

DAIHATSU

L500, L501

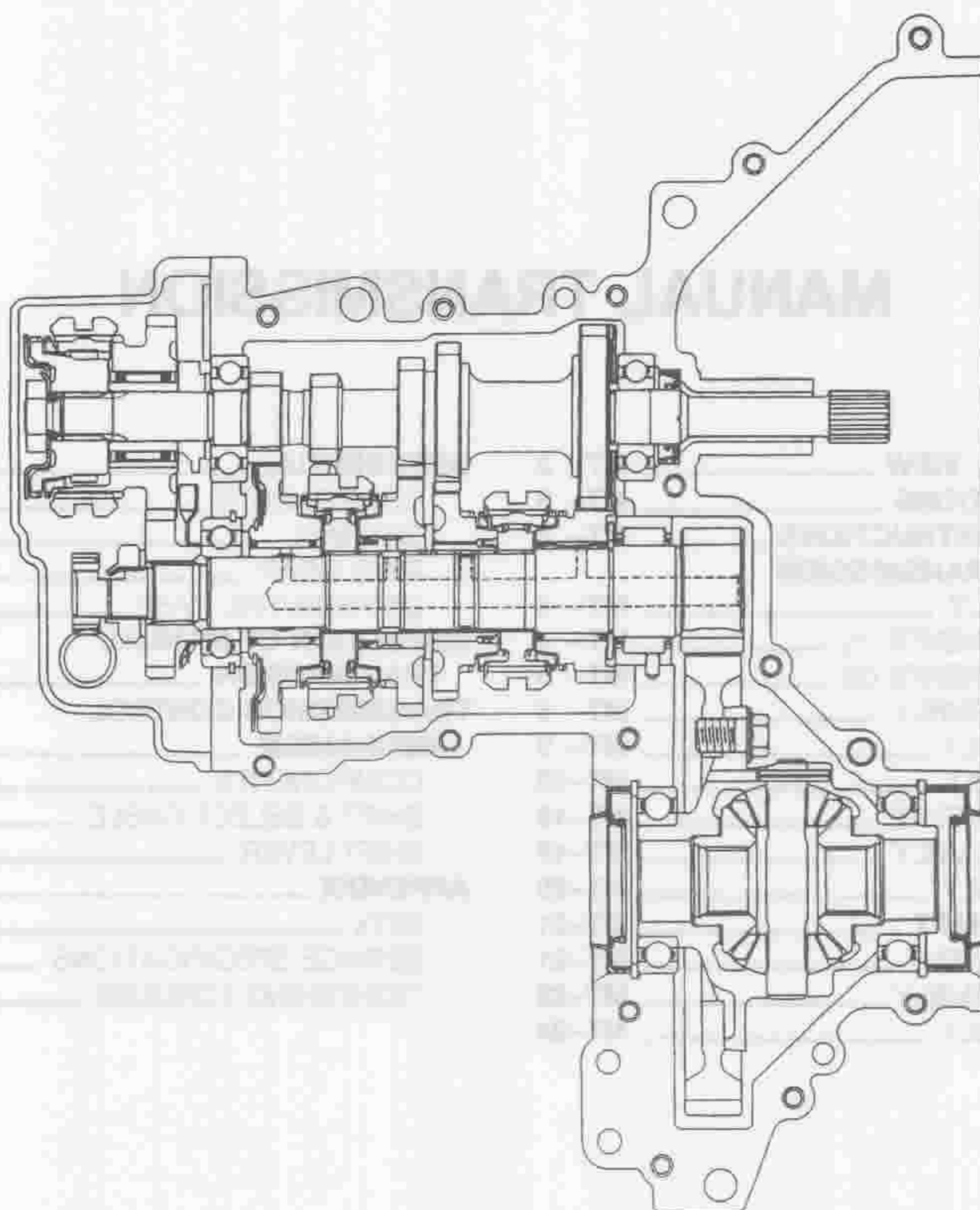
MANUAL TRANSMISSION

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MT

LMT00001-00000

SECTIONAL VIEW



DAIWA L200, L201

SPECIFICATIONS

Item		Specifications	
Engine type		EF	ED
Type	Forward gears	Constant-mesh type	
	Reverse gear	Selective sliding type	
Gear ratio	1st gear	3.500	
	2nd gear	2.111	
	3rd gear	1.392	
	4th gear	0.971	
	5th gear	0.794	
	Reverse gear	3.538	
Final reduction gear ratio		4.722	3.954
Number of differential side gear teeth		16	
Number of differential pinion teeth		10	
Speedometer gear ratio (driven/drive)		23/5	24/6
Oil used	Type	SAE 75W-85 API GL-3 or GL-4	
	Capacity	1.60 liter	

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 and a friction damper during operation.
5. Never reuse oil seals, friction dampers, 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 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 API GL-3 or GL-4

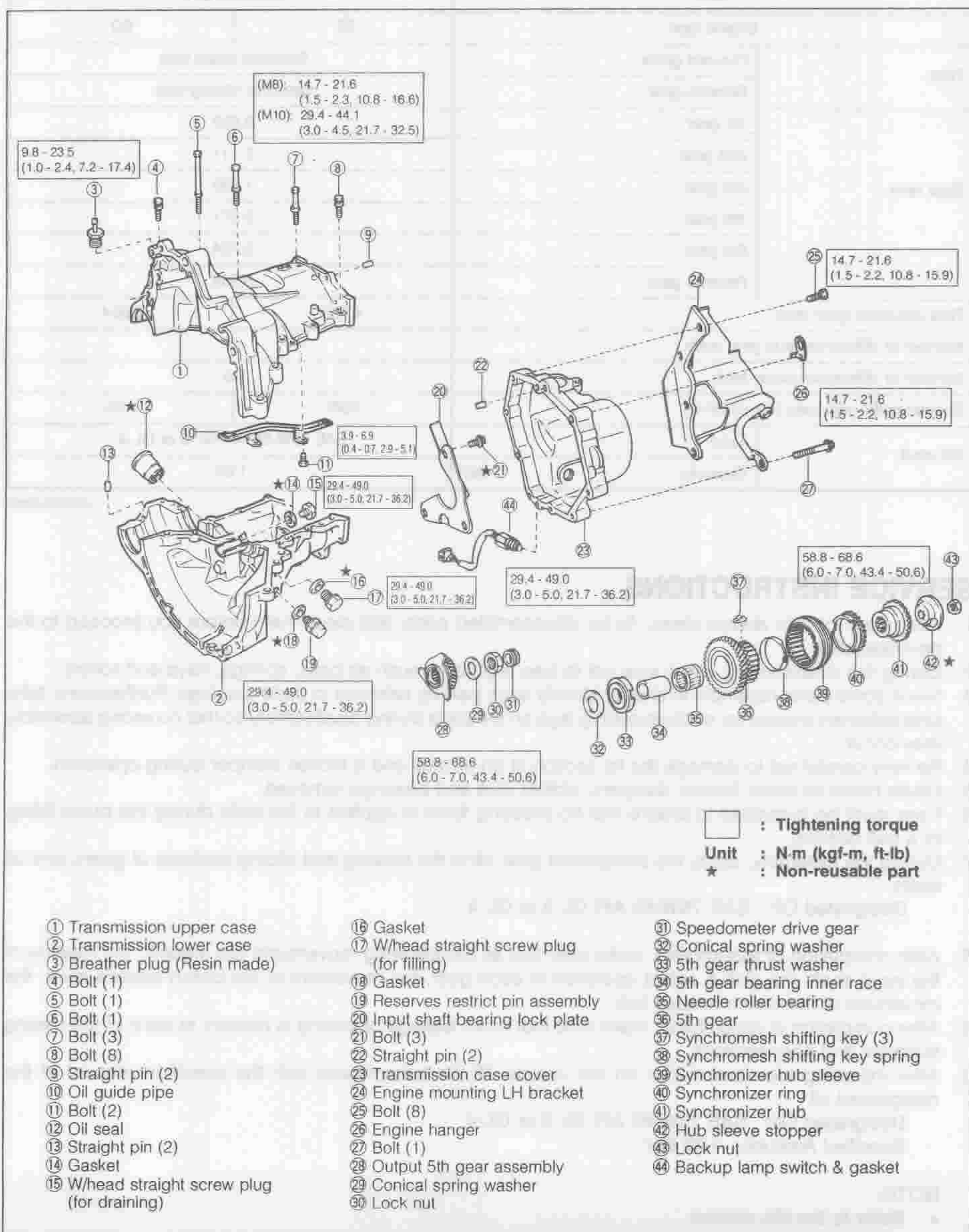
Specified Amount: 1.60 liter

NOTE:

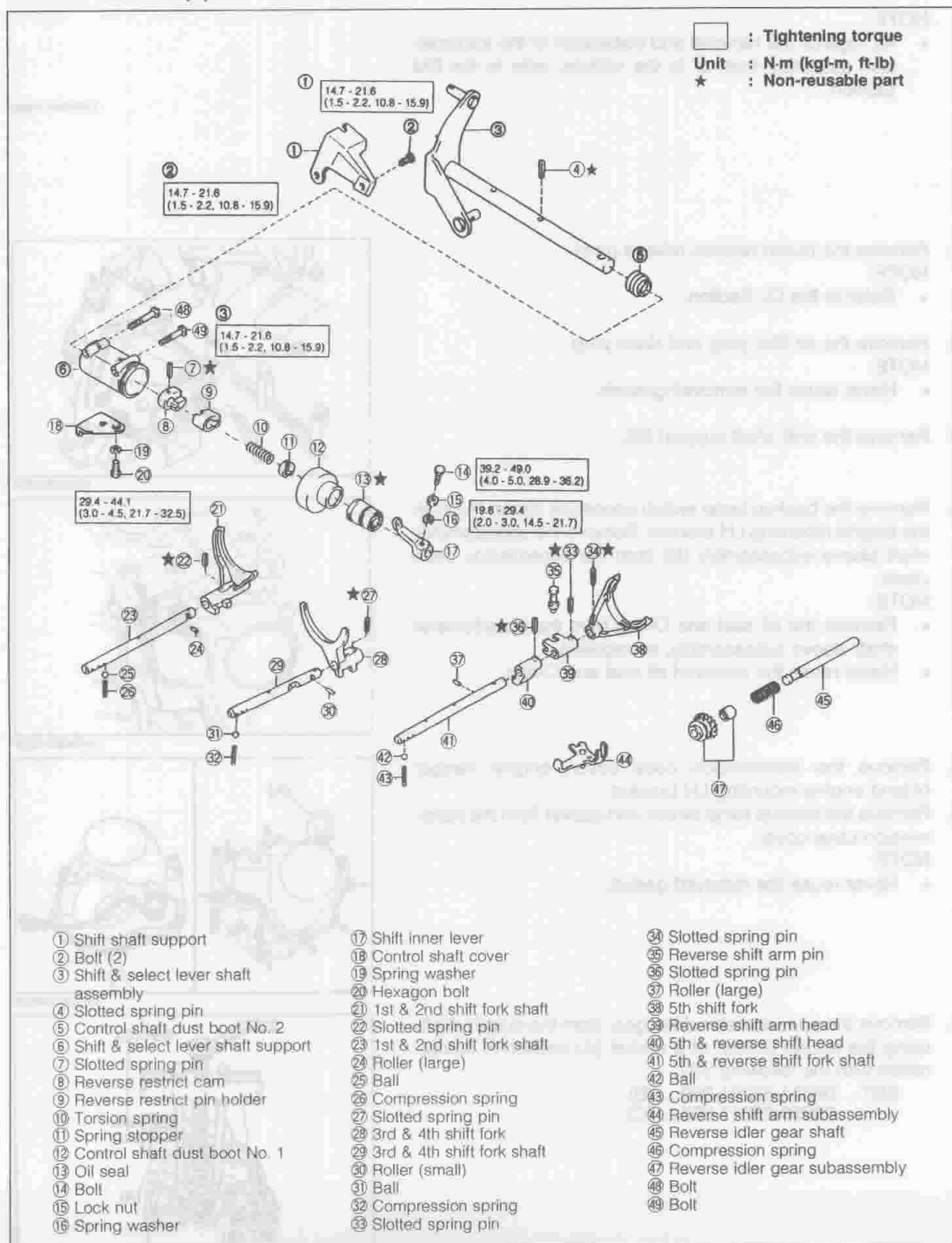
- Refer to the MA section.

LMT00004-00000

MANUAL TRANSMISSION ASSEMBLY COMPONENTS (1)



COMPONENTS (2)



DISASSEMBLY

NOTE:

- As regards the removal and installation of the transmission assembly from or to the vehicle, refer to the EM Section.

LMT00007-00000

- Remove the clutch release-related parts.

NOTE:

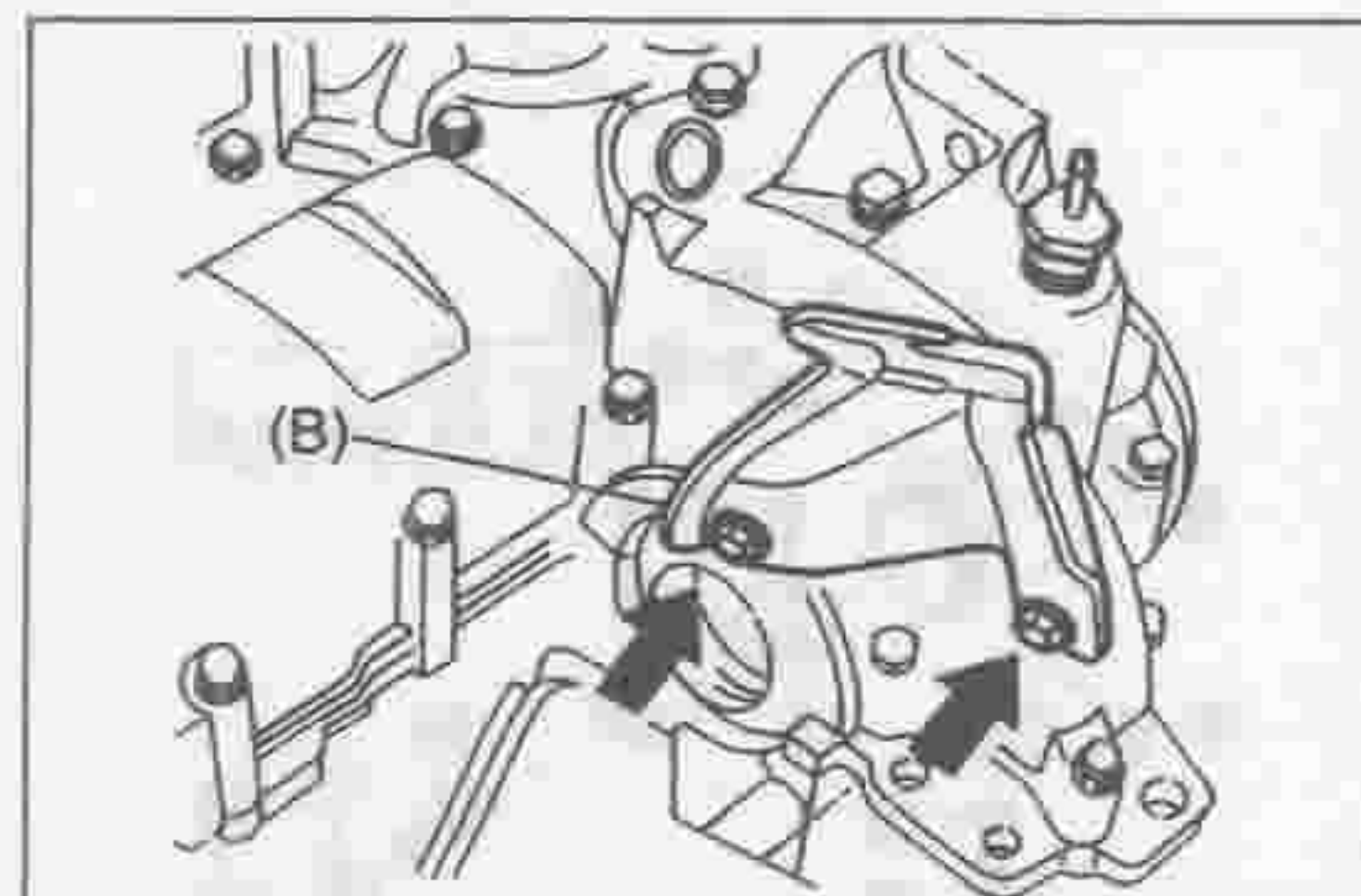
- Refer to the CL Section.

- Remove the oil filler plug and drain plug.

NOTE:

- Never reuse the removed gaskets.

- Remove the shift shaft support (B).

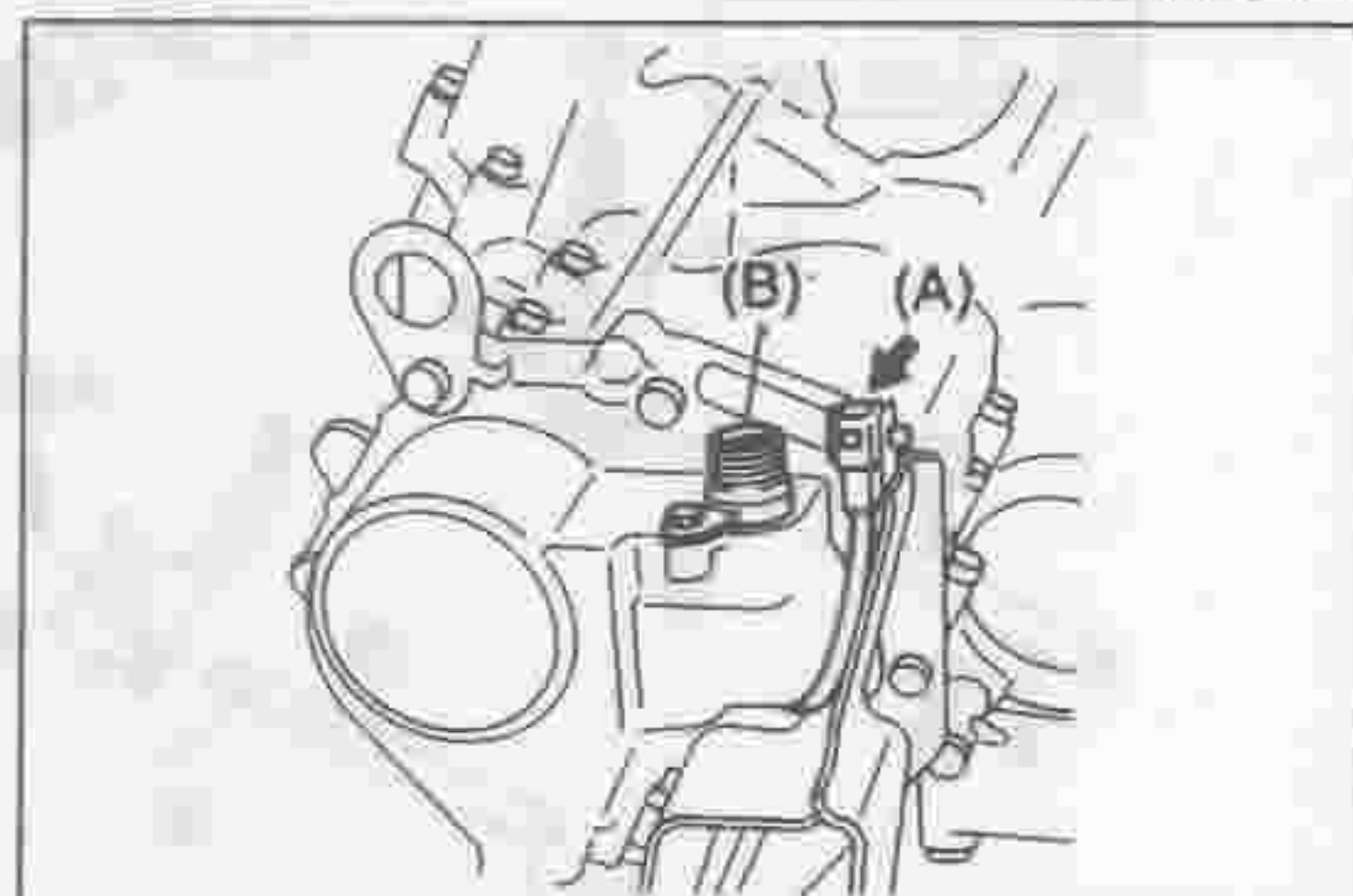


LMT00008-00004

- Remove the backup lamp switch connector clamp (A) from the engine mounting LH bracket. Remove the speedometer shaft sleeve subassembly (B) from the transmission case cover.

