.

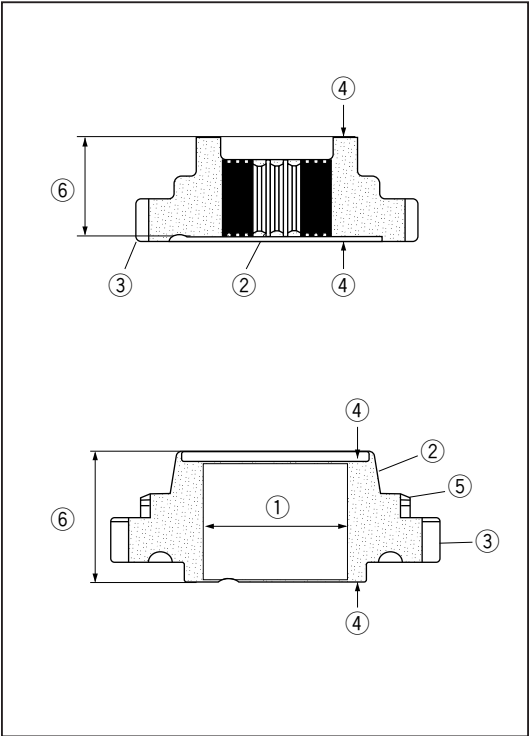
Part	Specified value mm	Limit mm
Bore ①	28.87 - 28.885	28.98
Outer diameter ②	36.940 - 36.960	36.89
Overall length ③	32.47 - 32.53	32.47



LMT00168-00160

- 2. Check each gear for wear or damage.

Part	Specified value mm		Limit mm	
	Bore ①	Width ⑥	Bore ①	Width ⑥
1st gear (output)	32.025 - 32.050	30.23 - 30.30	32.075	30.2
2nd gear (output)	37.000 - 37.025	32.30 - 32.37	37.05	32.2
3rd gear	37.000 - 37.025	27.23 - 27.30	37.05	27.2
4th gear	37.000 - 37.025	25.80 - 25.87	37.05	25.7
5th gear	37.000 - 37.025	25.80 - 25.87	37.05	25.7
Splined section Tapered section ②	Visually inspect the section for excessive damage or wear.			
Gear section ③				
Both edge surfaces of gear ④				
Fitting section with hub sleeve ⑤	Inspect the section for excessive play, nick or rounded edge.			

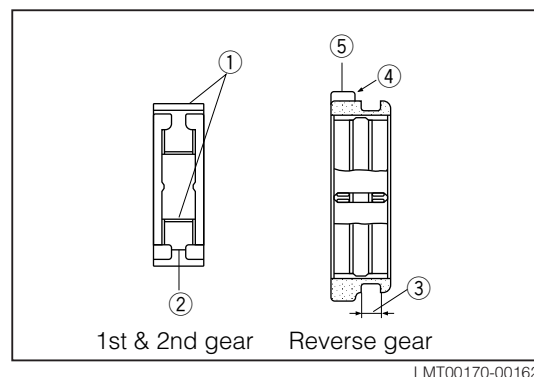


LMT00169-00161

- Check the clutch hub for the 1st & 2nd gears and reverse gear for wear or damage.

Clutch Hub

Part	Limit
Splined section ①	Visually inspect the section for excessive damage or wear.
Synchromesh shifting key fitting groove ②	
With the hub fitted into the sleeve, check for excessive looseness in up-&-down direction and the slant of the hub and sleeve.	

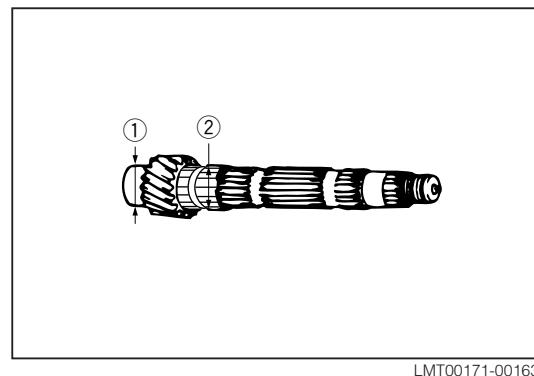


Reverse Gear

Part	Specified value mm	Limit mm
Shift fork groove width ③	7.05 - 7.18	7.3
Fitting section with gear ④	Visually inspect the section for excessive damage, wear, nick or rounded edge.	
Reverse gear tooth surface ⑤		

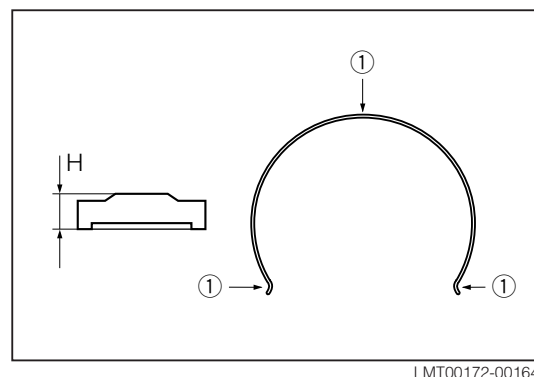
- Check the output shaft for wear or damage.

Part	Specified value mm	Limit mm
Outer dia. of needle roller bearing-contact sec. ①	29.979 - 30.000	29.96
Outer dia. of 1st gear-contact sec. ②	31.971 - 31.991	31.96
Tooth surfaces of gear and spline	Visually inspect the surface for excessive damage, wear, nick or rounded edge.	



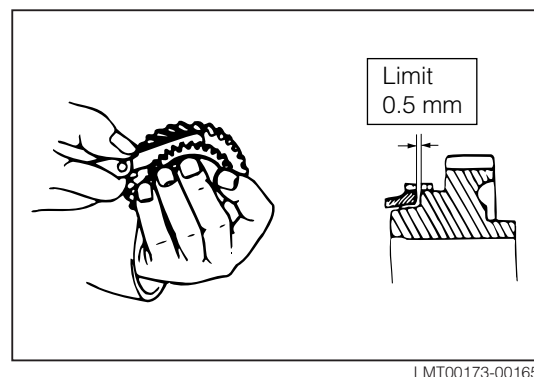
- Check the synchromesh shifting key and key spring for wear or damage.

Part	Specified value mm	Limit mm
Shifting key for 1st & 2nd gears (dimension H)	5.0 - 5.2	4.7
Spring ①	Visually inspect the spring for damage or distortion.	



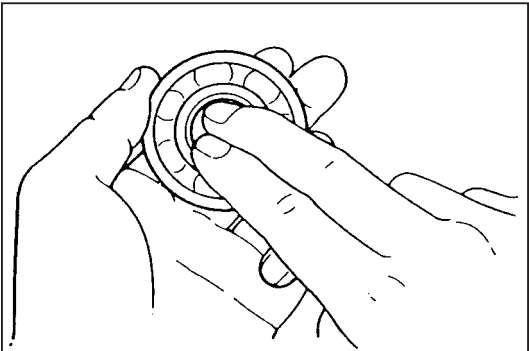
- Check the synchronizer ring for wear or damage.

Part	Specified value mm	Limit mm
Gap when synchronizer ring is pressed to gear 1st and 2nd gears	0.85 - 1.45	0.5
Damage at inner tapered section	Visually inspect the section for excessive damage.	
Damage at spline		



7. Check the bearing for wear or damage.

Part	Inspection criteria
Bearing	When the inner race is turned by your fingers, it should turn smoothly without any binding.