NOTE:

- Remove the oil seal and O-ring from the speedometer shaft sleeve subassembly, as required.
- Never reuse the removed oil seal and O-ring.



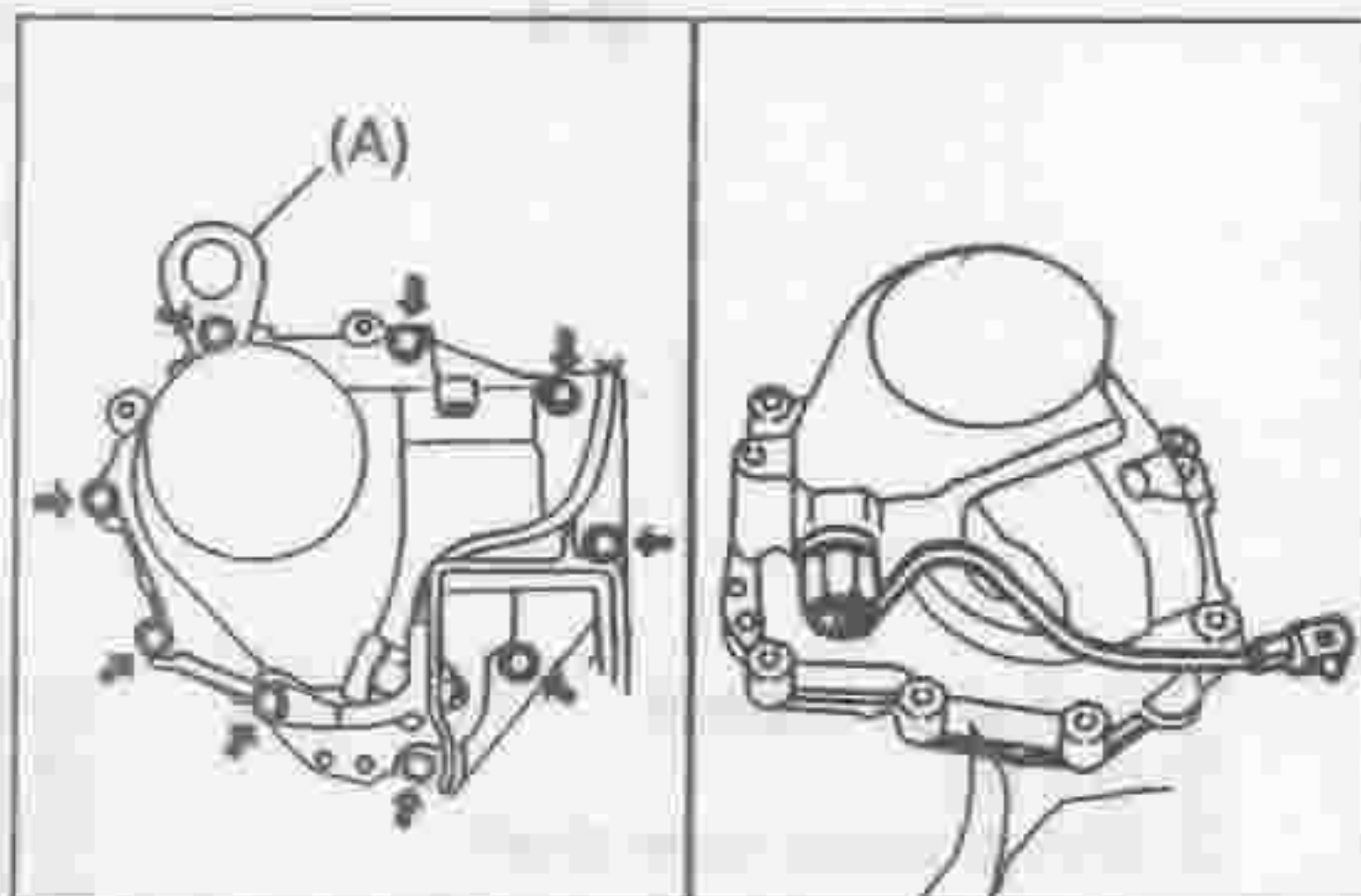
LMT00009-00005

- Remove the transmission case cover, engine hanger (A) and engine mounting LH bracket.

- Remove the backup lamp switch and gasket from the transmission case cover.

NOTE:

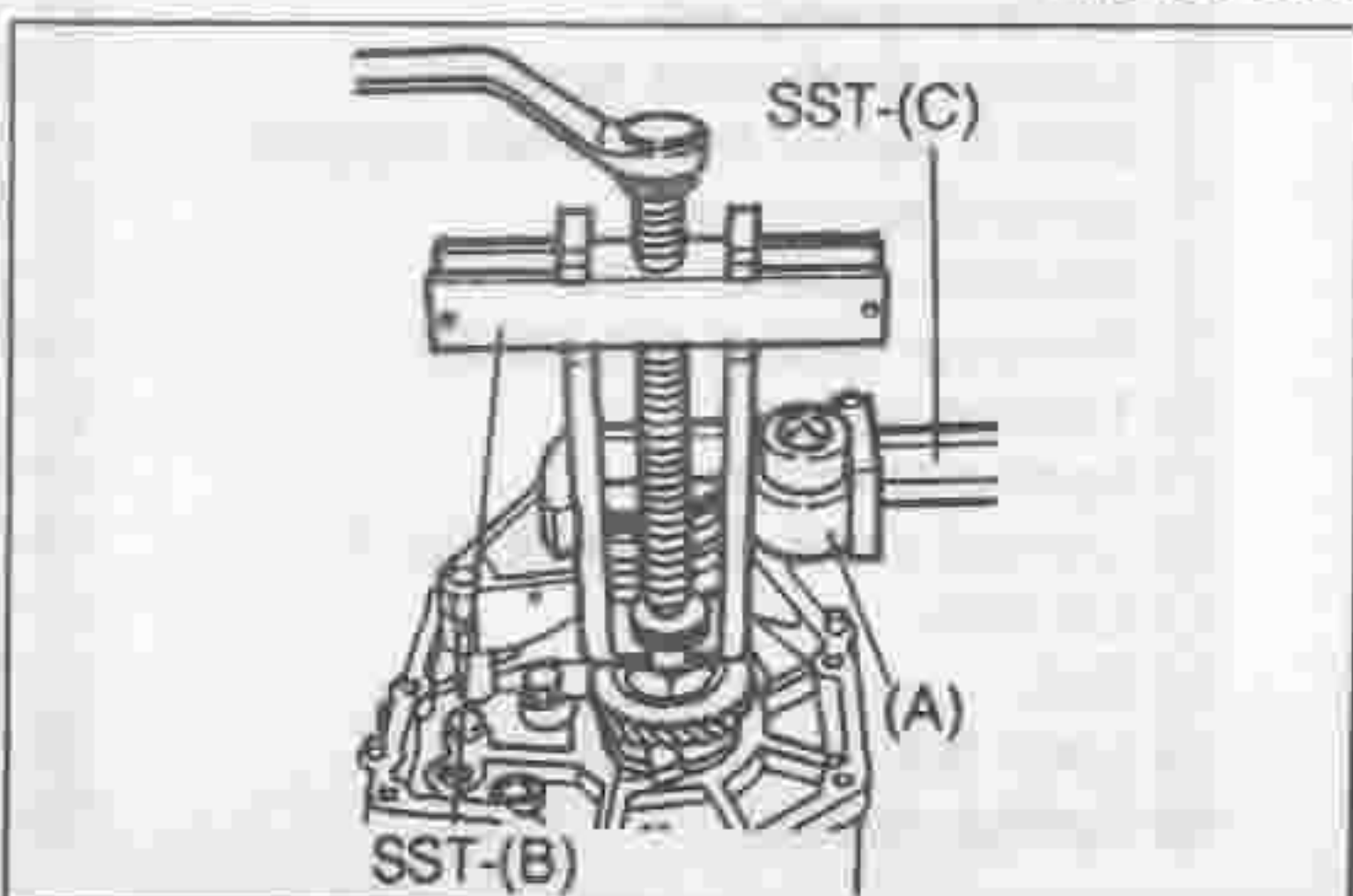
- Never reuse the removed gasket.



LMT00010-00006

- Remove the speedometer drive gear from the output shaft, using the socket portion of a socket (A) wrench in combination with the following SST.

SST: 09334-87201-000 ... (B)
09950-20017-000 ... (C)



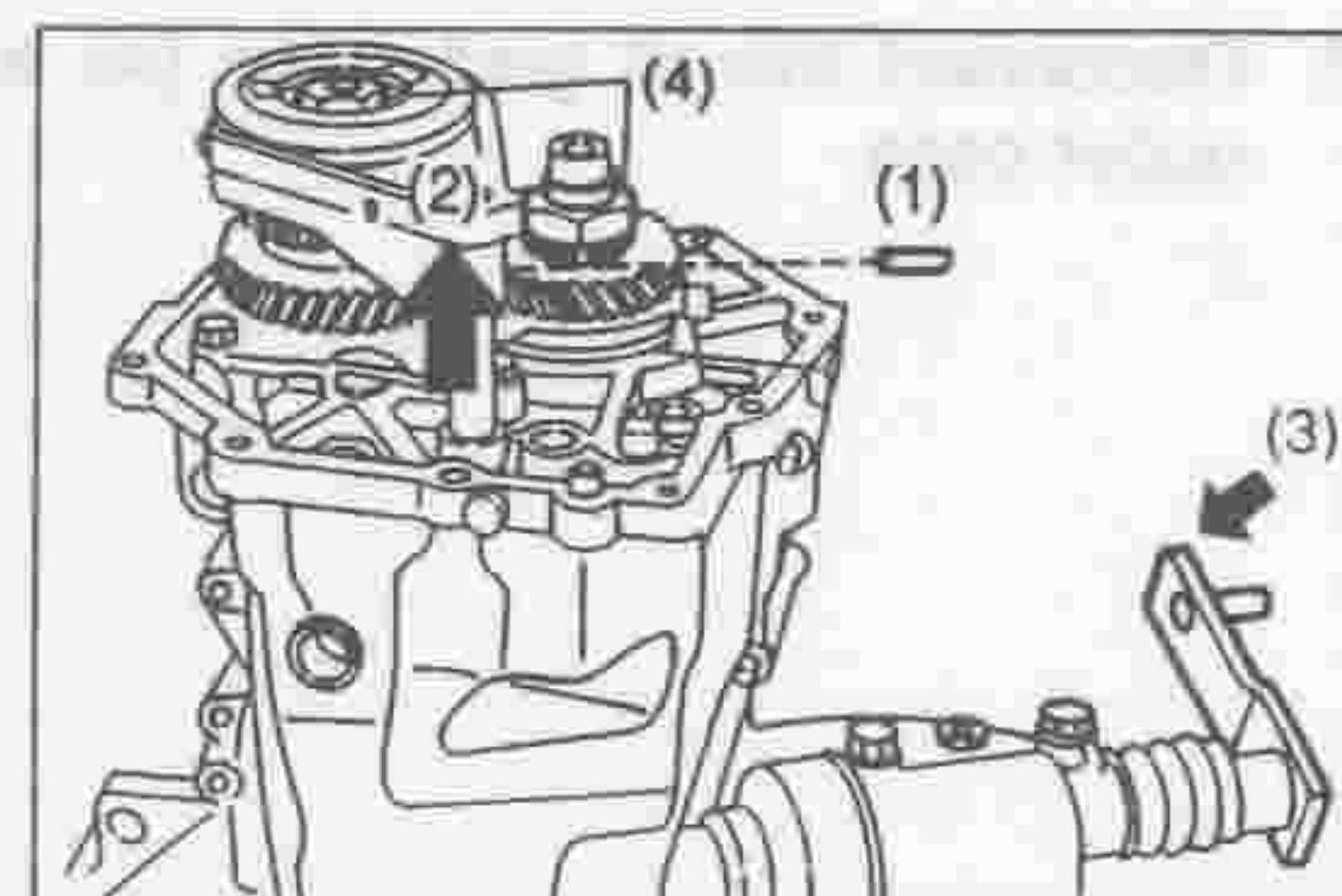
LMT00011-00007

8. Removal of 5th gear-related parts

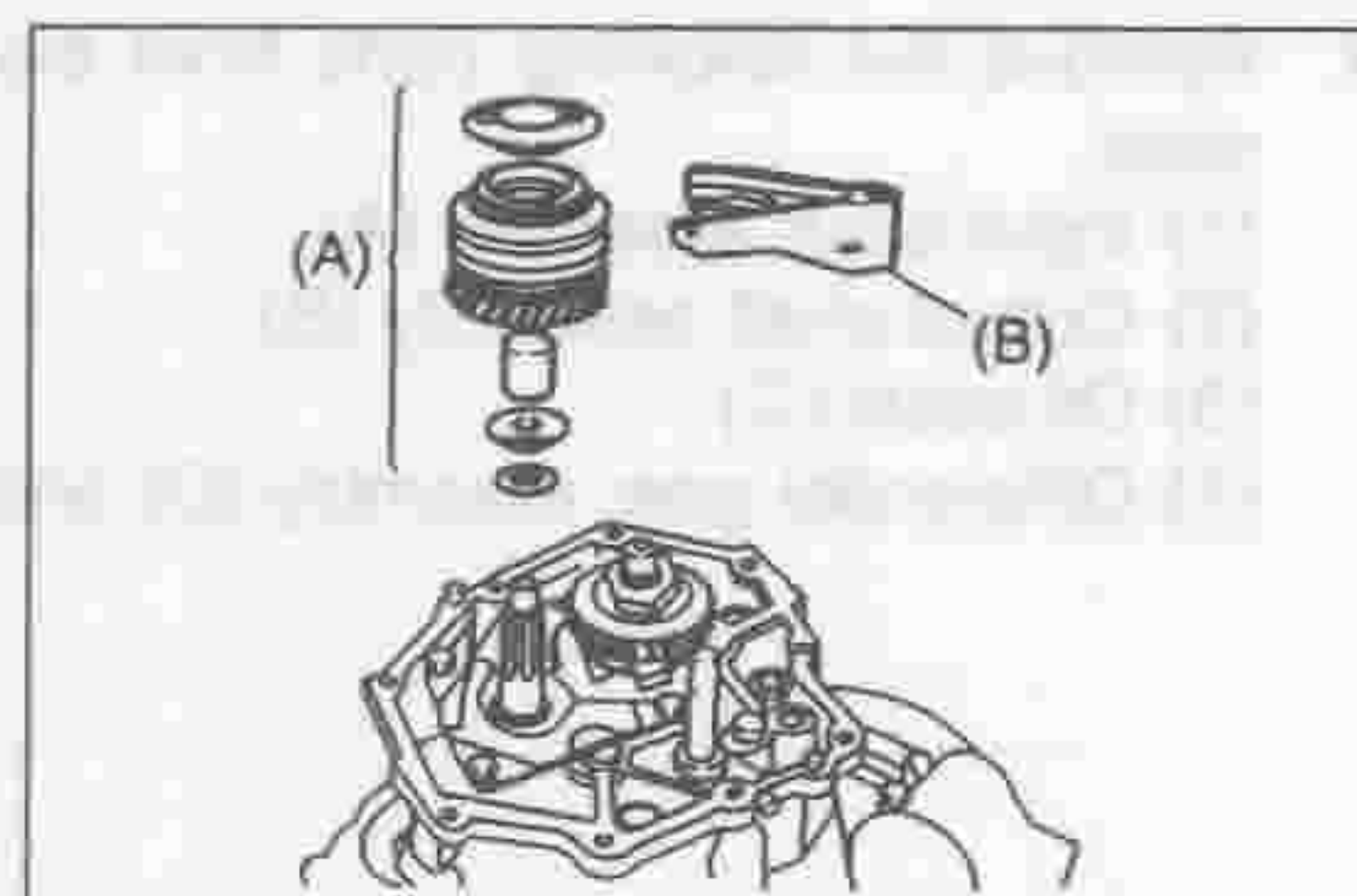
- (1) Pull out the slotted spring pin from the 5th shift fork.
- (2) Move the 5th shift fork in the arrow-headed direction in the right figure so that the synchronizer hub sleeve may mesh with the synchronizer.
- (3) Tilt the shift outer lever in the arrow-headed direction in the right figure so as to interlock two gears at the same time.
- (4) Release the staked state of the lock nuts of the input shaft and output shaft, respectively. Remove the lock nut at the input shaft. Loosen the lock nut at the output shaft.
- (5) Pull out the 5th gear-related parts (A) from the input shaft. At the same time, pull out the 5th shift fork (B) from the shift fork shaft.

NOTE:

- Never reuse the removed slotted spring pin.



LMT00012-00008

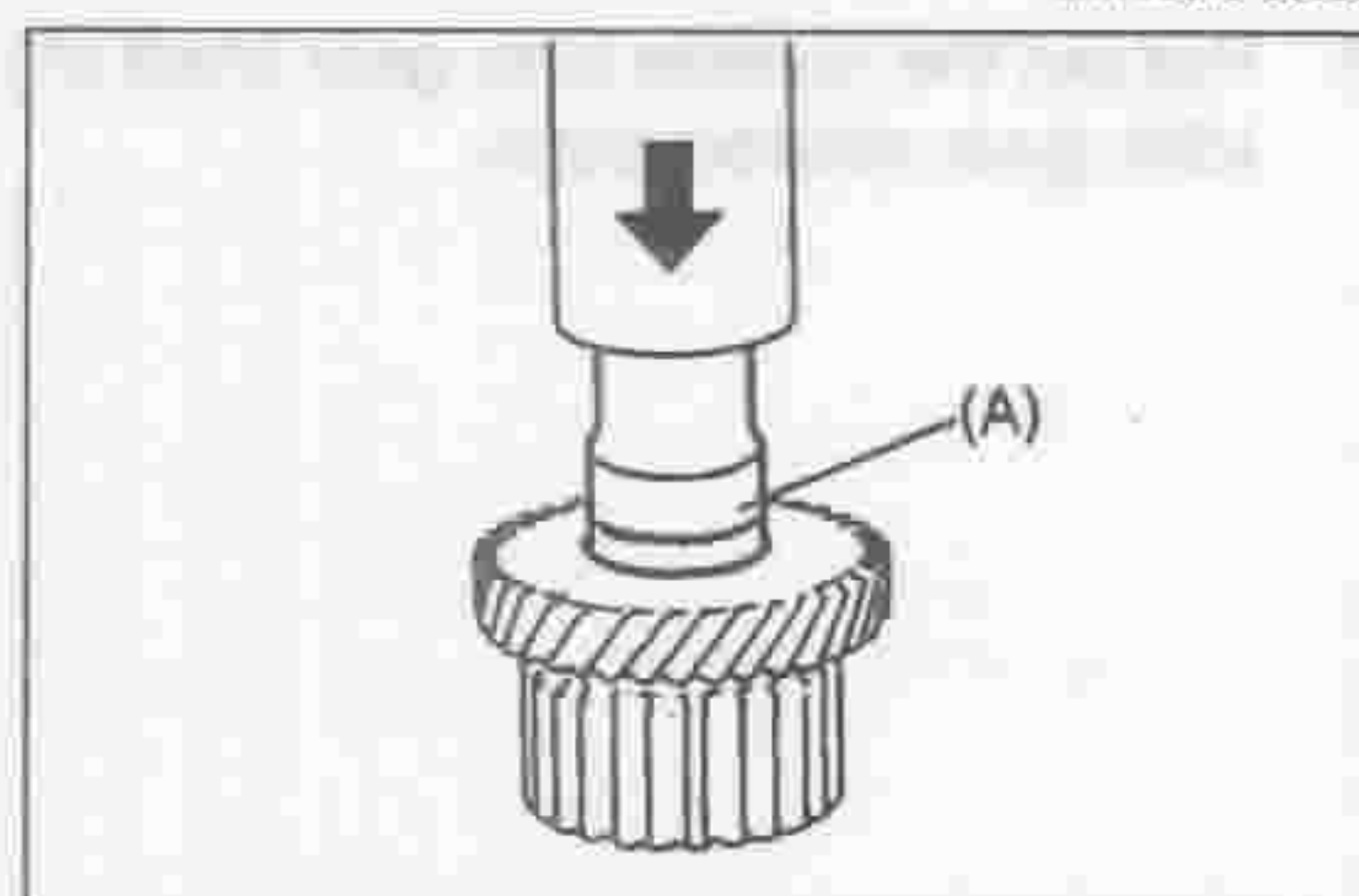


LMT00013-00009

- (6) Remove the needle roller bearing from the 5th gear, using a suitable socket portion of socket wrench in combination with a press.

NOTE:

- If the needle roller bearing and 5th gear exhibits no abnormality (section A in the right figure), it is not necessary to remove the bearing.



LMT00014-00010

- (7) Remove the lock nut, conical spring washer and output 5th gear assembly from the output shaft.

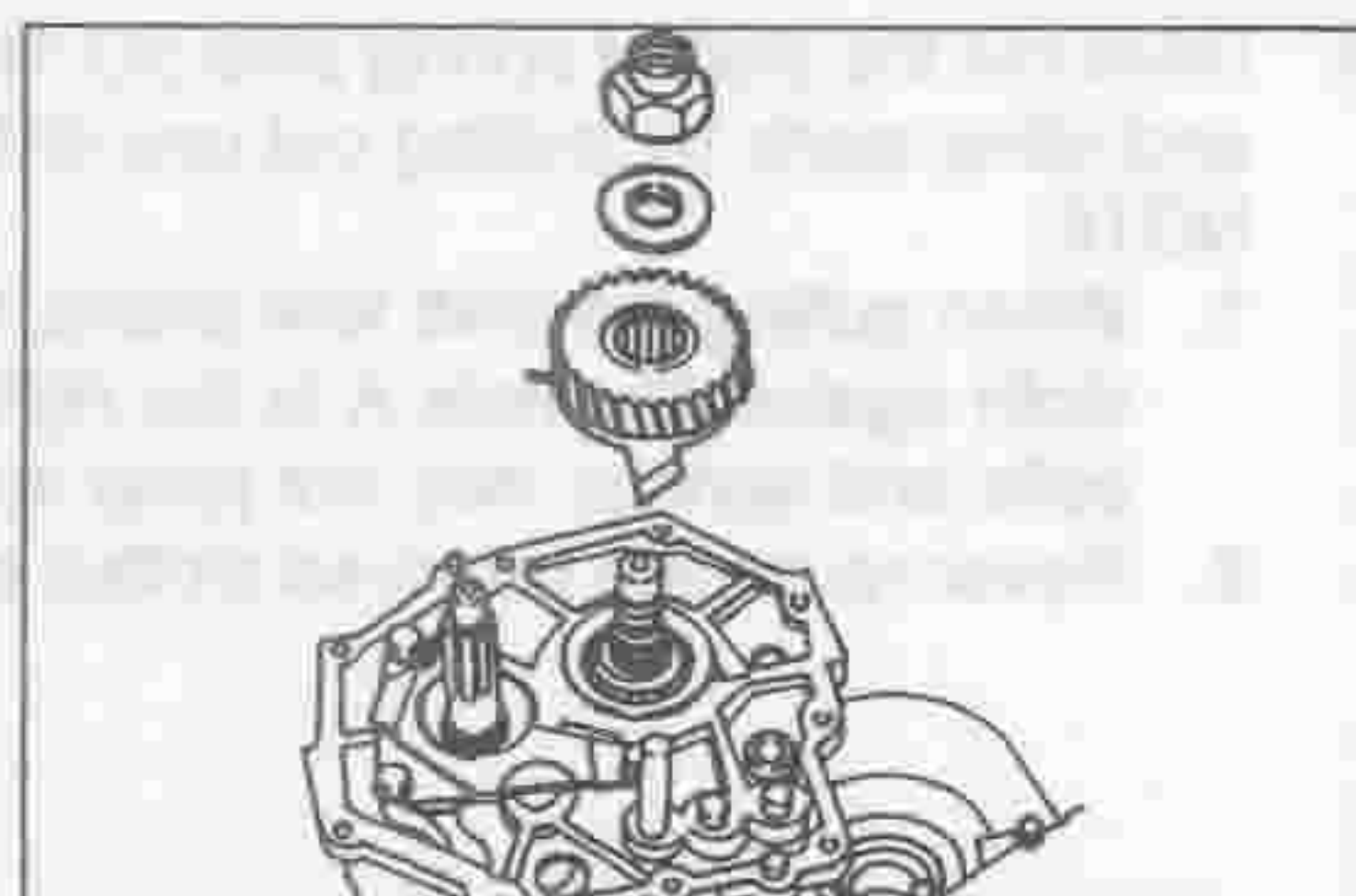
NOTE:

- Never reuse the removed lock nut.

- (8) Remove the input shaft bearing lock plate.

NOTE:

1. Never reuse the removed attaching bolts.
2. Completely remove the seal material from the screw holes at the case side.

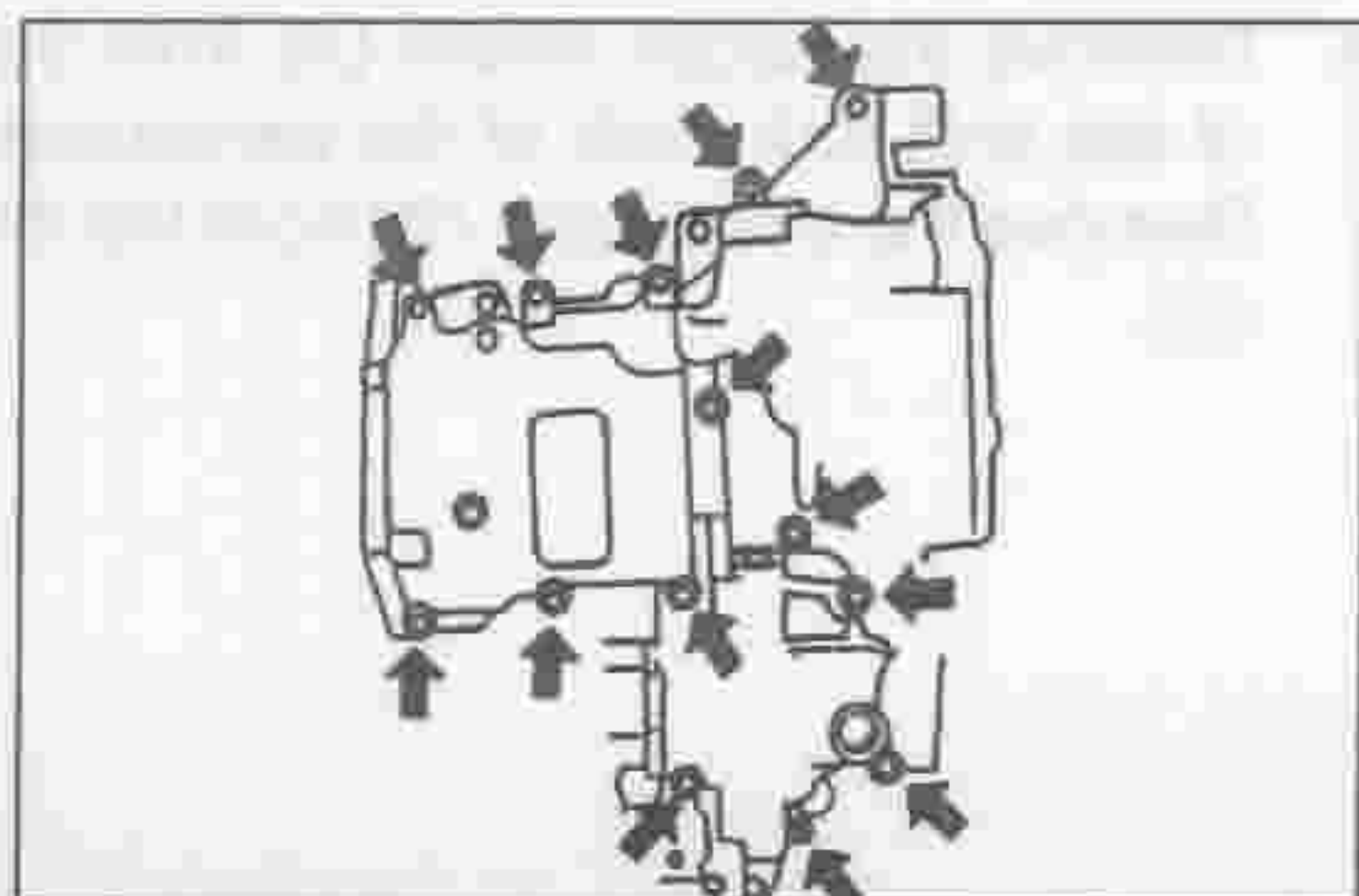


LMT00015-00011

9. Remove the bolts of the transmission case. Remove the transmission upper case.

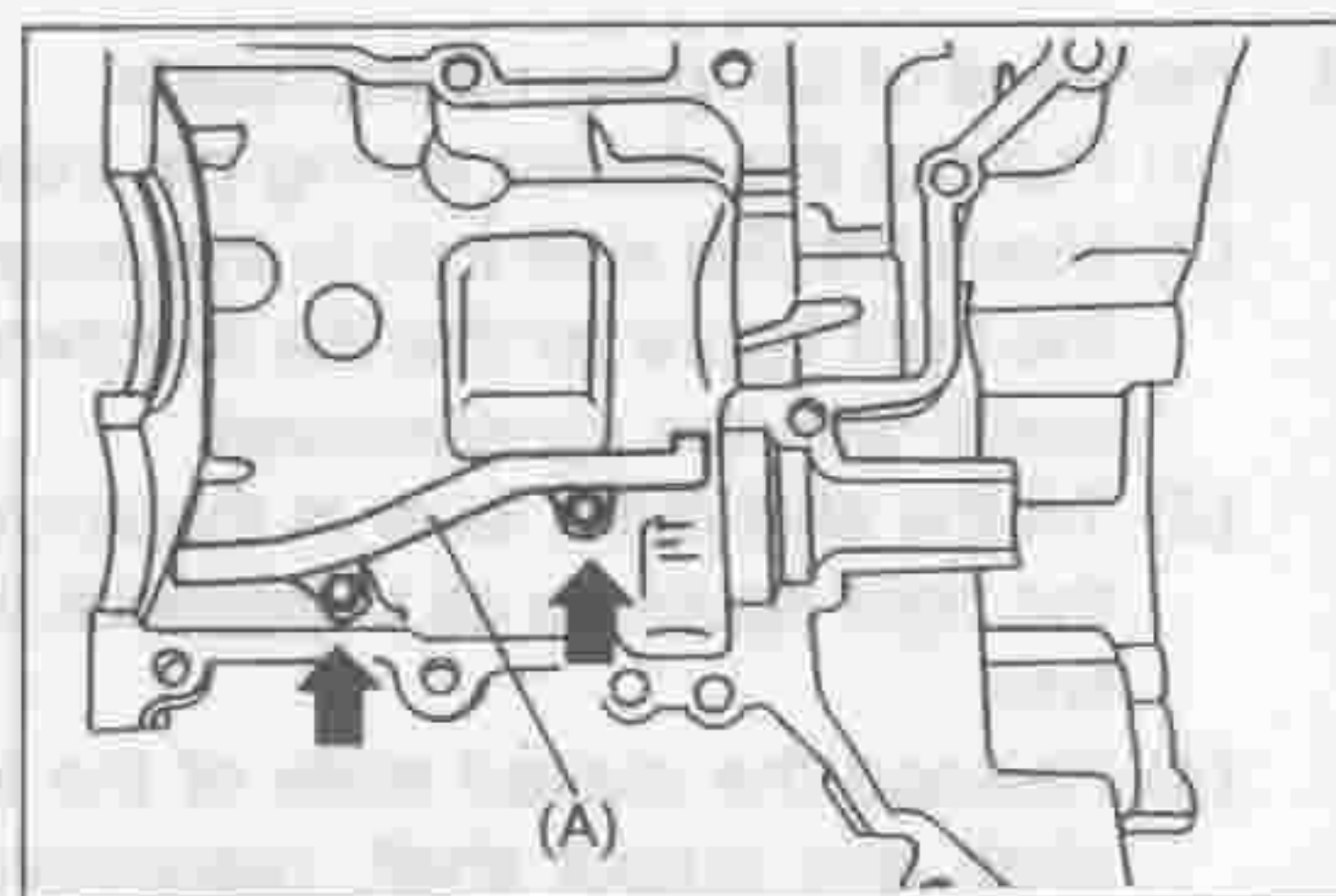
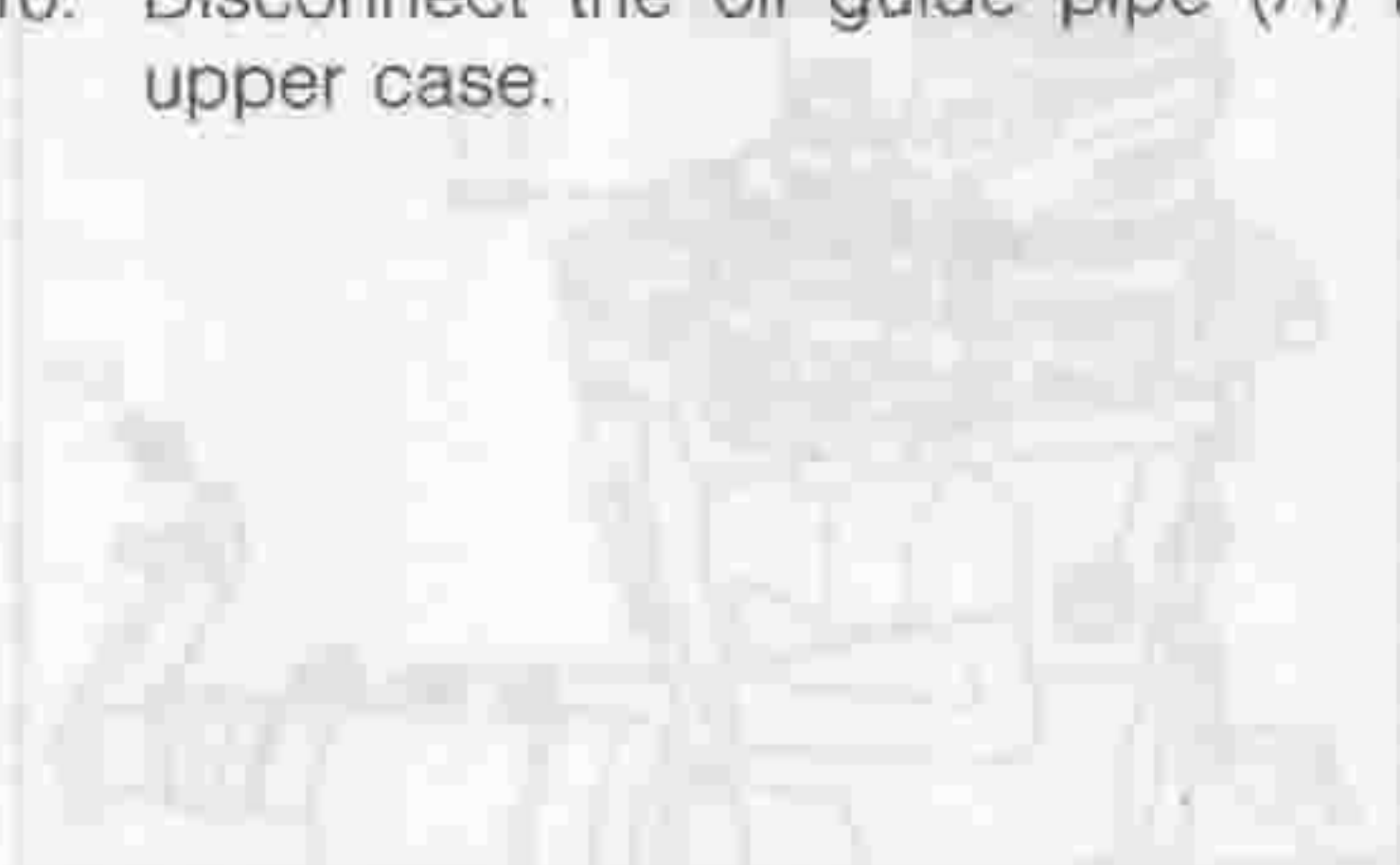
NOTE:

- Remove the transmission upper case by lightly tapping it by means of a plastic hammer.



LMT00016-00012

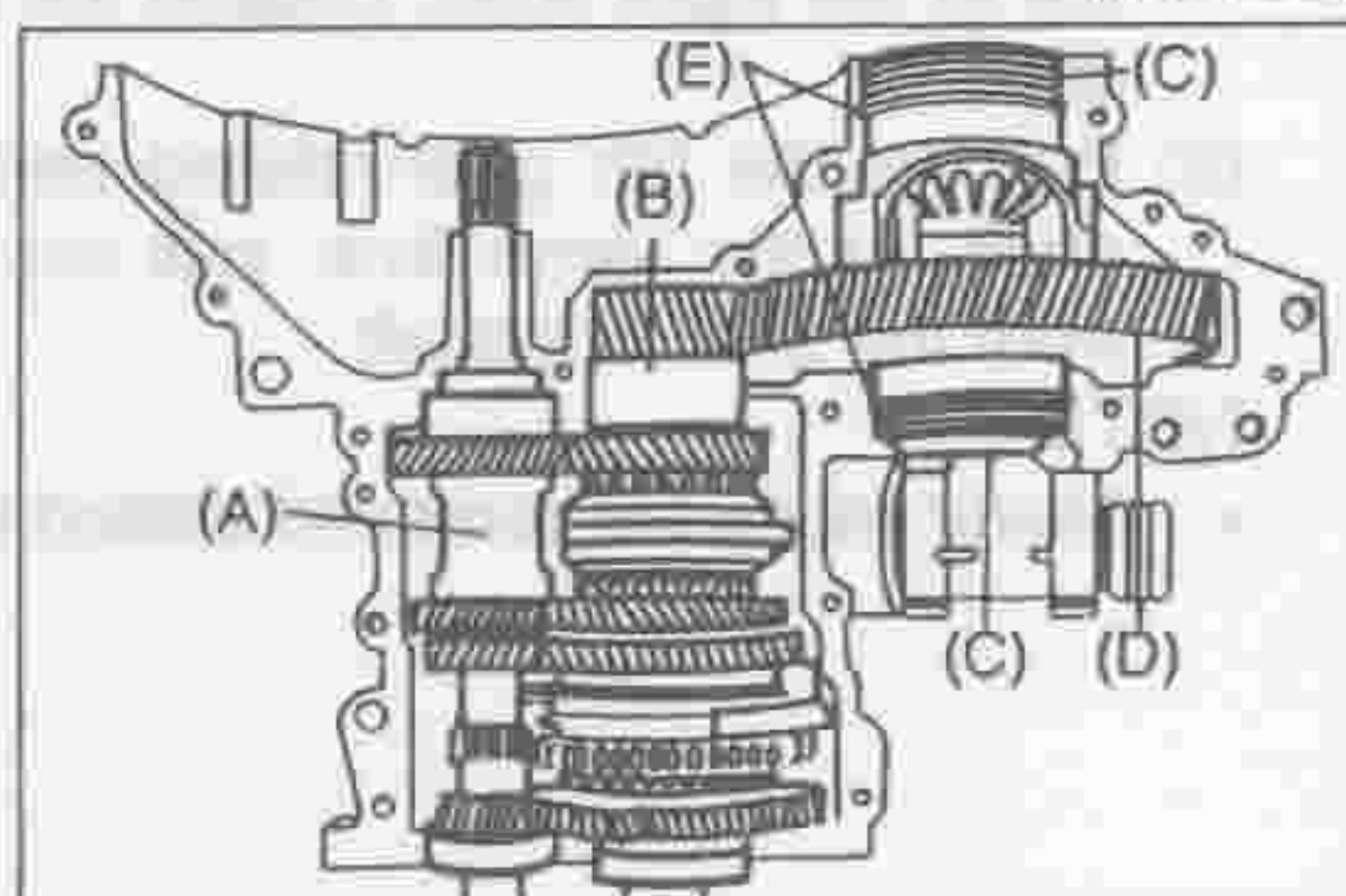
10. Disconnect the oil guide pipe (A) from the transmission upper case.