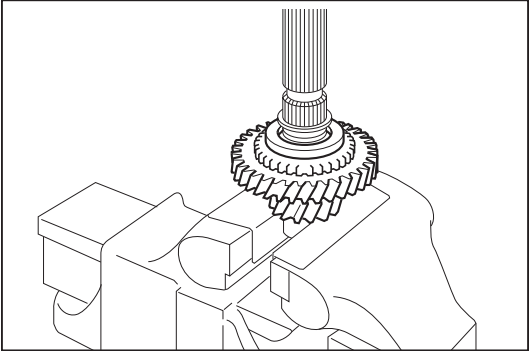
LMT00054-00050

ASSEMBLY

NOTE:

- Apply gear oil to the entire surface of the rotary or sliding section of each gear of the output shaft.

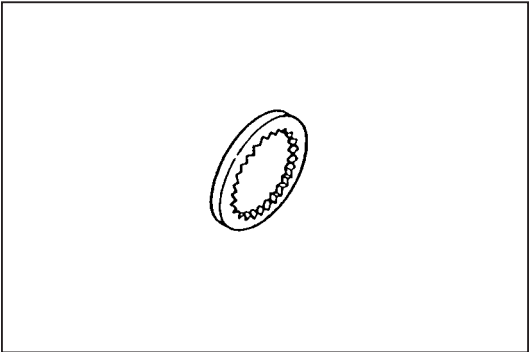
1. Assemble spring plate, scissors gear and snap ring.



LMT00055-00051

2. Installation of the 1st gear.

3. Assemble the washer.



LMT00056-00052

4. Assembly of synchronizer hub assembly.

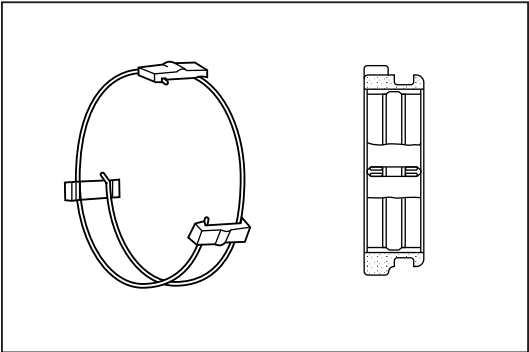
(1) Assemble hub clutch and reverse gear. Ensure that both parts can slide smoothly.

(2) Assemble the shifting keys and springs.

NOTE:

- Hook the key springs to the synchromesh shifting keys during the assembly, as shown in the right figure.

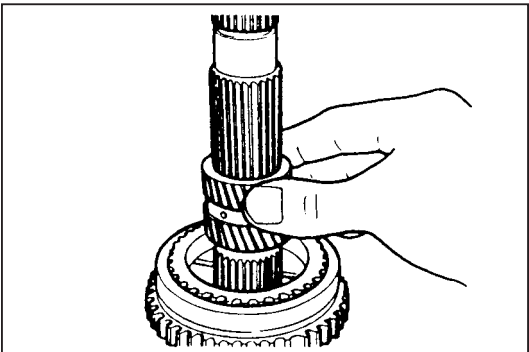
(3) Assemble the synchronizer ring No. 2.



LMT00057-00053

5. Assemble spring plate, scissors gear and snap ring to 2nd gear.

Then, assemble synchronizer ring No. 3, bushing and 2nd gear.

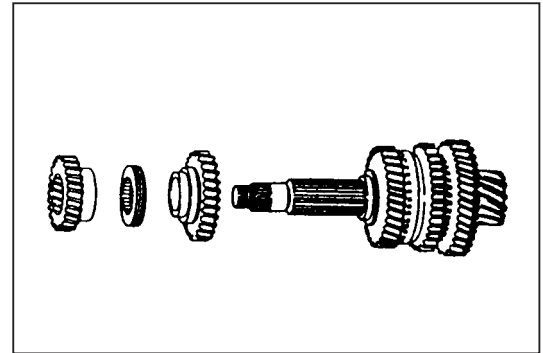


LMT00058-00054

6. Assemble the output 3rd gear, speedometer drive gear and output 4th gear.

NOTE:

- Apply gear oil to the entire surface of the rotary or sliding section of each gear.



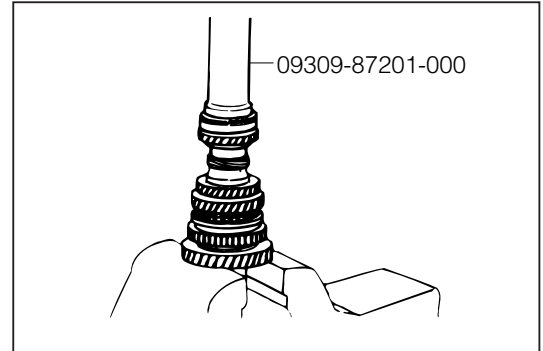
LMT00059-00055

7. Assemble the bearing, using the following SST.

SST: 09309-87201-000

NOTE:

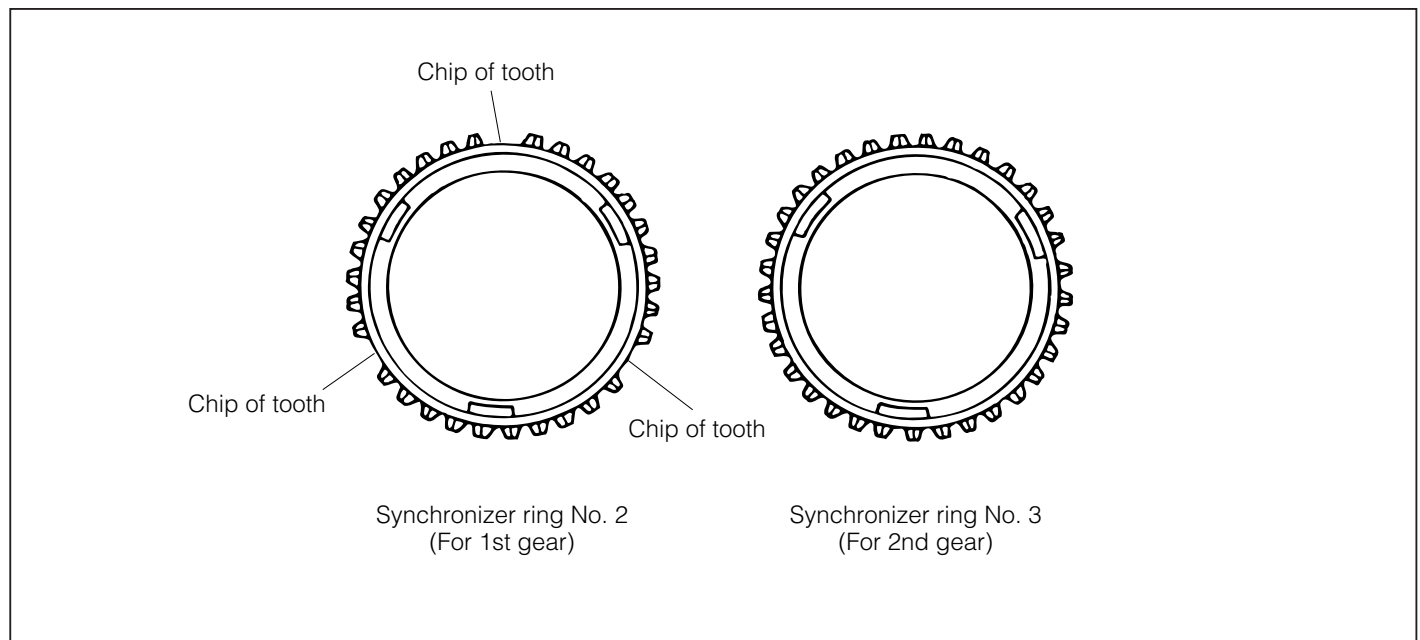
- The bearing should be assembled in such a way that the groove in the bearing outer race may come at the upper side.