LMT00017-00013

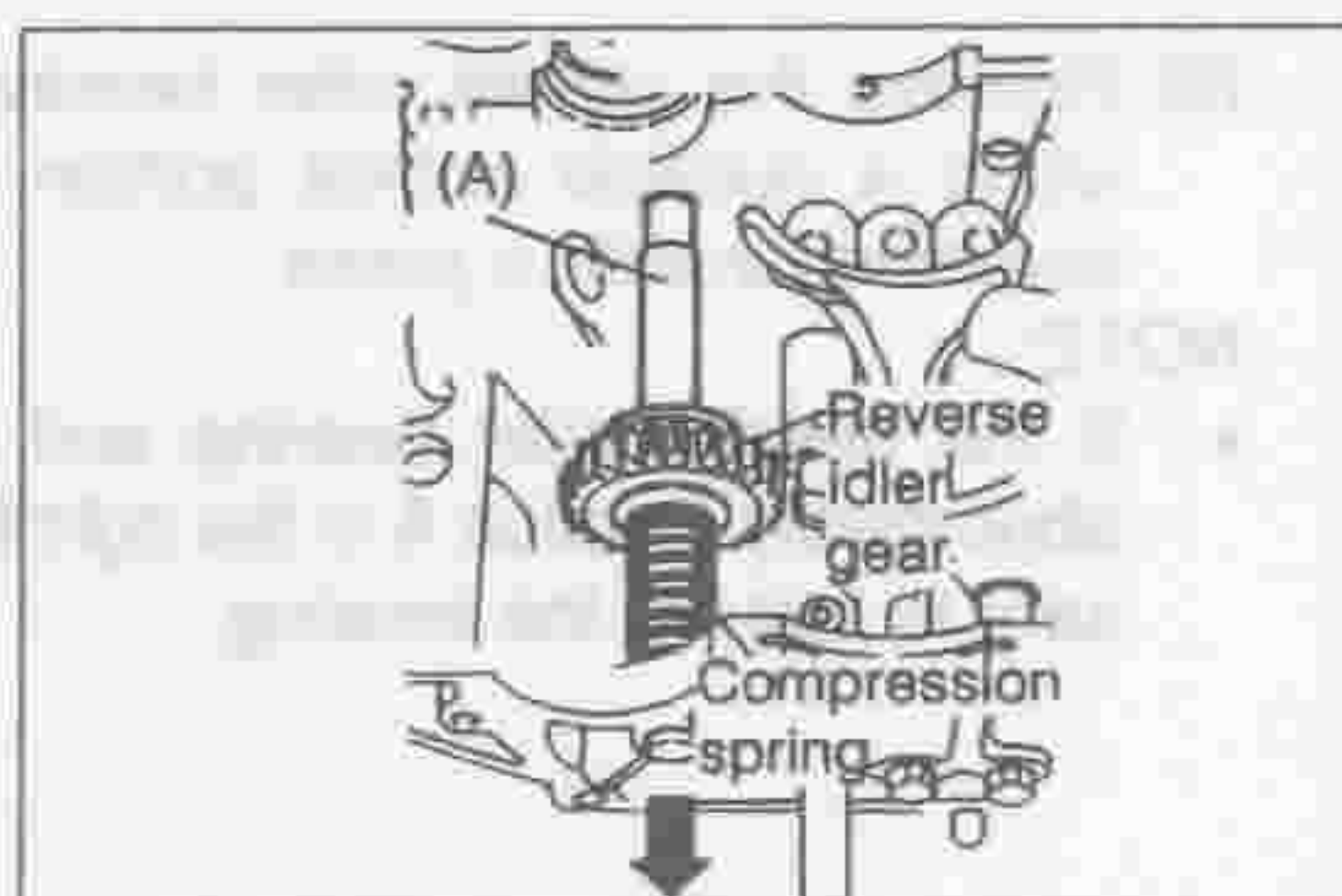
11. Remove the following parts from the transmission lower case.

- (1) Input shaft assembly (A)
- (2) Output shaft assembly (B)
- (3) Oil seals (C)
- (4) Differential gear assembly (D) and thrust washers (E).



LMT00018-00014

12. Pull out the reverse idler gear shaft (A). Take out the reverse idler gear-related parts.

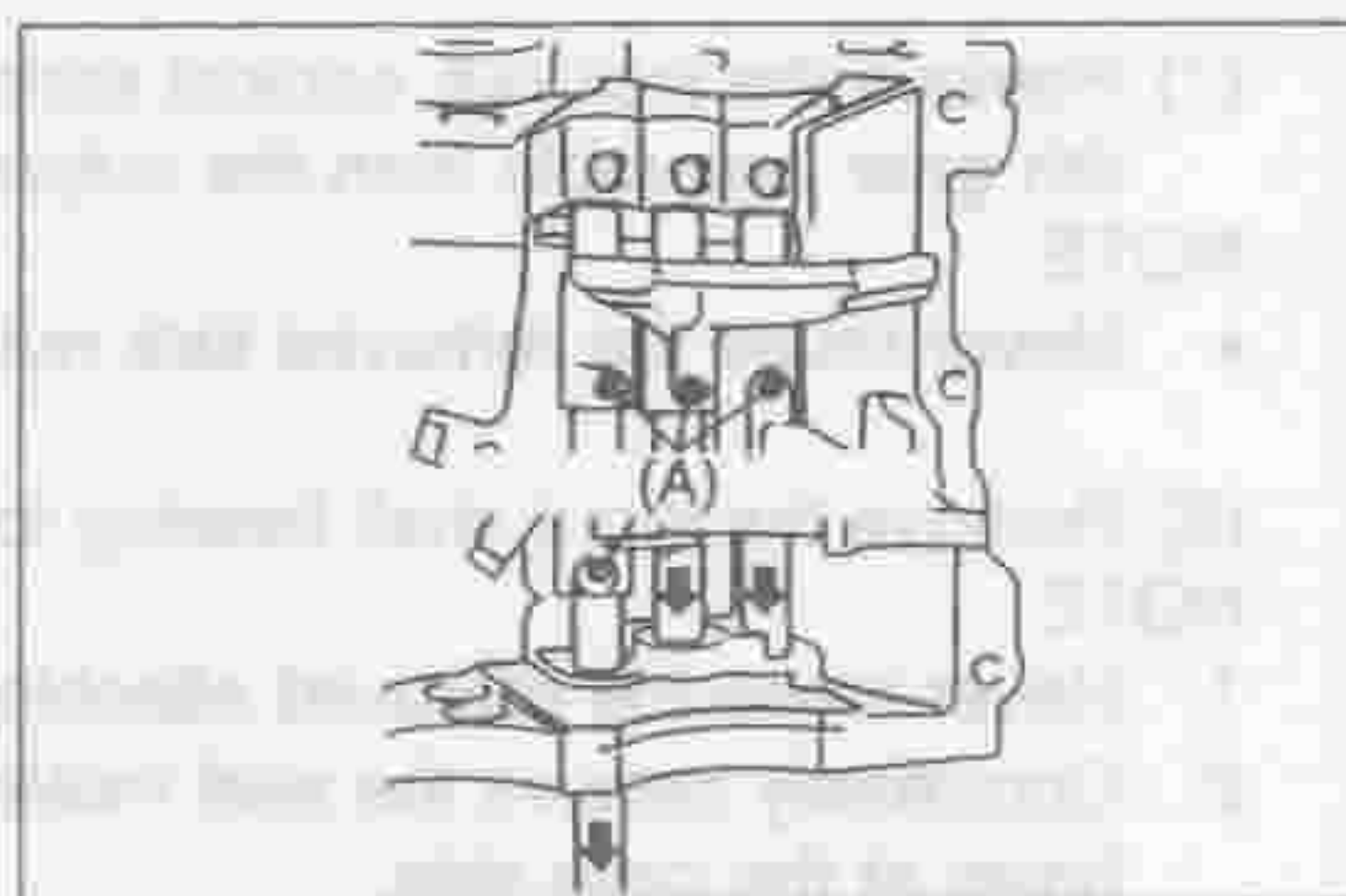


LMT00019-00015

13. Drive out the slotted spring pins (A). Remove each shift fork and other parts by pulling out one shift fork shaft at a time.

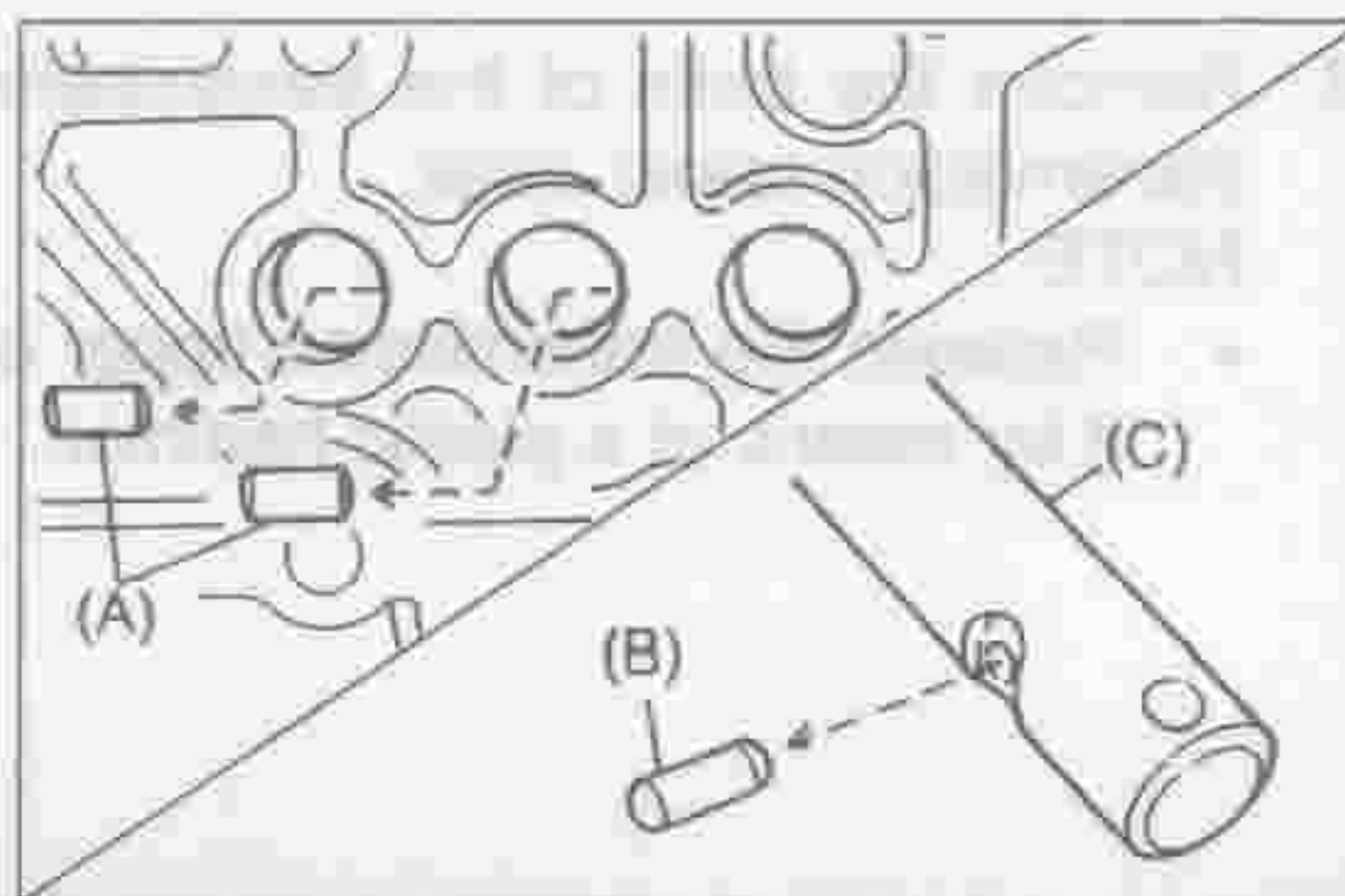
NOTE:

1. When pulling the shift fork shafts, be sure to apply a cloth against the hole A in the right figure so that the balls and springs may not jump out from the hole.
2. Never reuse the removed slotted spring pins.



LMT00020-00016

14. Remove the larger rollers (A) from the pass-through holes of the shift fork shaft of the transmission case. Remove the small roller (B) from the 3rd & 4th shift fork shaft (C).

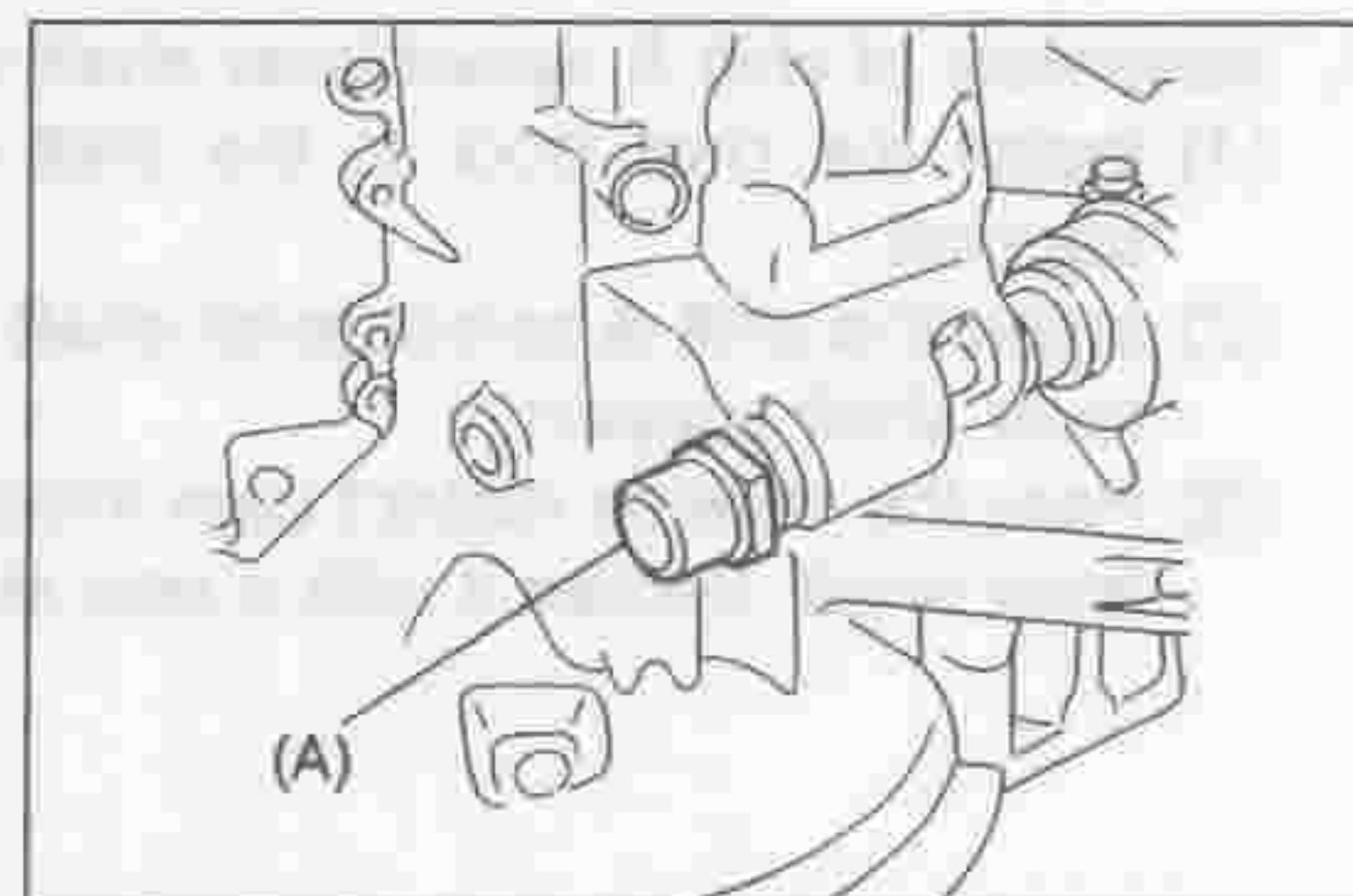
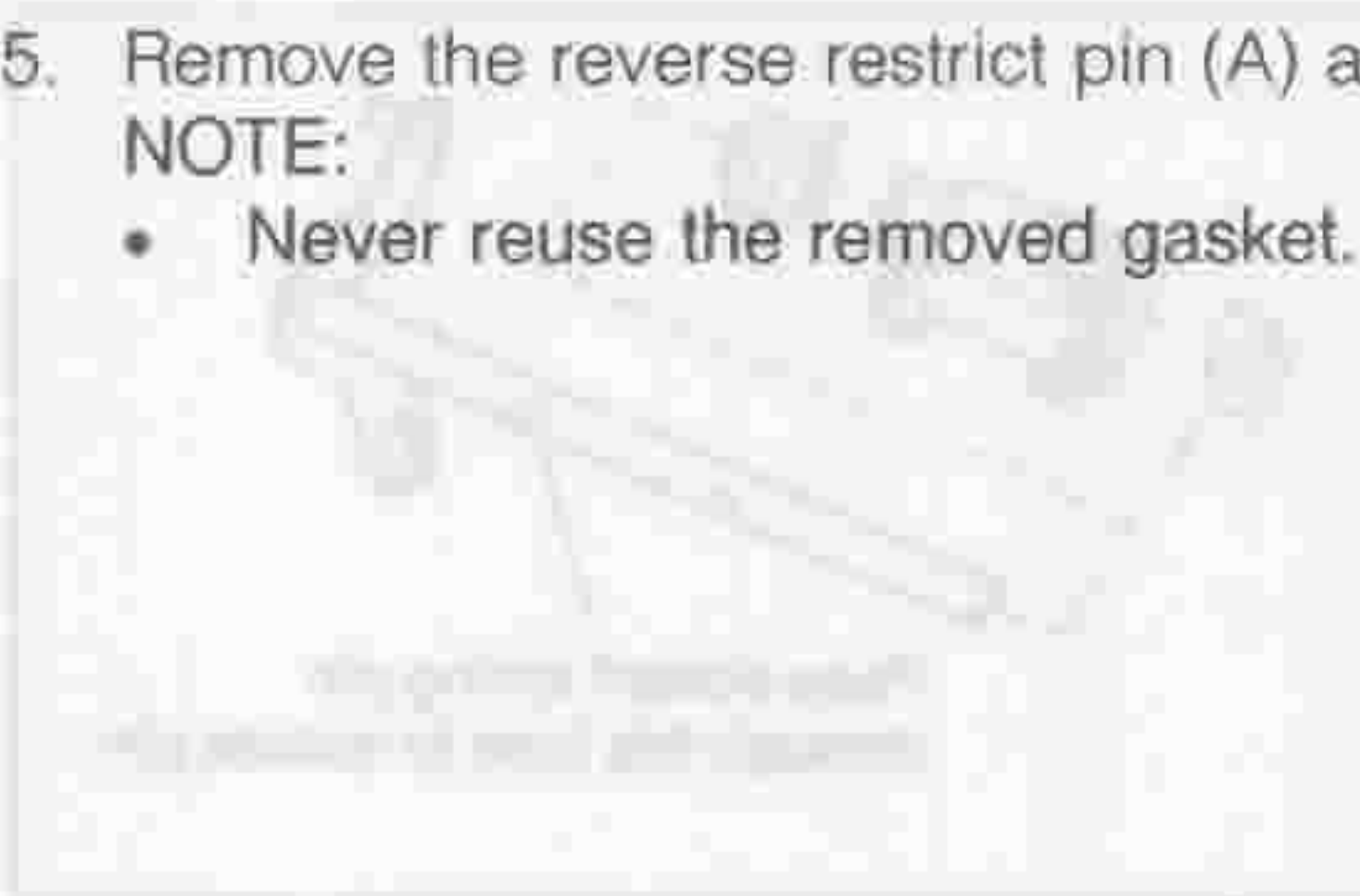


LMT00021-00017

15. Remove the reverse restrict pin (A) and gasket.

NOTE:

- Never reuse the removed gasket.

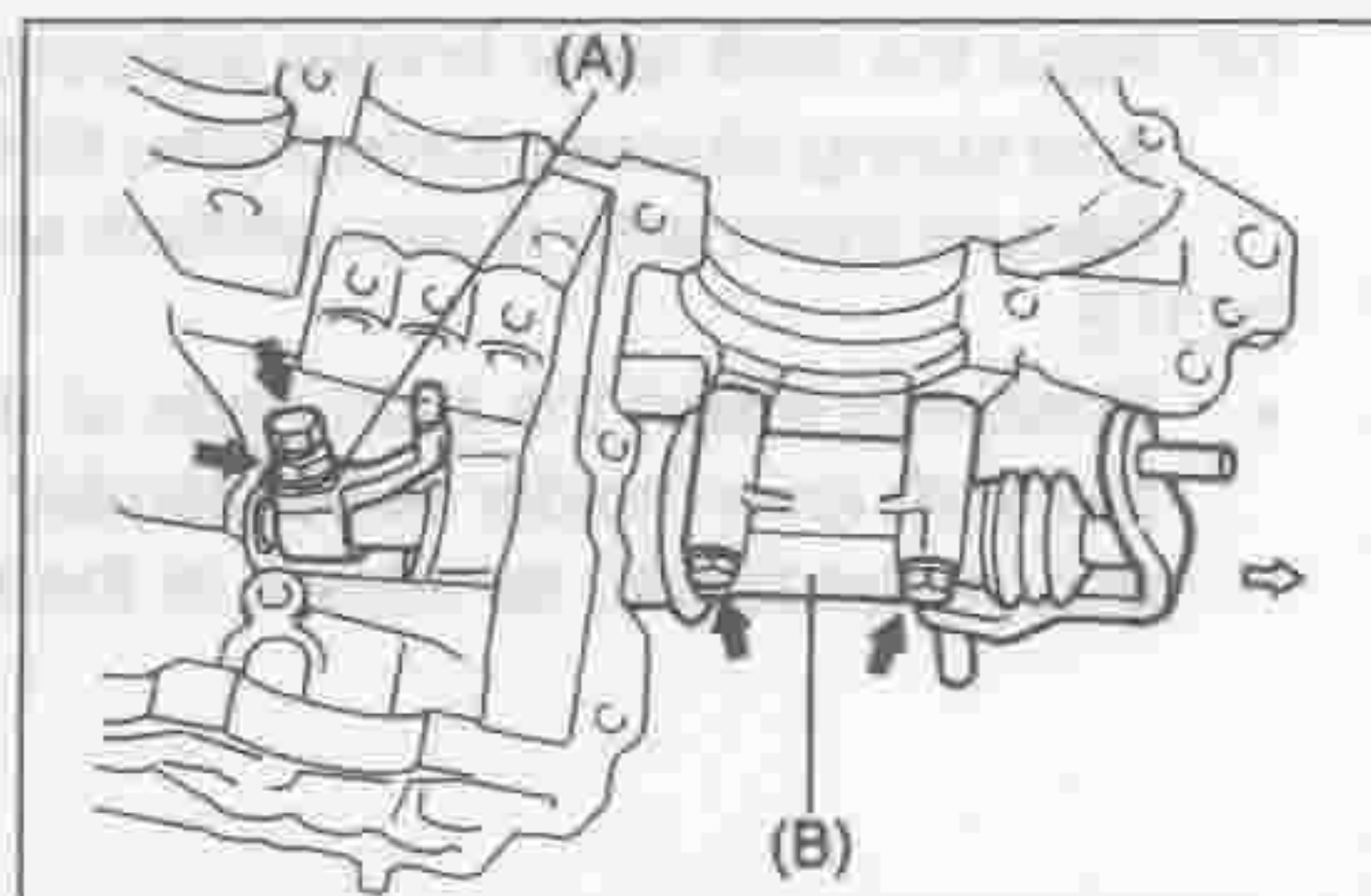
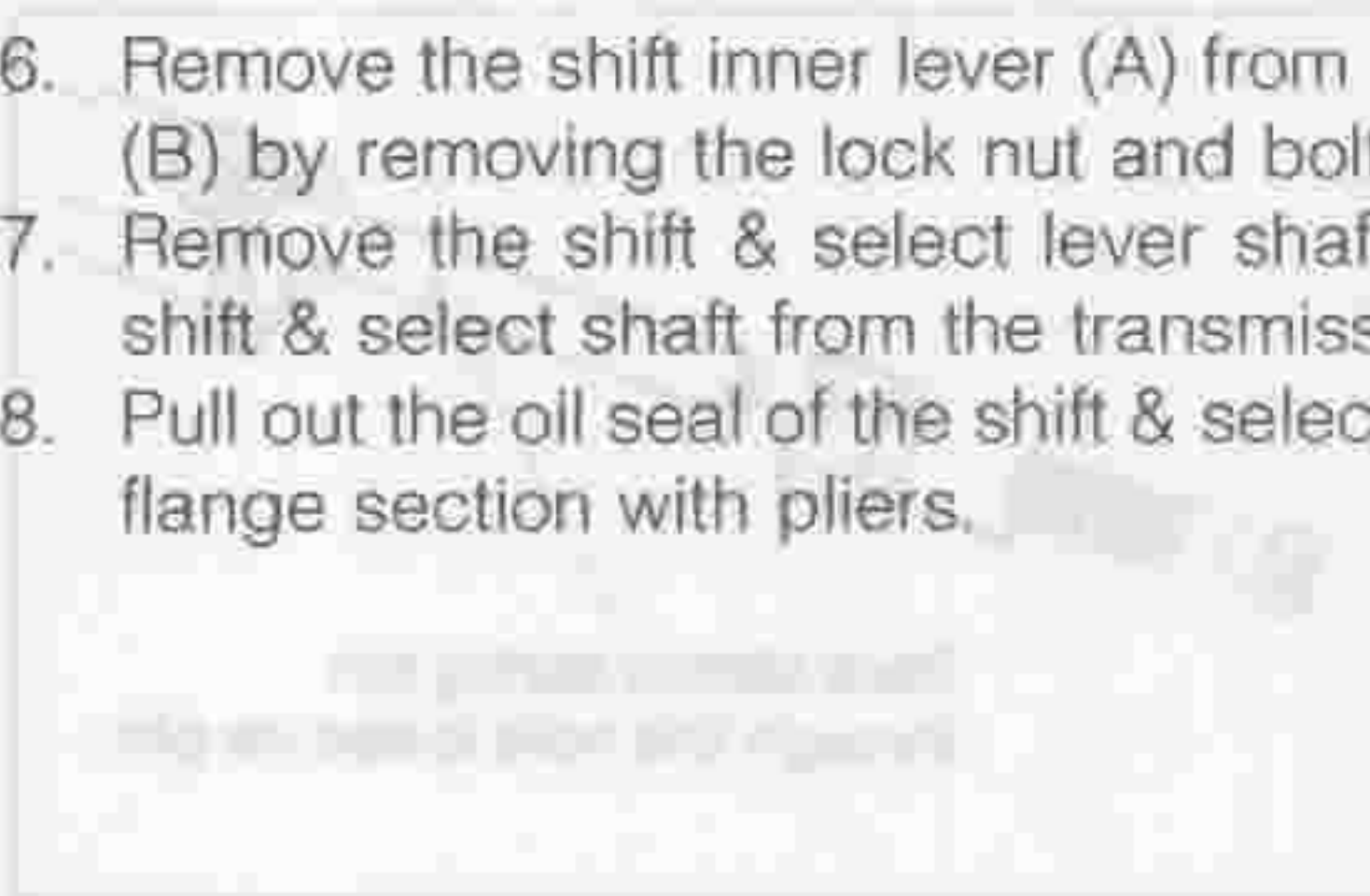


LMT00022-00018

16. Remove the shift inner lever (A) from the shift & select shaft (B) by removing the lock nut and bolt.

17. Remove the shift & select lever shaft support. Pullout the shift & select shaft from the transmission case.

18. Pull out the oil seal of the shift & select shaft by pinching its flange section with pliers.



LMT00023-00019

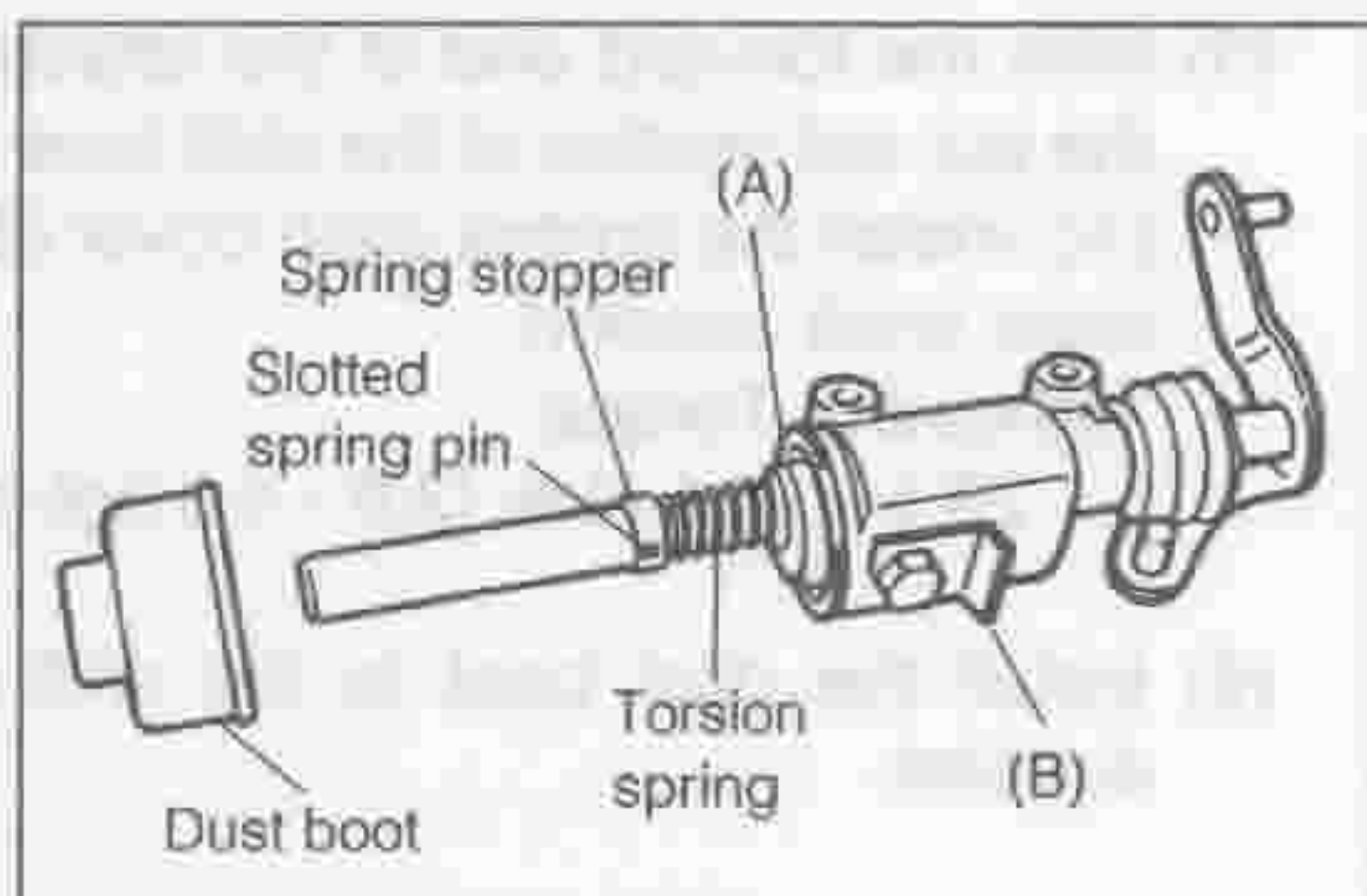
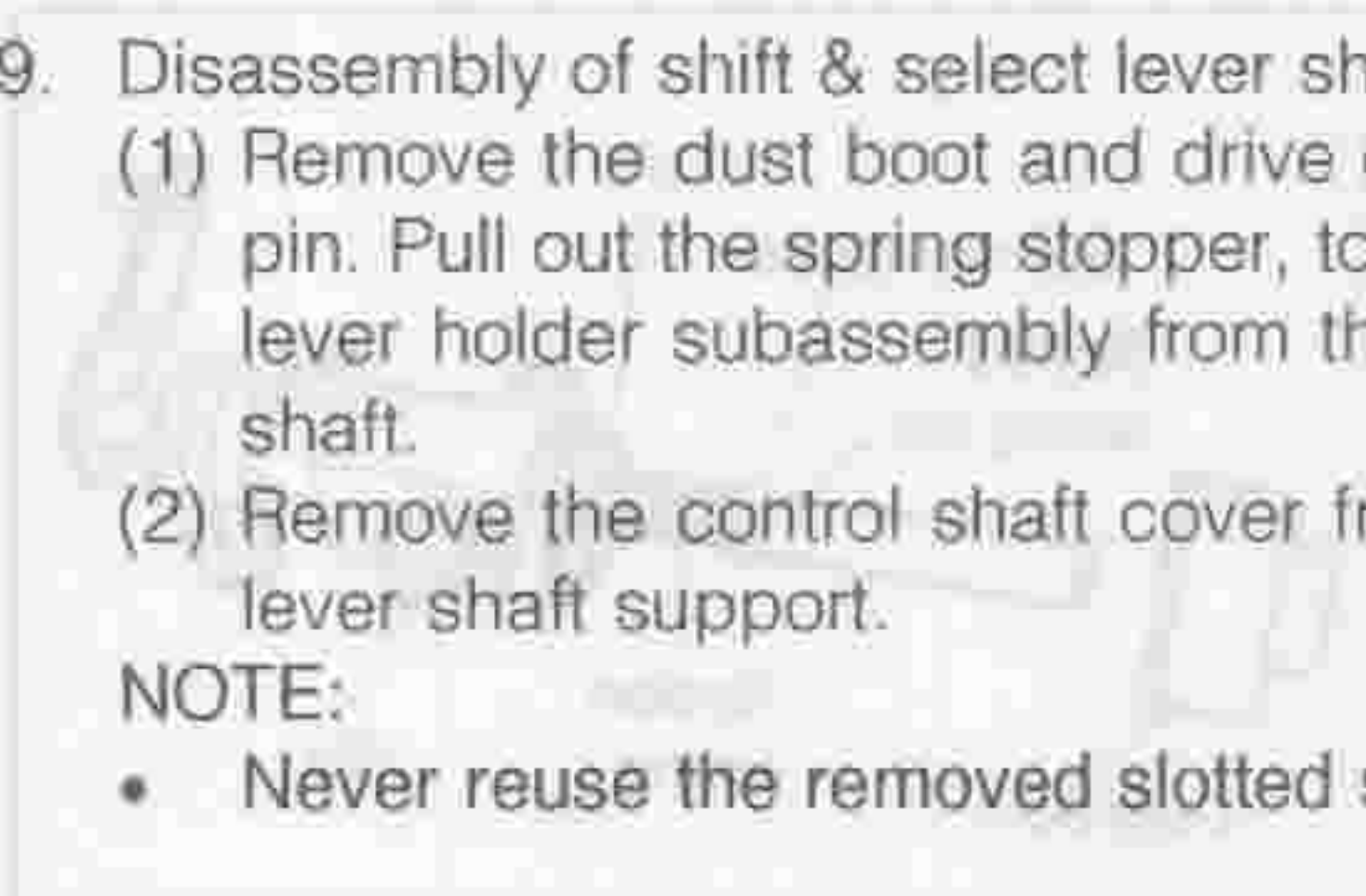
19. Disassembly of shift & select lever shaft support

- (1) Remove the dust boot and drive out the slotted spring pin. Pull out the spring stopper, torsion spring and shift lever holder subassembly from the shift & select lever shaft.

- (2) Remove the control shaft cover from the shift & select lever shaft support.

NOTE:

- Never reuse the removed slotted spring pin.