LMT00060-00056

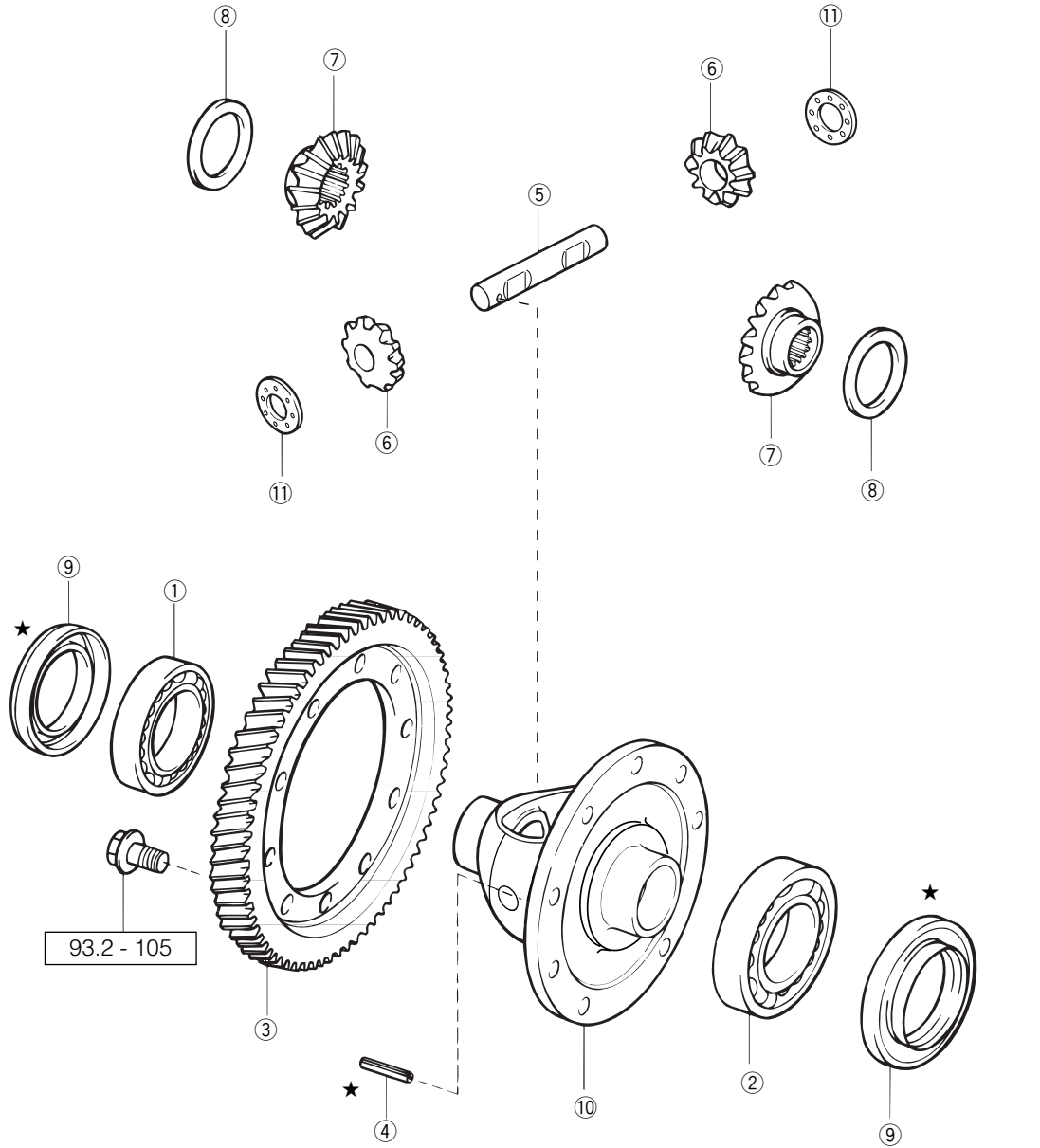
DISCRIMINATION

1. Discrimination of synchronizer ring



LMT00061-00057

DIFFERENTIAL GEAR COMPONENTS



 : Tightening torque
 Unit : N·m
 ★ : Non-reusable parts

- ① Radial ball bearing
- ② Radial ball bearing
- ③ Differential ring gear
- ④ Slotted spring pin
- ⑤ Differential pinion shaft
- ⑥ Differential pinion

- ⑦ Differential side gear
- ⑧ Differential side gear washer
- ⑨ Oil seal
- ⑩ Differential case
- ⑪ Differential pinion washer

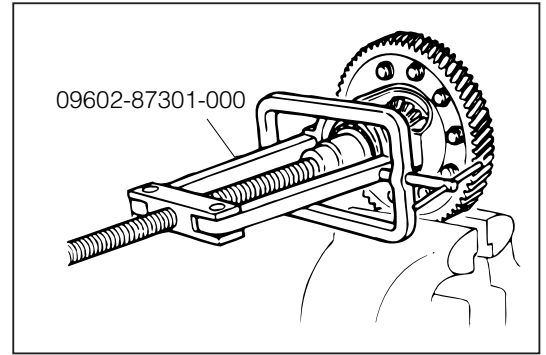
BEARING

NOTE:

- Check bearings for wear and rough rotation. If bearings are normal condition, removal is not necessary.

REMOVAL

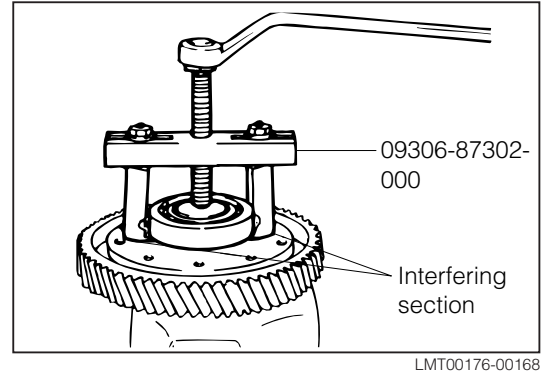
- Remove the bearing at the engine side, using the following SST.
SST: 09602-87301-000



- Remove the bearing at the transmission side, using the following SST.
SST: 09306-87302-000

NOTE:

- Grinding off the interfering section of the SST will make the operation easier.

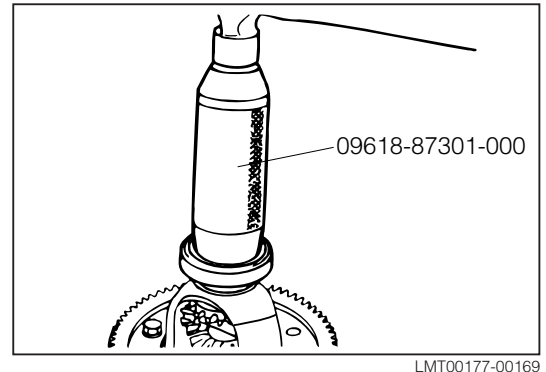


INSTALLATION

- Assemble a new radial ball bearings, using the following SST.
SST: 09618-87301-000

NOTE:

- Install the radial ball bearings with the bearing having a larger outer diameter assembled at the ring gear side.

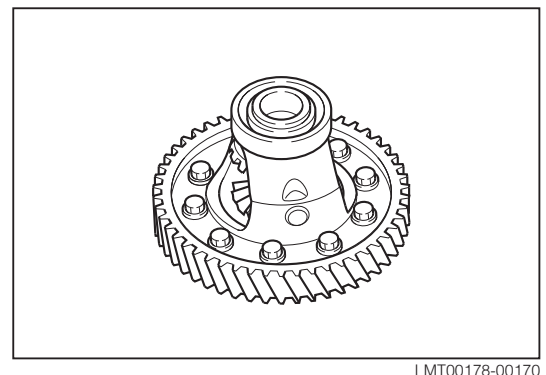


DIFFERENTIAL GEAR

INSPECTION

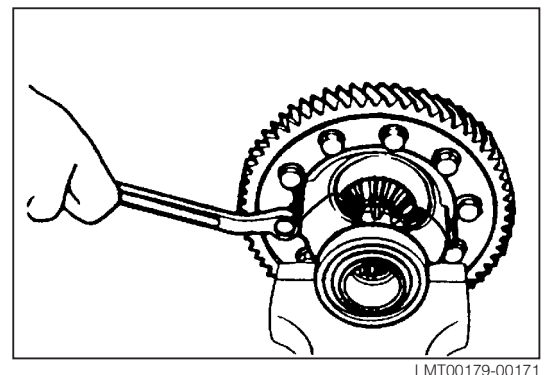
- Check the differential ring gear for wear or damage.

Part	Inspection criteria
Gear tooth surface	Visually inspect the surface for wear, damage, nick or rounded edge.

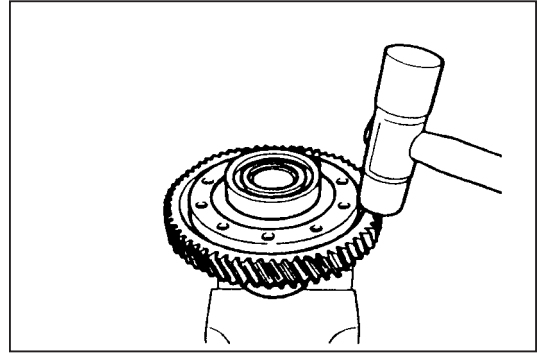


REMOVAL

- Clamp the differential case in a vise. Remove the attaching bolts.



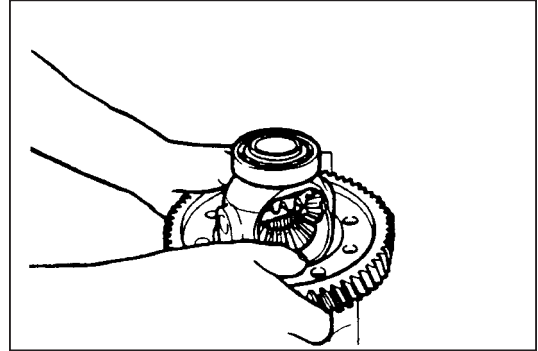
2. Remove the differential ring gear.
If any difficulty in removing the ring gear is encountered, evenly tap the peripheral section of the ring gear, using a plastic hammer.



LMT00180-00172

INSTALLATION

1. Install the ring gear in such a way that the side having large chamfer at its inner diameter comes at the case side.

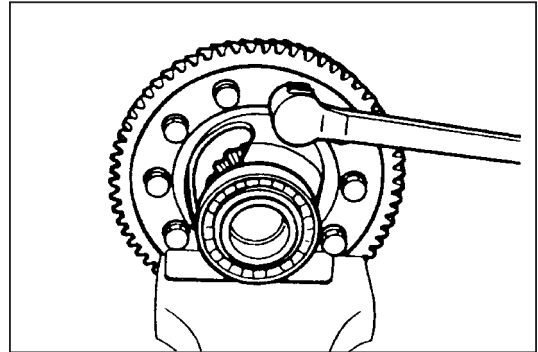


LMT00181-00173

2. Tighten the ring gear attaching bolts.
Tightening Torque: 93.2 - 105 N·m

NOTE:

- Be sure to attach the lock plate to the two bolts provided in the pinion shaft direction.



LMT00182-00174

DIFFERENTIAL CASE

DISASSEMBLY

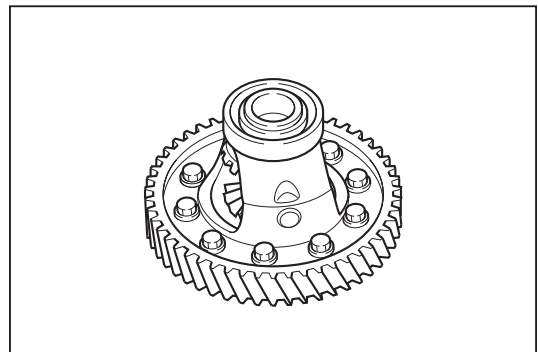
NOTE:

- As for the side gears, pinions and pinion shaft, their disassembling and assembling operations can be carried out without removing both bearings or ring gear.

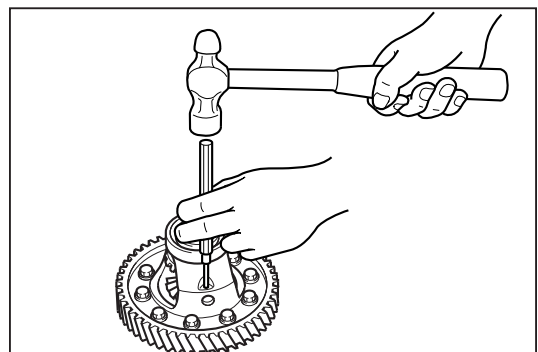
1. Disassemble the radial ball bearings.
2. Disassemble the ring gear.
3. Drive out the slotted spring pin, using a punch pin.

NOTE:

- Never reuse the slotted spring pin.