LMT00024-00020

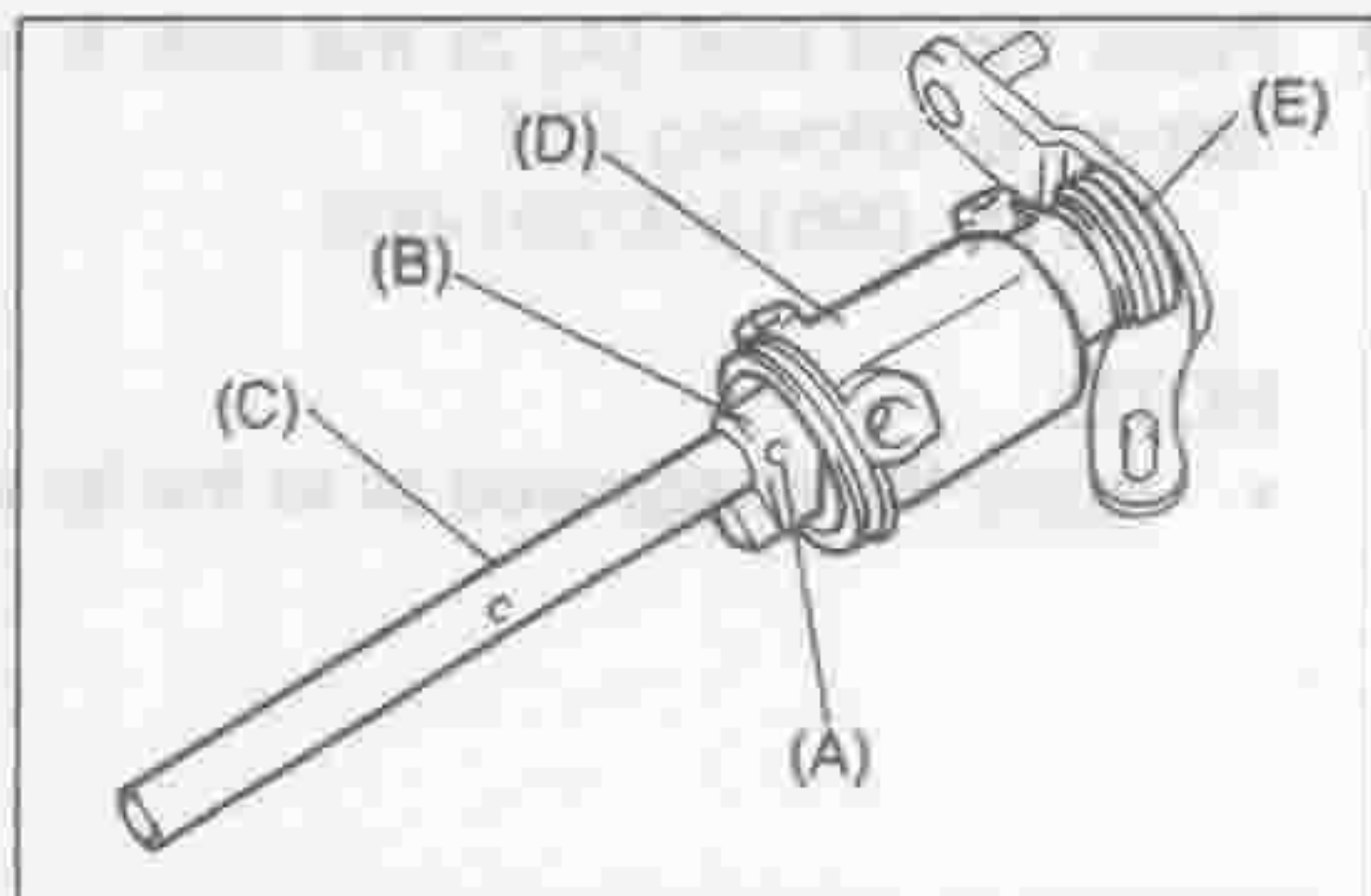
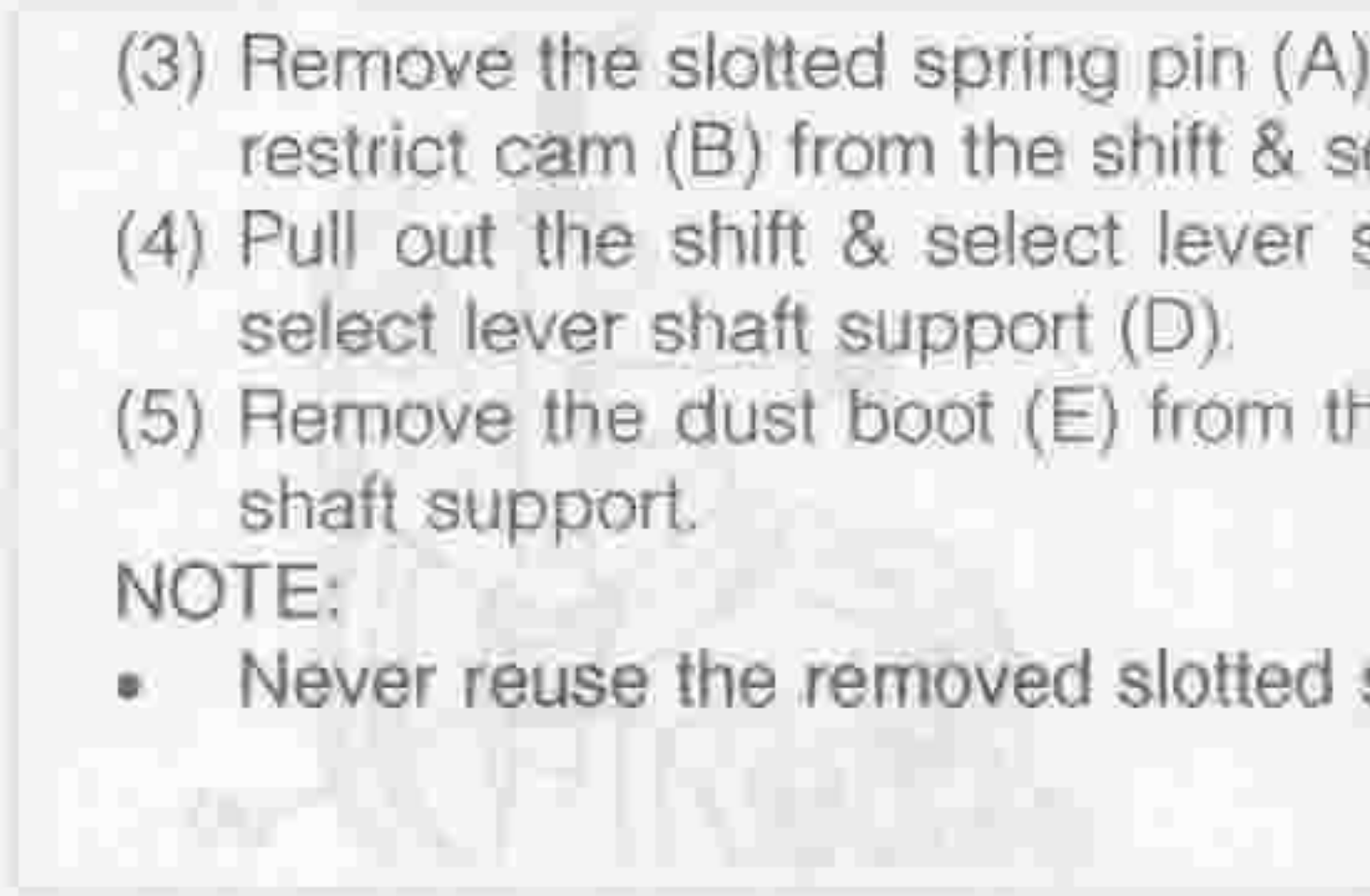
- (3) Remove the slotted spring pin (A). Remove the reverse restrict cam (B) from the shift & select lever shaft (C).

- (4) Pull out the shift & select lever shaft from the shift & select lever shaft support (D).

- (5) Remove the dust boot (E) from the shift & select lever shaft support.

NOTE:

- Never reuse the removed slotted spring pin.

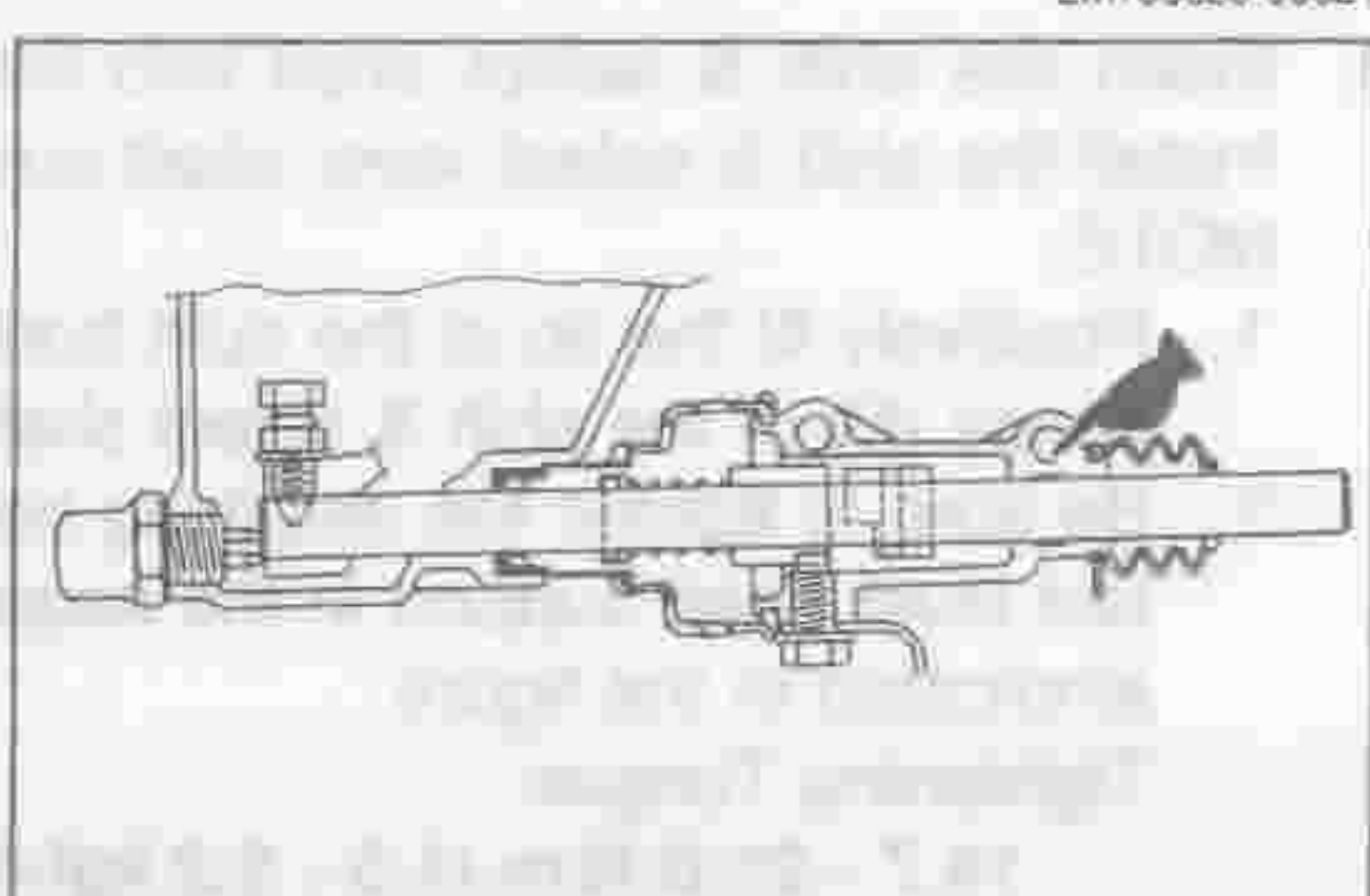
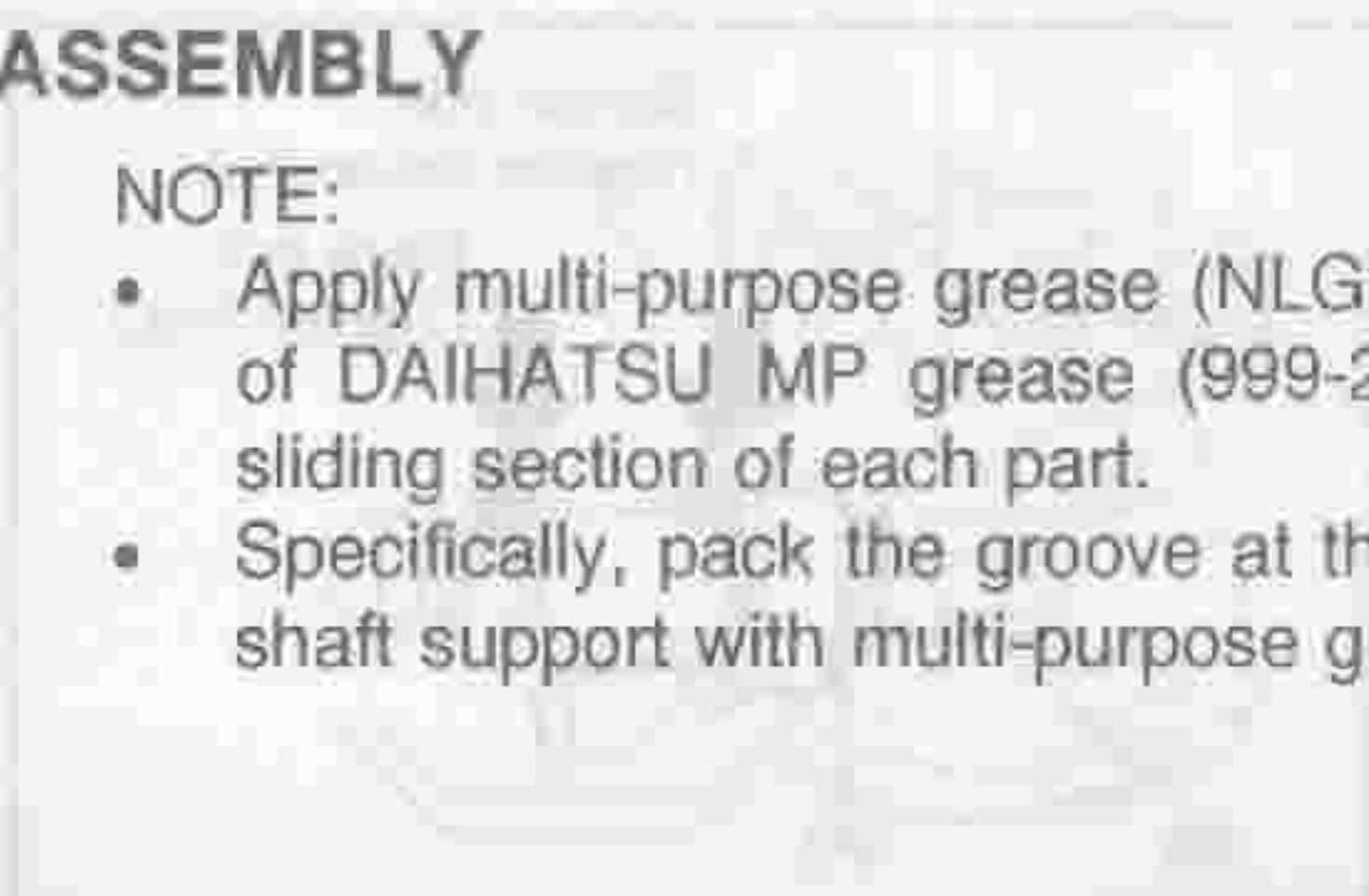


LMT00025-00021

ASSEMBLY

NOTE:

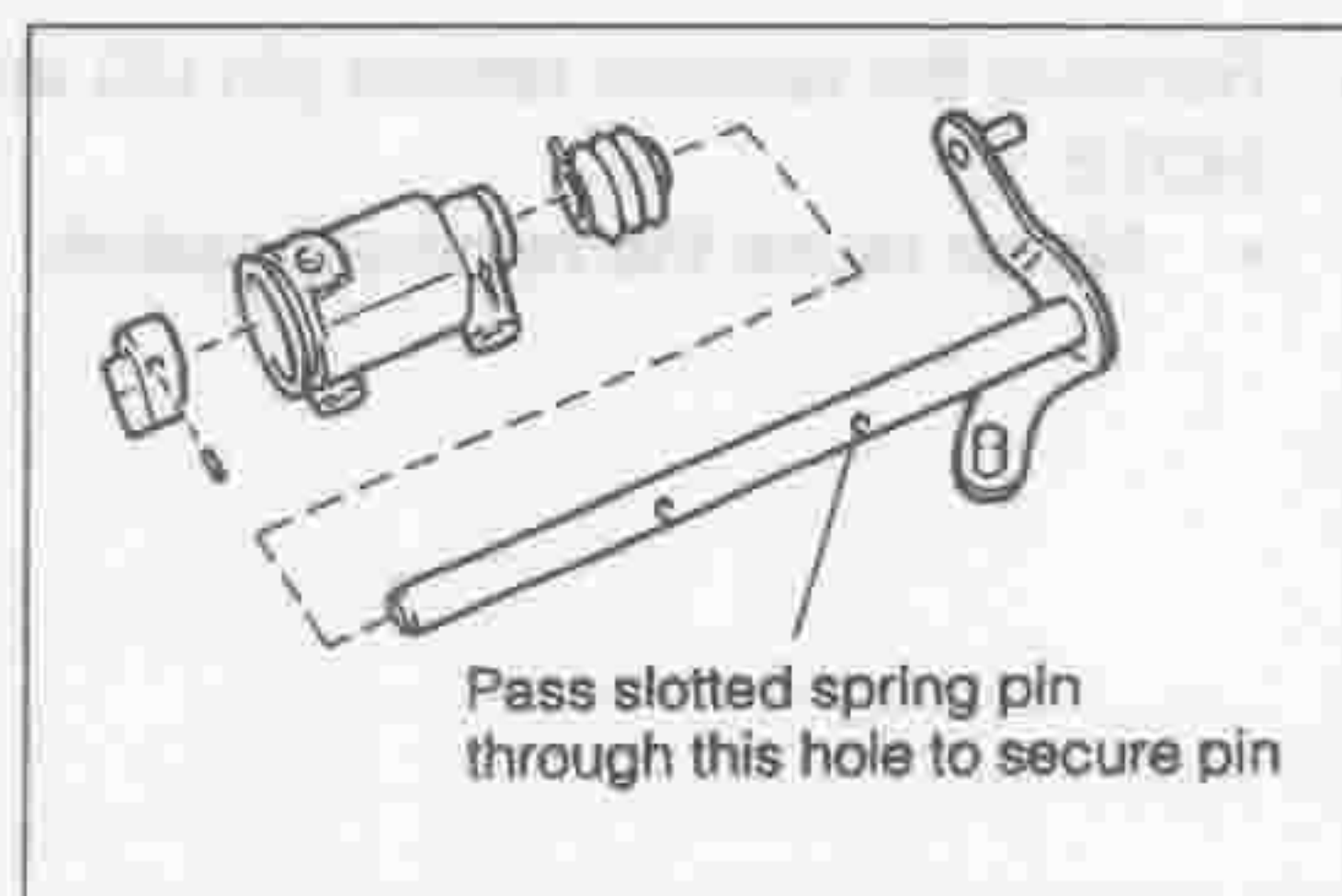
- Apply multi-purpose grease (NLGI No. 2) or equivalent of DAIHATSU MP grease (999-2102-8483-00) to the sliding section of each part.
- Specifically, pack the groove at the shift & select lever shaft support with multi-purpose grease.



LMT00026-00022

1. Assembly of shift & select lever shaft support

- (1) Install the dust boot to the shift & select lever shaft support.
- (2) Insert the shift & select lever shaft into the shift & select lever shaft support.
- (3) Pass the reverse restrict cam through the shift & select lever shaft. Secure it with a new slotted spring pin.