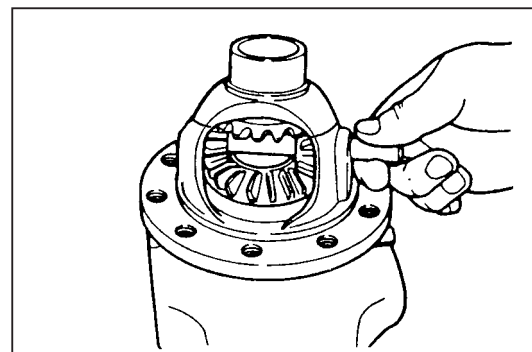


LMT00183-00175



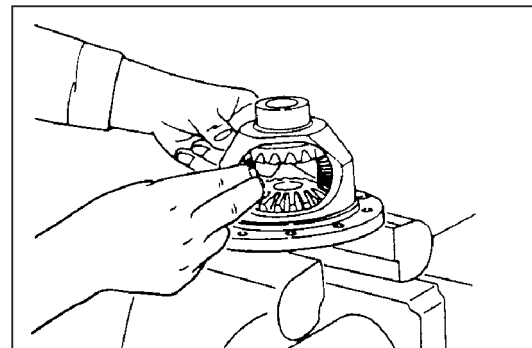
LMT00184-00176

4. Pull out the differential pinion shaft.



LMT00185-00177

5. Remove the pinions, pinion washers, side gears and side gear washers.

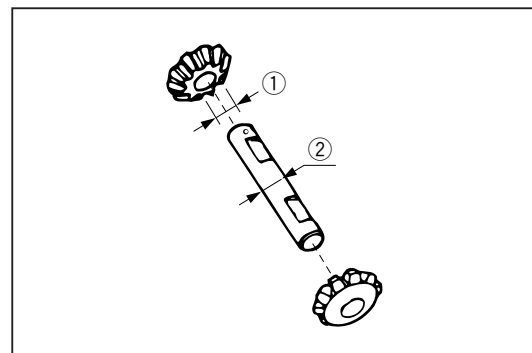


LMT00186-00178

INSPECTION

1. Check the side gears, pinions and pinion shaft for wear or damage.

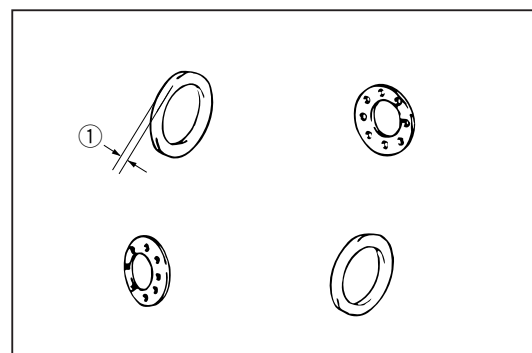
Part	Specified value mm	Limit mm
Pinion shaft fitting hole of pinion ①	15.03 - 15.08	15.10
Outer diameter of pinion shaft ②	14.944 - 14.962	14.94
Check the gear tooth surface and the splined section of the side gear for wear or damage.		



LMT00187-00179

2. Check the side gear thrust washers and pinion washers for wear or damage.

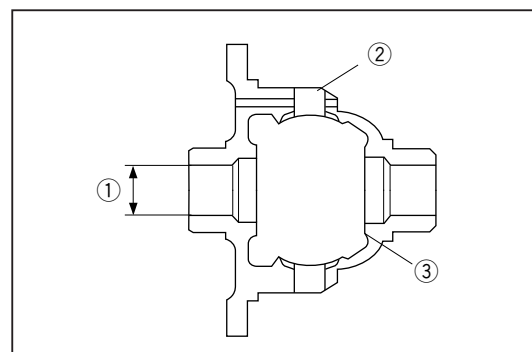
Part	Specified value mm	Limit mm
Thickness of thrust washer ①	0.95 - 0.85	0.70
Washer surface	Visually inspect the section for excessive wear or damage.	



LMT00188-0180

3. Check the differential case for wear or damage.

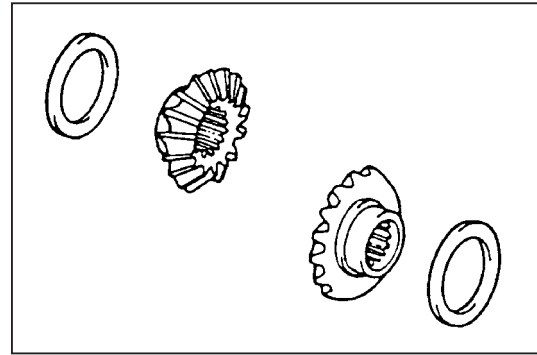
Part	Specified value mm	Limit mm
Drive shaft fitting hole ①	29.007 - 29.028	29.03
Pinion gear contact section ②	Visually inspect the section for excessive wear or damage.	
Side gear thrust washer contact section ③		



LMT00189-00181

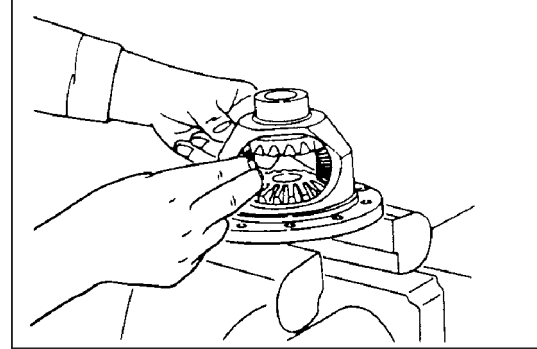
ASSEMBLY

1. Assemble the differential washers and differential side gears into the differential case.



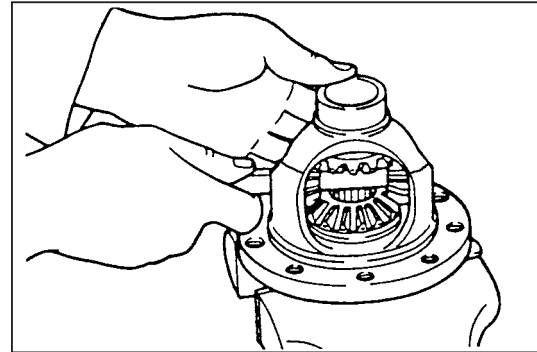
LMT00190-00182

2. Assembly of differential pinions and washers
 - (1) Make the two pinions mesh with the side gears, working from the case side. Rotate the side gear so that the pinion's hole may align with the pinion shaft hole provided in the case.



LMT00191-00183

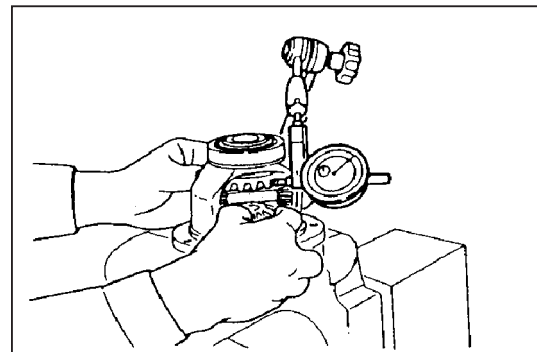
3. Assemble the differential pinion shaft.



LMT00192-00184

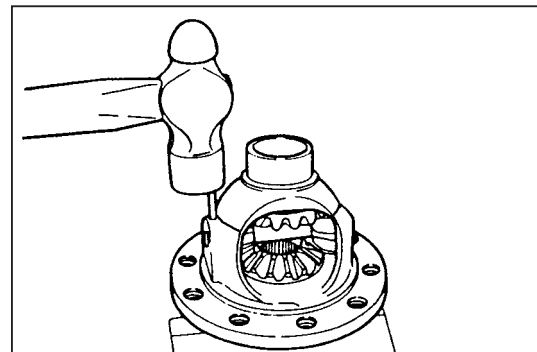
4. Side gear backlash measurement
 - (1) Fix the side gear at one side.
 - (2) Measure the backlash of each side gear at the right and left sides at several points, using a dial gauge.

Specified Backlash: 0.02 - 0.21 mm



LMT00193-00185

5. New slotted spring pin installation
 - (1) Align the pin hole of the pinion shaft with the corresponding pin hole in the case.
 - (2) Working from the backside of the case (ring gear side), drive a new slotted spring pin into position, until it becomes flush with the case edge surface.

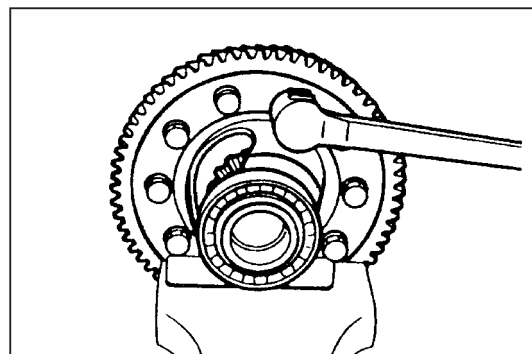


LMT00194-00186

6. Install the ring gear onto the differential case.
7. Tighten the ring gear attaching bolts.
Tightening Torque: 93.2 - 105 N·m

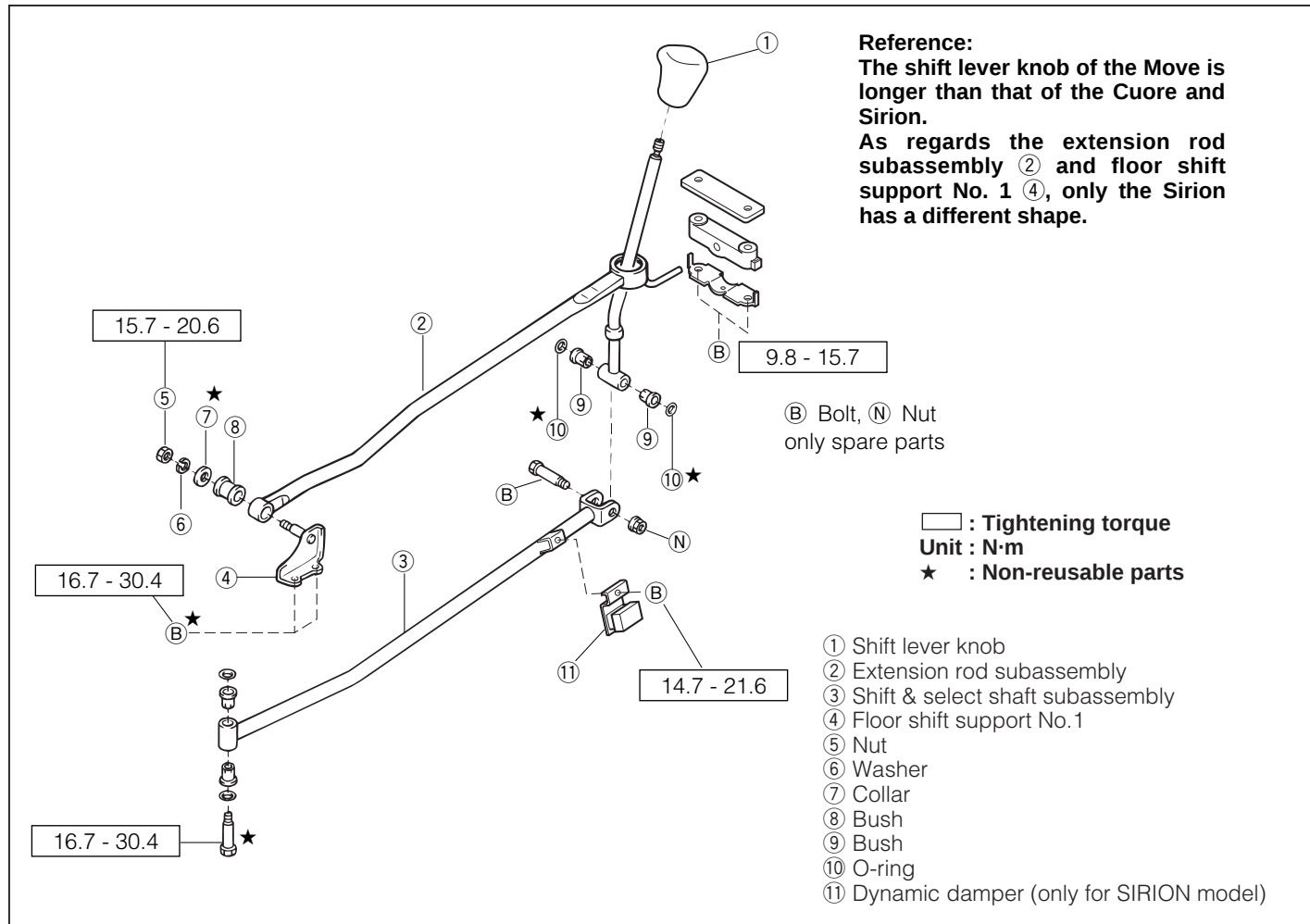
NOTE:

- Be sure to attach the lock plate to the two bolts provided in the pinion shaft direction.
8. Assemble the radial ball bearings.



LMT00195-00187

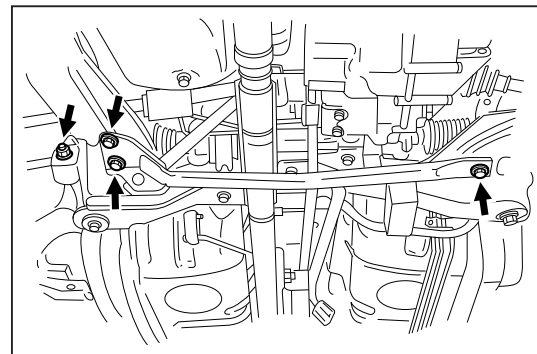
SHIFT LEVER & SELECTING ROD COMPONENTS



LMT00062-00058

REMOVAL

1. Jack up the vehicle.
2. Remove the lower arm bracket connecting rod.



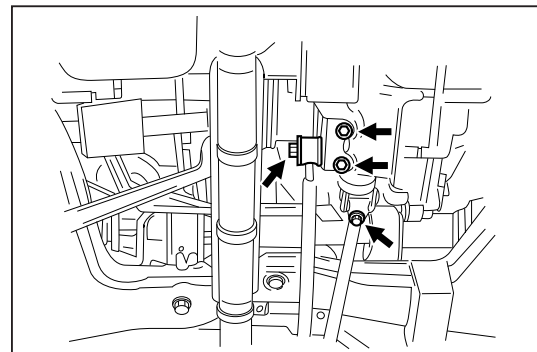
LMT00063-00059

3. Remove the shift lever knob.
4. Disconnect the shift & select shaft subassembly and the extension rod subassembly from the transaxle.

NOTE:

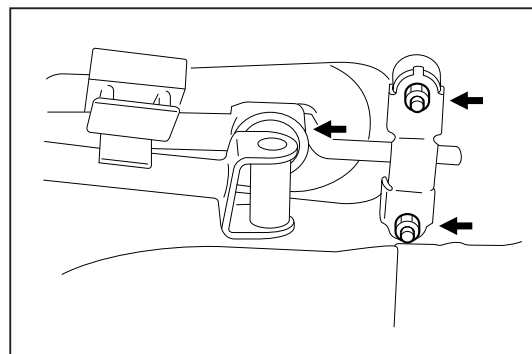
- Never reuse the removed attaching bolts of the shift & select shaft subassembly and the extension rod subassembly.

5. Disconnect the floor shift support No. 2 of the extension rod subassembly from the body.



LMT00064-00060

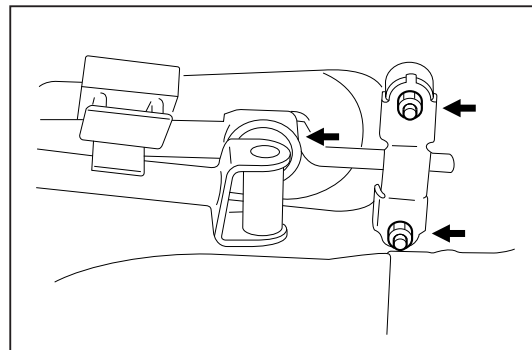
6. Pull out the shift & select shaft subassembly together with the extension rod subassembly.