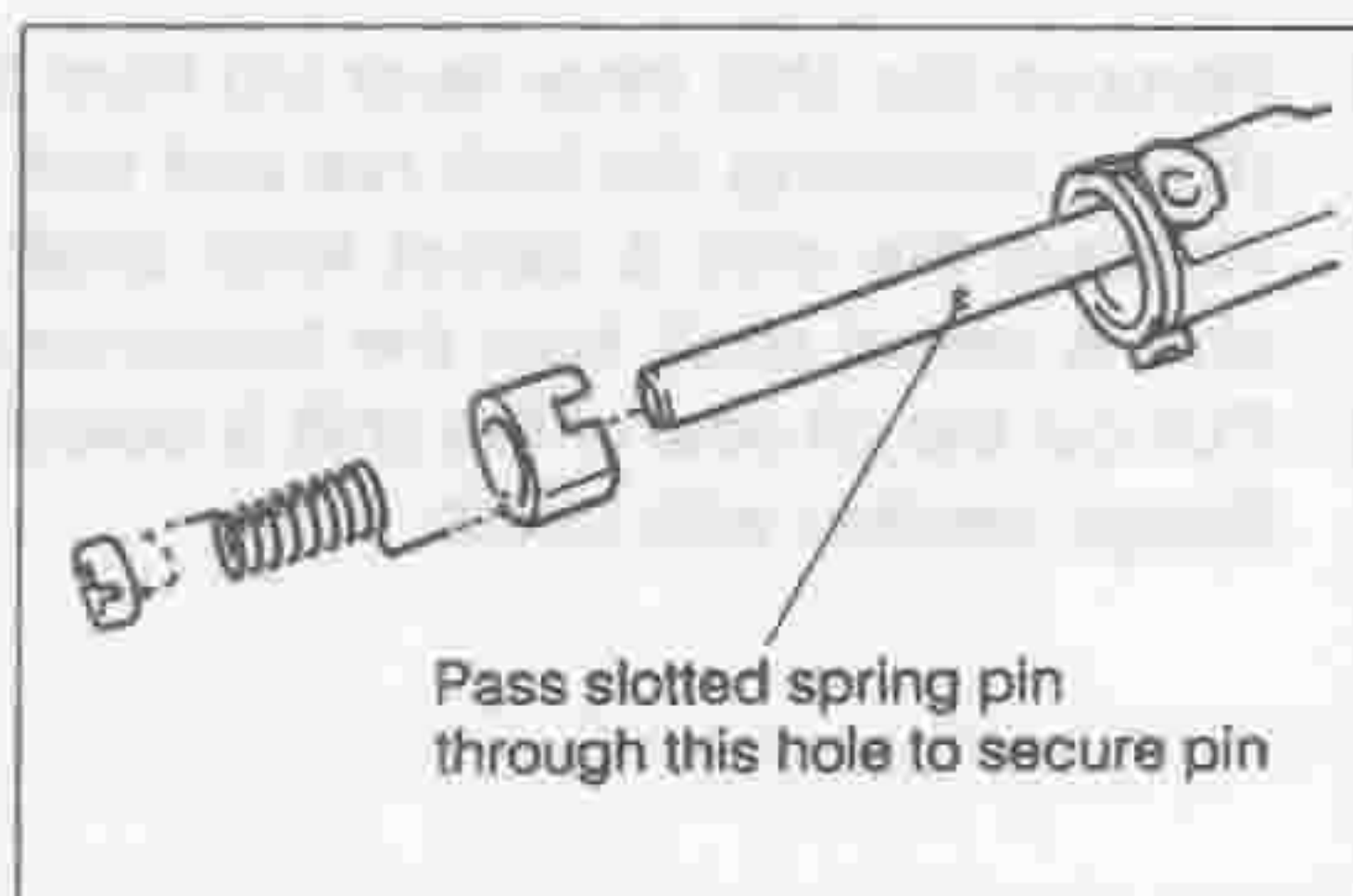


LMT00027-00023

- (4) Pass the shift lever holder subassembly, torsion spring and spring stopper through the shift & select lever shaft. Secure them with a new slotted spring pin.

NOTE:

- Positively insert the both ends of the torsion spring into the shift lever holder subassembly and the spring stopper, respectively, as shown in the right figure.



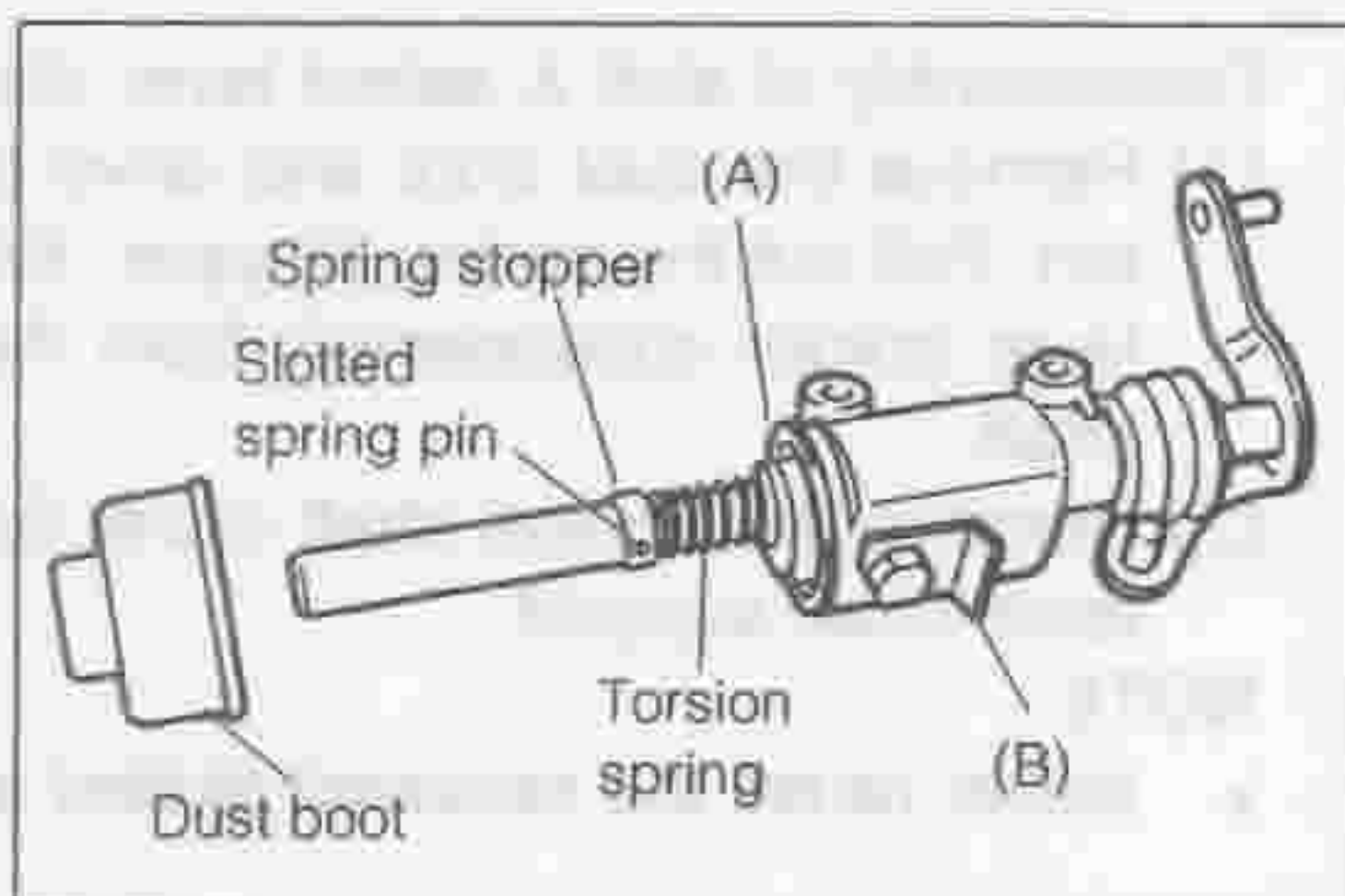
LMT00028-00024

- (5) With the forward end of the attaching bolt aligned with the cut-out section of the shift lever holder subassembly (A), install the control shaft cover (B) to the shift & select lever shaft support.

Tightening Torque:

29.4 - 44.1 N·m (3.0 - 4.5 kgf-m, 21.7 - 32.5 ft-lb)

- (6) Install the dust boot to the shift & select lever shaft support.



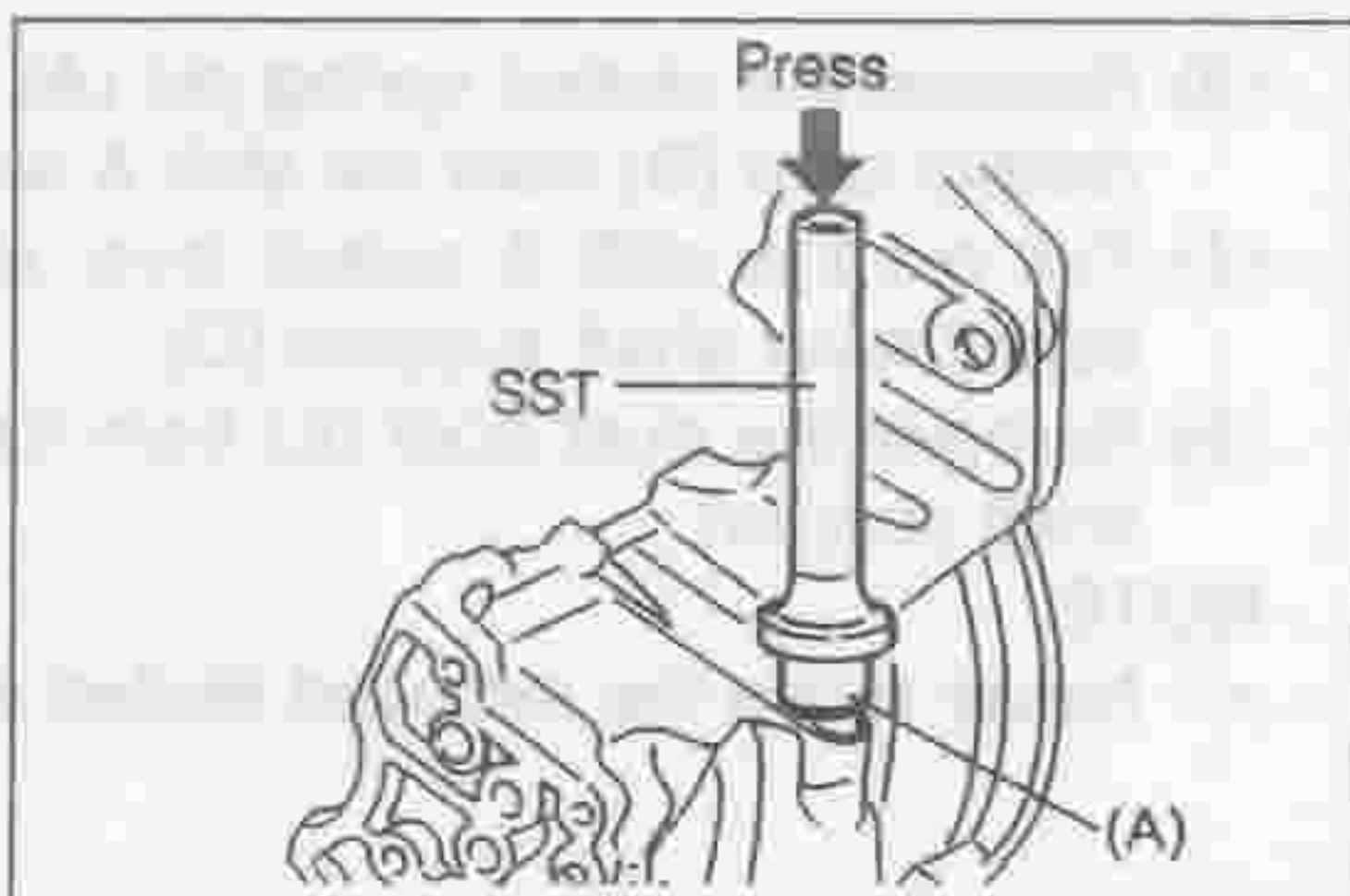
LMT00029-00025

2. Press the oil seal (A) of the shift & select shaft in place, using the following SST.

SST: 09515-87201-000

NOTE:

- Apply the designated oil to the lip section of the oil seal.



LMT00030-00026

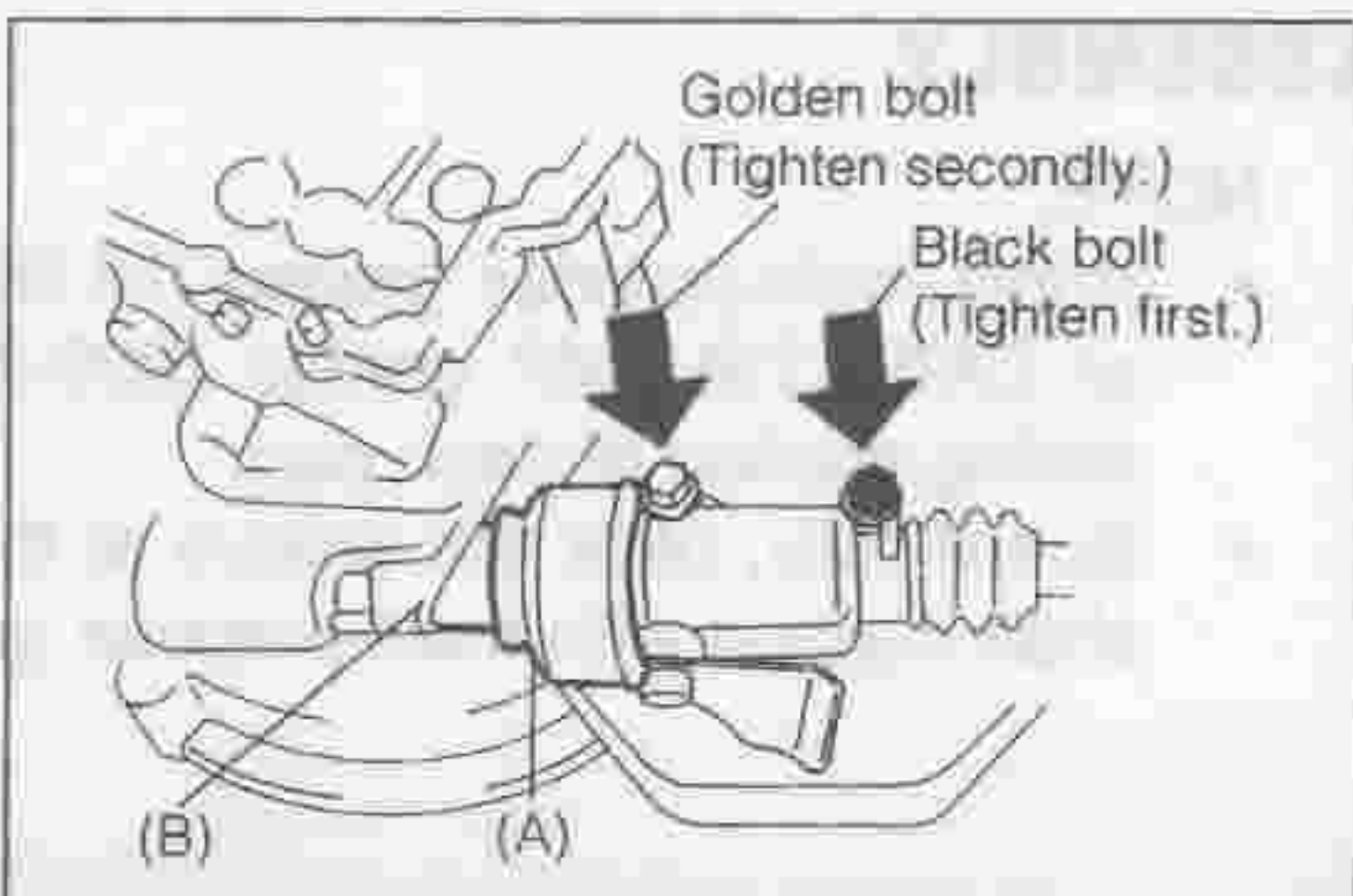
3. Insert the shift & select shaft into the transmission case. Install the shift & select lever shaft support.

NOTE:

1. Positively fit the lip of the dust boot (A) onto the flange (B) of the shift & select shaft oil seal.
2. Be sure to tighten the attaching bolts of the shift & select lever shaft support in the sequence of the number indicated in the figure.

Tightening Torque:

14.7 - 21.6 N·m (1.5 - 2.2 kgf-m, 10.8 - 15.9 ft-lb)



LMT00031-00027

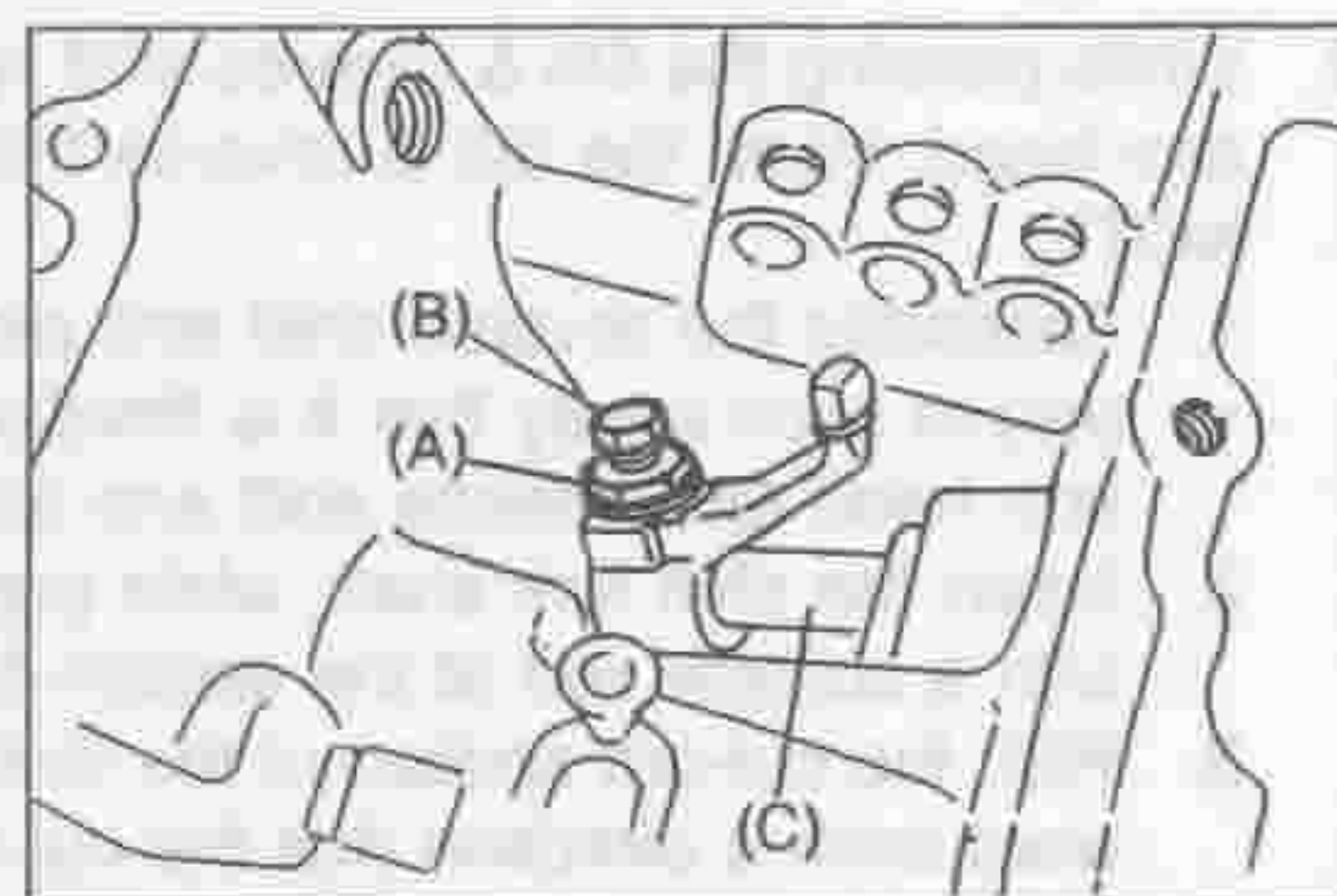
- Pass the shift inner lever through the shift & select shaft (C).
Install the bolt (B) and lock nut (A).

Tightening Torque

(Bolt): 39.2 - 49.0 N·m
(4.0 - 5.0 kgf-m, 28.9 - 36.2 ft-lb)
(Lock nut): 19.6 - 29.4 N·m
(2.0 - 3.0 kgf-m, 14.5 - 21.7 ft-lb)

NOTE:

- Before tightening the lock nut (A), tighten the bolt (B), while aligning the forward end of the bolt with the hole of the shift & select shaft (C).