LMT00065-00061

INSTALLATION

1. Install the shift & select shaft subassembly together with the extension rod subassembly.



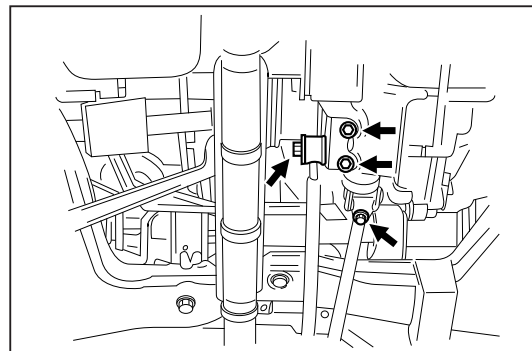
LMT00066-00062

2. Connect the floor shift support No. 2 of the extension rod subassembly to the body.

Tightening Torque: 9.8 - 15.7 N·m (Floor side)

3. Connect the shift & select shaft subassembly and the extension rod subassembly to the transaxle.

Tightening Torque: 16.7 - 30.4 N·m (Transaxle side)



LMT00067-00063

NOTE:

- Be sure to use a new attaching bolts for both the shift & select shaft subassembly and extension rod subassembly.

4. Install the shift lever knob.

5. Install the front exhaust pipe.

Tightening Torque: 41.2 - 62.7 N·m (Front side)

15.2 - 22.8 N·m (Rear side)

NOTE:

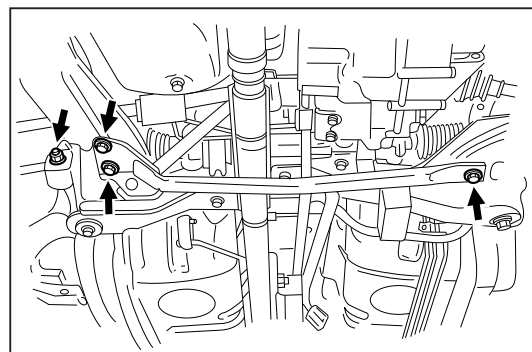
- Be sure to use a new exhaust pipe gasket and a new nut for rear side.

LMT00068-00000

6. Install the lower arm bracket connecting rod.

Tightening Torque: 39.2 - 92.1 N·m

7. Jack down the vehicle.

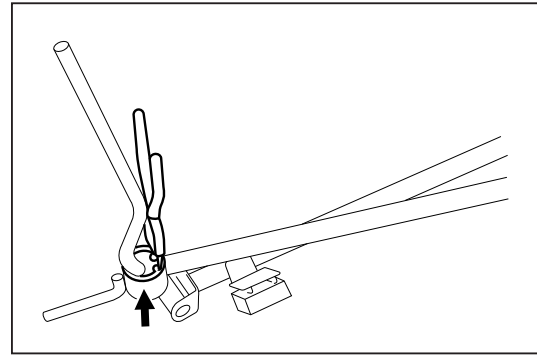


LMT00069-00064

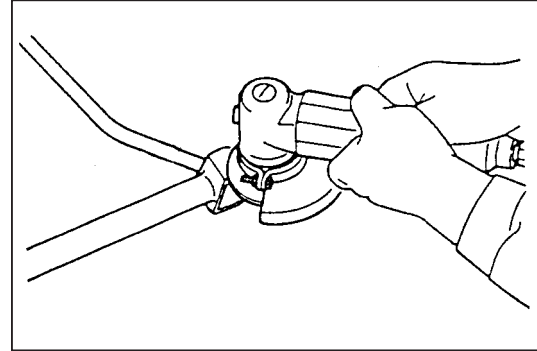
MT-48

DISASSEMBLY

1. Detach the shift & select shaft subassembly from the body.
2. Remove the snap ring by using a snap ring pliers.
3. Remove the collar and bush for the shift knob.
4. Remove the floor shift support No. 1.
5. Remove the nut, washer, collar and the bush for the floor shift support No. 1.
6. Remove the extension rod subassembly by using a grinder.
7. Remove the shift & select shaft subassembly by using a grinder.
8. Remove the control rod joint.
9. Remove the bush and O-ring.



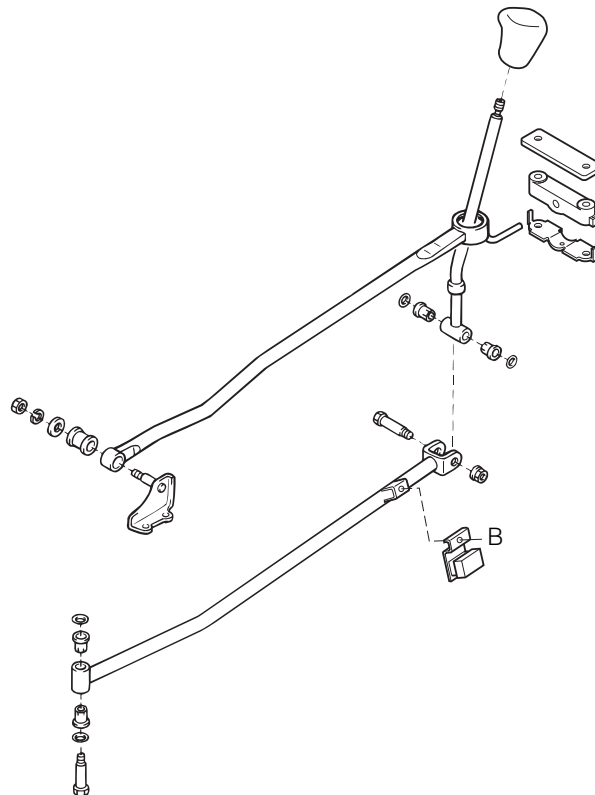
LMT00071-00065



LMT00072-00066

INSPECTION

Check each component for wear, damage, deformation or flattened condition.



LMT00073-00067

ASSEMBLY

1. Install a new O-ring.
2. Apply MP grease to both the inner and outer surfaces of the bush and install it.
3. Install the control joint.
4. Assemble the shift & select shaft subassembly.

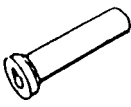
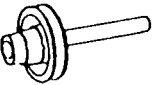
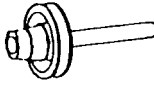
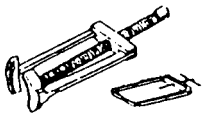
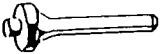
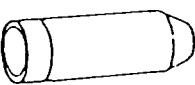
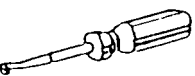
NOTE:

- In case of the spare part, as the connecting method of the shift & select shaft and shift lever is bolt connecting, be sure not to mistake the connecting method.

5. Install the extension rod subassembly.
6. Install the nut, washer, collar and the bush for the floor shift support No. 1.
7. Install the floor shift support No. 1.
Tightening Torque: 15.7 - 20.6 N·m (Floor side)
8. Install the collar and bush for the shift knob.
9. Install a new snap ring by using a snap ring pliers.
10. Install the shift & select shaft subassembly to the body.

APPENDIX

SSTs (Special Service Tools)

Shape	Part No. and name	Purpose
	09201-60011-000 Valve guide bush remover & replacer	Assembling oil seal
	09306-87302-000 Counter gear front bearing puller	Removal of bearing
	09308-00010-000 Oil seal puller	Removal of oil seal
	09309-87201-000 Transmission bearing replacer	Assembling bearing
	09515-87201-000 Rear axle shaft bearing replacer (Tip-end $\phi 16.5$)	Assembling oil seal
	09517-87705-000 Oil seal replacer (Transmission case side)	Assembling oil seal
	09517-87706-000 Oil seal replacer (Clutch housing side)	Assembling oil seal
	09602-87301-000 Counter gear bearing puller	Removal of bearing
	09606-87201-000 Front hub bearing remover & replacer (Tip-end $\phi 24$)	Assembling oil seal
	09618-87301-000 Transmission bearing replacer	Assembling bearing
	09905-00012-000 Snap ring expander	Removal of snap ring
	09921-00010-000 Spring tension tool	Removal of oil seal

SERVICE SPECIFICATIONS

Unit: mm

Item		Specified value	Allowable limit	Remarks
2nd gear bush	Inner diameter	28.870 - 28.885	28.98	
	Outer diameter	36.940 - 36.960	36.890	
	Overall length	32.470 - 32.530	32.470	
4th and 5th gear bush	Inner diameter	25.027 - 25.042	25.050	
	Outer diameter	36.940 - 36.960	36.890	
	Overall length	28.970 - 29.030	28.970	
	Thickness of flange section	2.94 - 3.06	2.94	
End play	1st gear	0.10 - 0.40	0.5	
	2nd gear	0.10 - 0.23	0.4	
	3rd gear	0.10 - 0.37	0.5	
	4th gear	0.10 - 0.23	0.4	
	5th gear	0.10 - 0.23	0.4	
Gear width	1st gear	30.23 - 30.30	30.2	
	2nd gear	32.30 - 32.37	32.2	
	3rd gear	27.23 - 27.30	27.2	
	4th gear	25.80 - 25.87	25.7	
	5th gear	25.80 - 25.87	25.7	
Reverse idler gear and shaft	Bush inner diameter	17.000 - 17.027	17.050	
	Shaft outer diameter	16.941 - 16.968	16.900	
	Bush-to-shaft clearance Groove width	8.000 - 8.058	8.2	
Input shaft outer diameter		25.002 - 25.017	24.99	Bush installing position
Output shaft outer diameter	Front	29.979 - 30.000	29.96	
	Rear	31.971 - 31.991	31.96	
Synchronizer ring-to-gear clearance		0.85 - 1.45	0.5	

Item		Specified value	Allowable limit	Remarks
Differential pinion and side gear	Inner diameter of pinion shaft fitting hole of pinion	15.03 - 15.08	15.10	
	Outer diameter of pinion shaft	14.944 - 14.962	14.94	
Thickness of side gear thrust washer		0.95 - 0.85	0.70	
Drive shaft fitting holes of the differential case		29.007 - 29.028	29.03	
Differential side gear-to-pinion backlash		0.02 - 0.21	—	
Speedometer shaft sleeve subassembly	Driven gear shaft diameter	7.972 - 7.987	7.96	
	Shaft sleeve bore	8.029 - 8.065	8.10	
Shift fork	Thickness of tip-section of fork	6.8 - 7.0	6.3	
	Groove width of shift inner lever-contact-section	12.1 - 12.2	12.7	Reverse shift arm head
		12.2 - 12.3	12.8	1st & 2nd shift head, 3rd & 4th shift fork
	Groove width of reverse shift arm pin-contact-section	15.000 - 15.043	15.1	
Length of interlock plate	Roller and edge surface	16.15 - 16.45	16.0	
	Width of roller section	11.1 - 11.3	11.0	
Reverse shift arm	Pin diameter	14.907 - 14.950	14.85	
	Tip end width	7.884 - 7.920	7.8	
Shift fork groove width of sleeve and reverse gear	Gears other than reverse gear	7.05 - 7.12	7.3	
	Reverse gear	7.05 - 7.18	7.3	
Thickness of synchromesh shifting key	for 1st & 2nd	5.0 - 5.2	4.7	
	for 3rd & 4th, 5th	4.6 - 4.8	4.3	

TIGHTENING TORQUE

Tightening component	Tightening torque	
	N·m	kgf-m
Clutch cable bracket × Transaxle	14.7 - 21.6	1.5 - 2.2
Surge tank stay No. 3 × Transaxle	14.7 - 21.6	1.5 - 2.2
Rear mount bracket × Transaxle	49.0 - 68.6	5.0 - 7.0
Transaxle × Engine	49.0 - 68.6	5.0 - 7.0
Engine mount bracket left × Transaxle	49.0 - 68.6	5.0 - 7.0
E/G mt. insulator left × Transaxle (Nut)	72.0 - 134	7.4 - 13.7
E/G mt. insulator left × Transaxle (Bolt)	48.0 - 89.2	4.9 - 9.1
Surge tank stay No. 3 × Intake manifold	14.7 - 21.6	1.5 - 2.2
Starter × Transaxle	29.4 - 44.1	3.0 - 4.5
Stay × Transaxle (Bolt)	29.4 - 44.1	3.0 - 4.5
Engine mount insulator rear × Stay (Nut)	72.0 - 134	7.4 - 13.7
Shift control shaft × Transaxle	16.7 - 30.4	1.7 - 3.1
Drive shaft assembly × Alternator bracket	34.3 - 49.0	3.5 - 5.0
Lower arm × Fr. suspension cross member	167 - 245	17.0 - 25.0
Shock absorber (upper support) × Flame	28.4 - 42.1	2.9 - 4.3
Power train stiffener × Transaxle	29.4 - 44.1	3.0 - 4.5
Power train stiffener × Cylinder block	14.7 - 21.6	1.5 - 2.2
Engine mount front bracket × Transaxle	29.4 - 44.1	3.0 - 4.5
Engine lower mounting subassembly × Flame	48.0 - 89.2	4.9 - 9.1
E/G mt. insulator fr. × E/G lower mt. mem.	72.0 - 134	7.4 - 13.7
E/G mt. insulator rr. × E/G lower mt. mem.	26.0 - 48.5	2.7 - 5.0
Clutch release cable × Clamp	3.9 - 6.9	0.4 - 0.7
Tie-rod end × Knuckle	29.4 - 44.1	3.0 - 4.5
Breather plug × Transaxle	9.8 - 12.7	1.0 - 1.3
W/head straight screw plug (filler side)	29.4 - 49.0	3.0 - 5.0
W/head straight screw plug (drain side)	29.4 - 49.0	3.0 - 5.0
Speedometer sleeve (Lock plate) × Transaxle	6.9 - 9.8	0.7 - 1.0
Backup lamp switch assembly × Transaxle	29.4 - 49.0	3.0 - 5.0
Bearing lock plate × Bell crank	6.9 - 9.8	0.7 - 1.0
Shift inner lever (Bolt)	39.2 - 49.0	4.0 - 5.0
Shift inner lever (Nut)	19.6 - 29.4	2.0 - 3.0
Lock nut × Input shaft	98.1 - 137.3	10.0 - 14.0
Lock nut × Output shaft	98.1 - 137.3	10.0 - 14.0
Differential case × Ring gear	93.1 - 105	9.5 - 10.7
Front exhaust pipe (front side, bolt)	41.2 - 62.7	4.2 - 6.4
Front exhaust pipe (rear side, nut)	15.2 - 22.8	1.6 - 2.3
Shift & select shaft subassembly × Transaxle	16.7 - 30.4	1.7 - 3.1
Extension rod subassembly × Transaxle	16.7 - 30.4	1.7 - 3.1
Floor shift support No. 2 × Floor	16.7 - 30.4	1.7 - 3.1
Lower arm bkt. con. rod × Lower arm	39.2 - 92.1	4.0 - 9.4
Floor shift support No. 1 × Extension rod	15.7 - 20.6	1.6 - 2.1