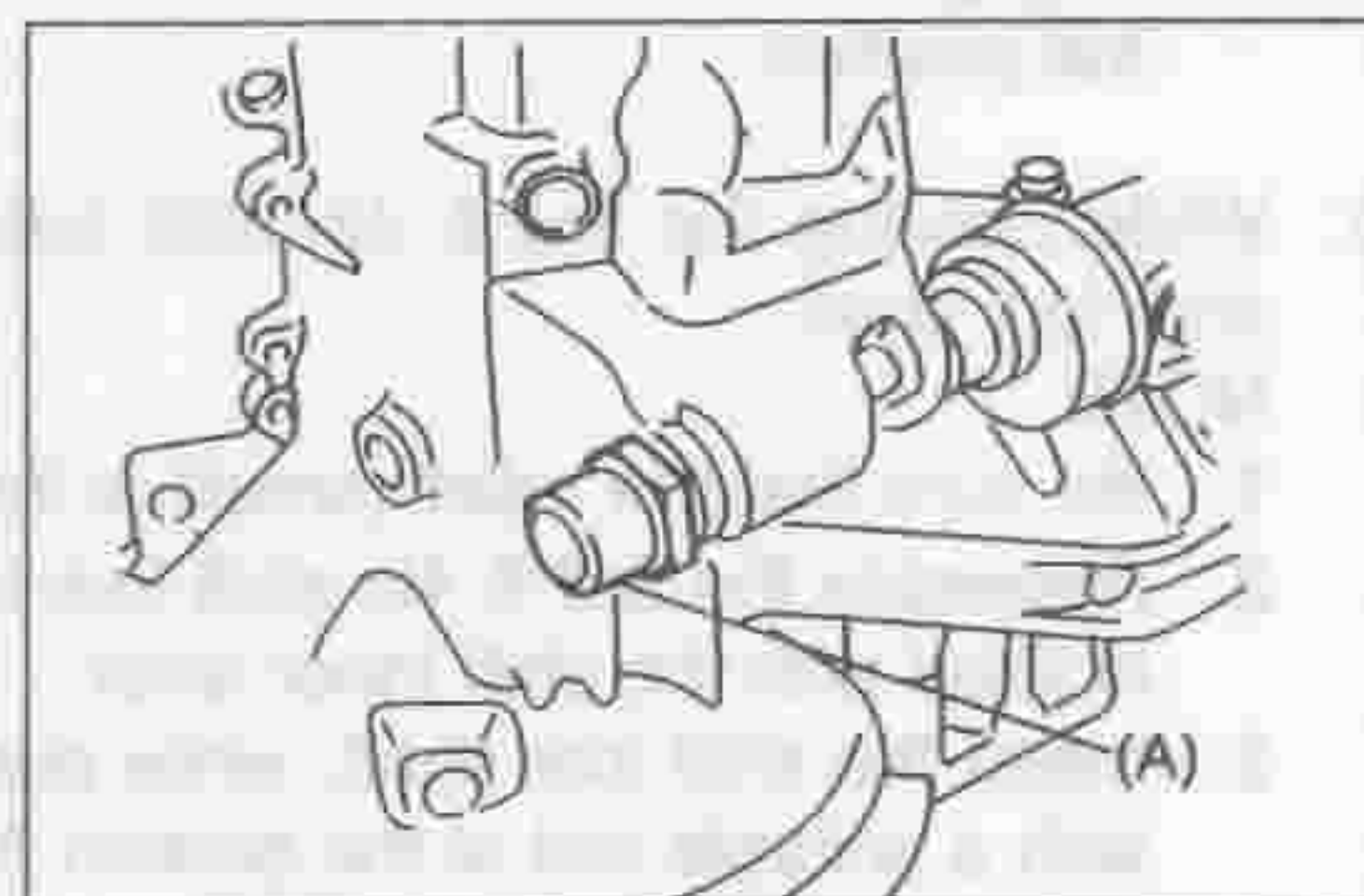


LMT00032-00028

- Install the reverse restrict pin (A) and a new gasket.

Tightening Torque:

29.4 - 49.0 N·m (3.0 - 5.0 kgf-m, 21.7 - 36.2 ft-lb)

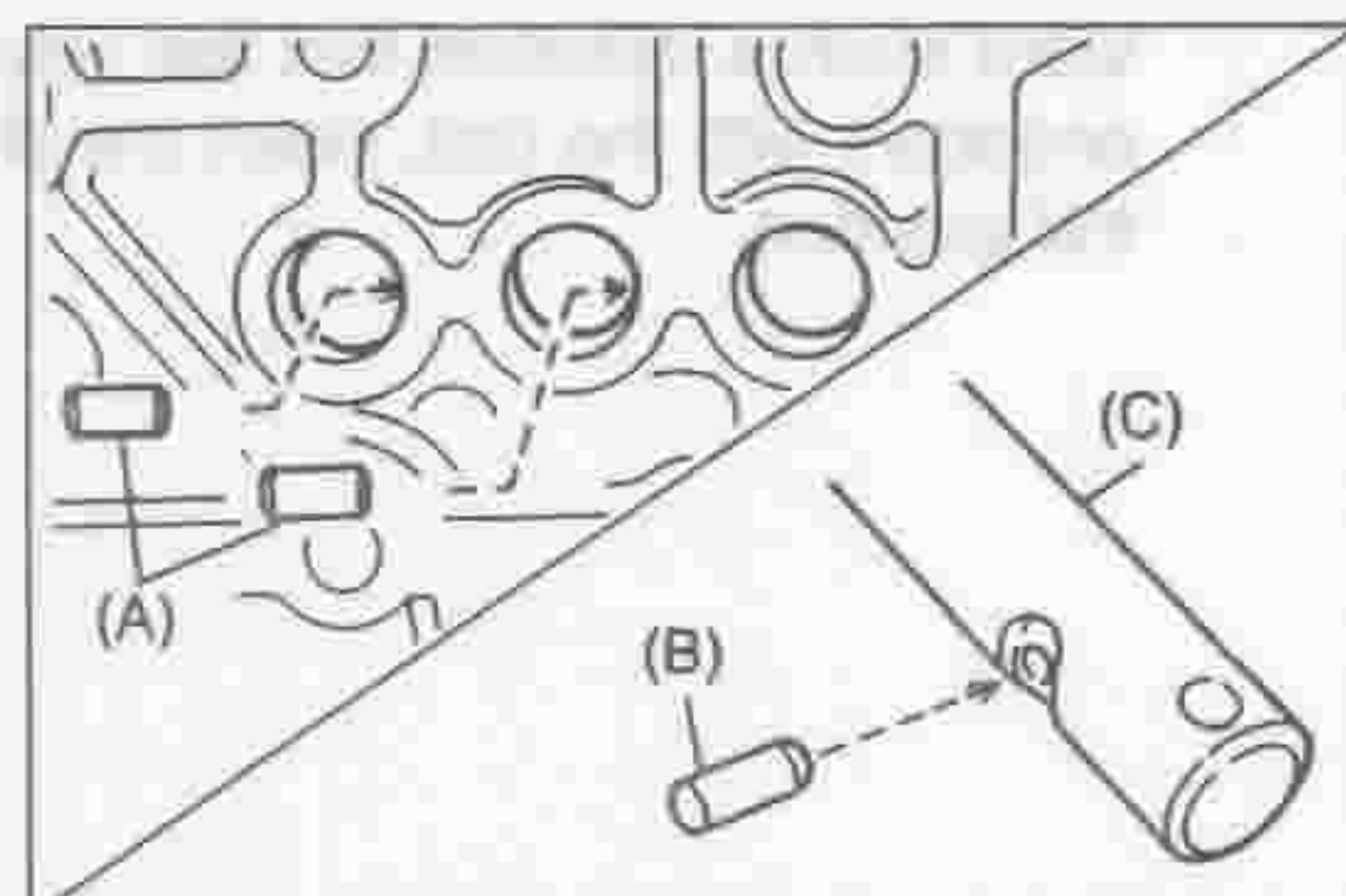


LMT00033-00029

- Insert the larger rollers (A) into the pass-through holes of the shift fork shaft of the transmission case.
Insert the smaller roller (B) into the 3rd & 4th shift fork shaft (C).

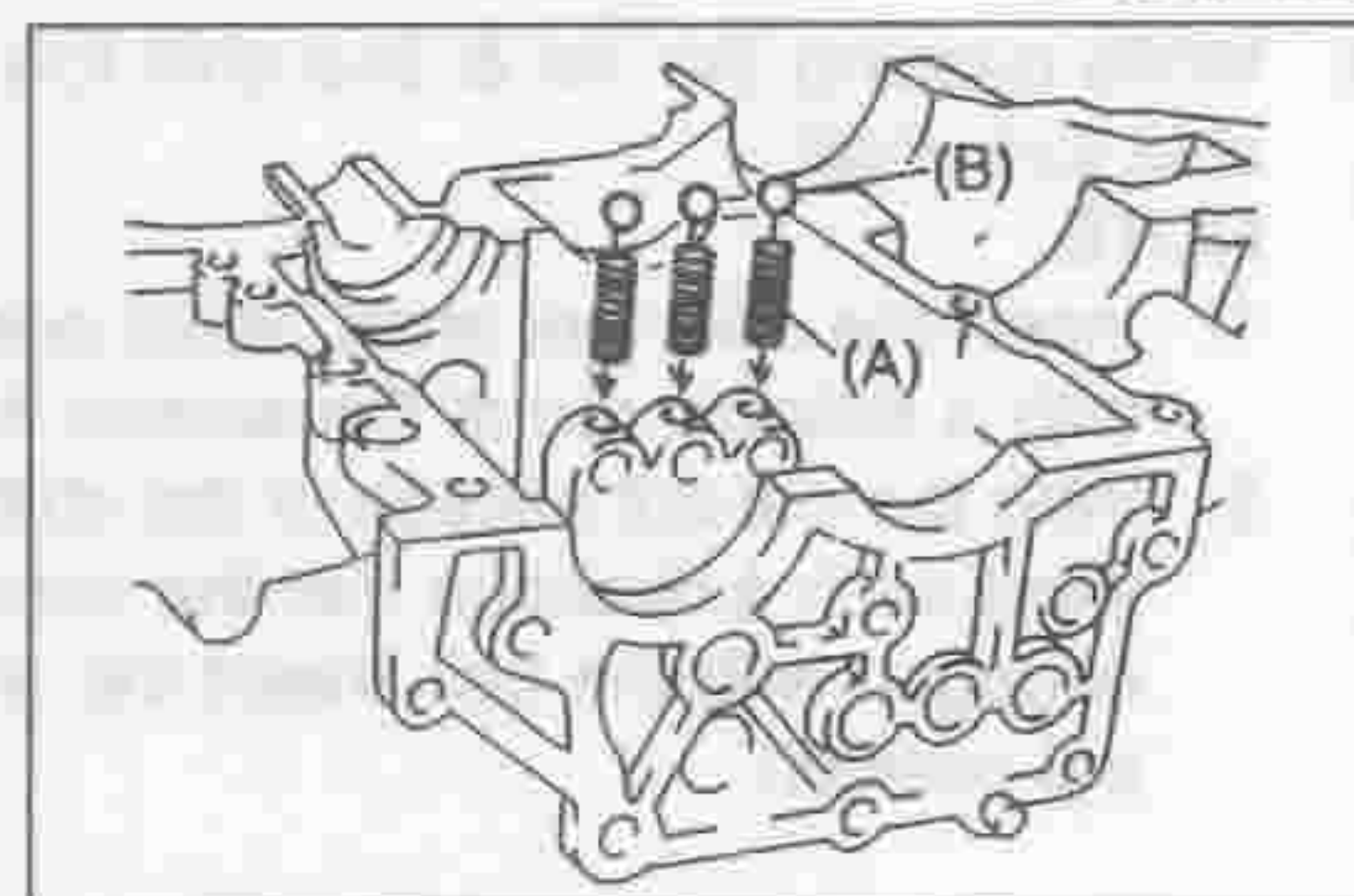
NOTE:

- Make sure that the rollers will not drop before the shift-related parts are assembled.



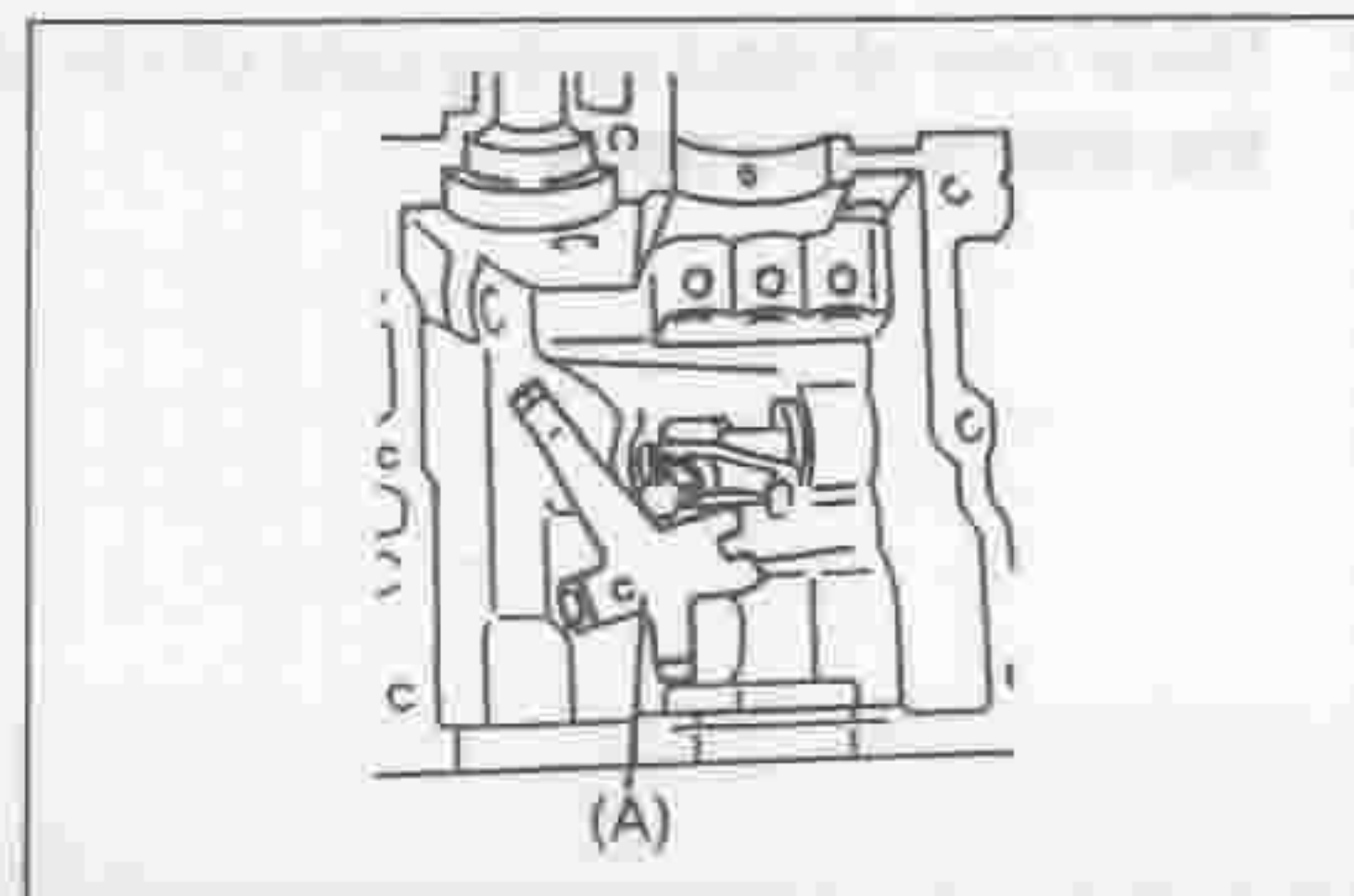
LMT00034-00030

- Place the springs (A) and balls (B) in the shift fork shaft insertion holes of the transmission case.



LMT00035-00031

- Install the reverse shift arm subassembly (A).

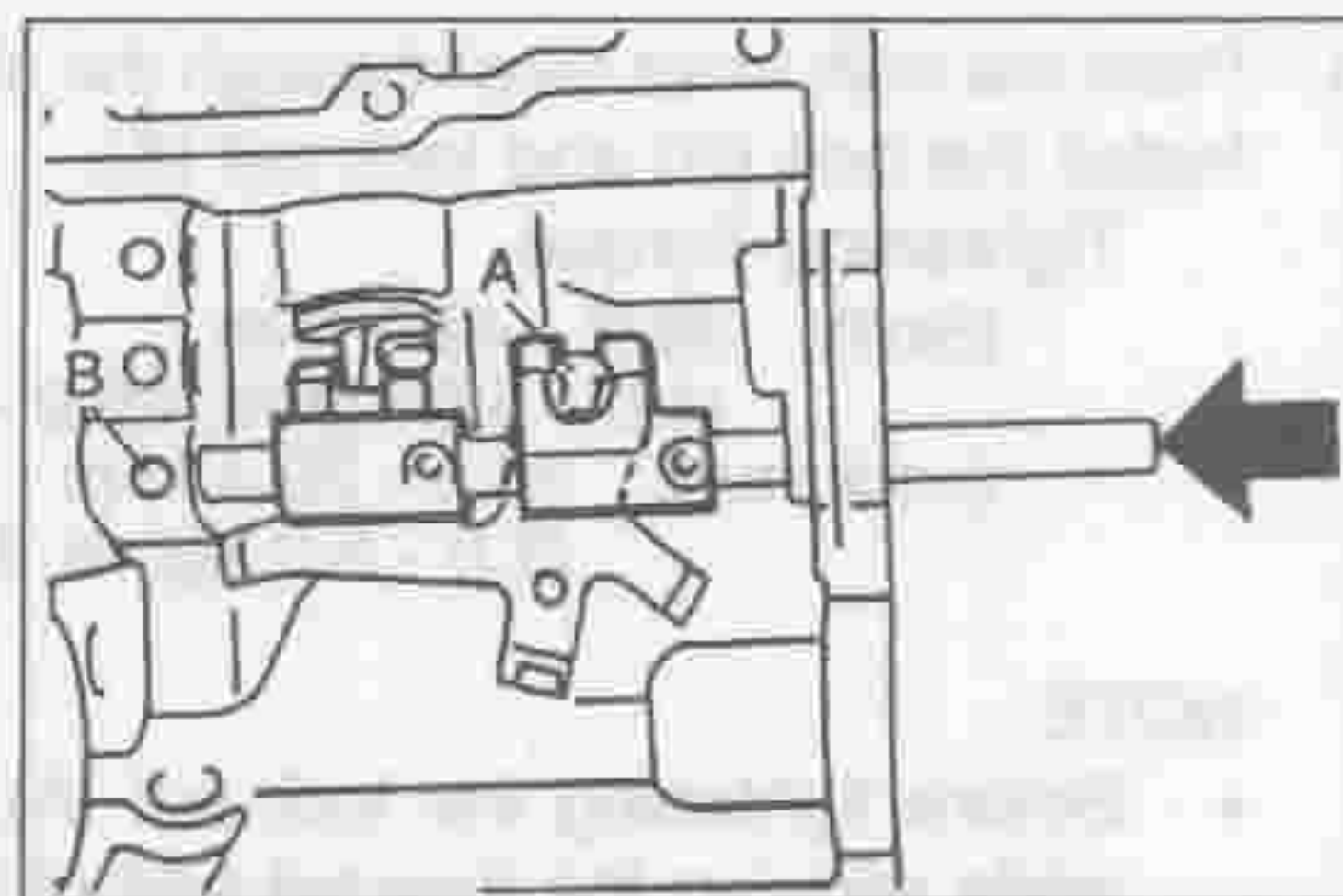


LMT00036-00032

9. While passing the 5th & reverse shift head and reverse shift arm head, insert the 5th & reverse shift fork shaft.

NOTE:

1. Assemble the reverse shift arm pin (A in the right figure) in such a way that it is fitted with the reverse shift arm head and reverse shift arm subassembly.
2. Insert the shift fork shaft, while pushing down the ball with a suitable rod at the section B in the right figure.
3. With the cut-out section of the shift fork shaft facing toward such a direction that the cut-out section is engaged with the ball, insert the shaft up to the neutral position.

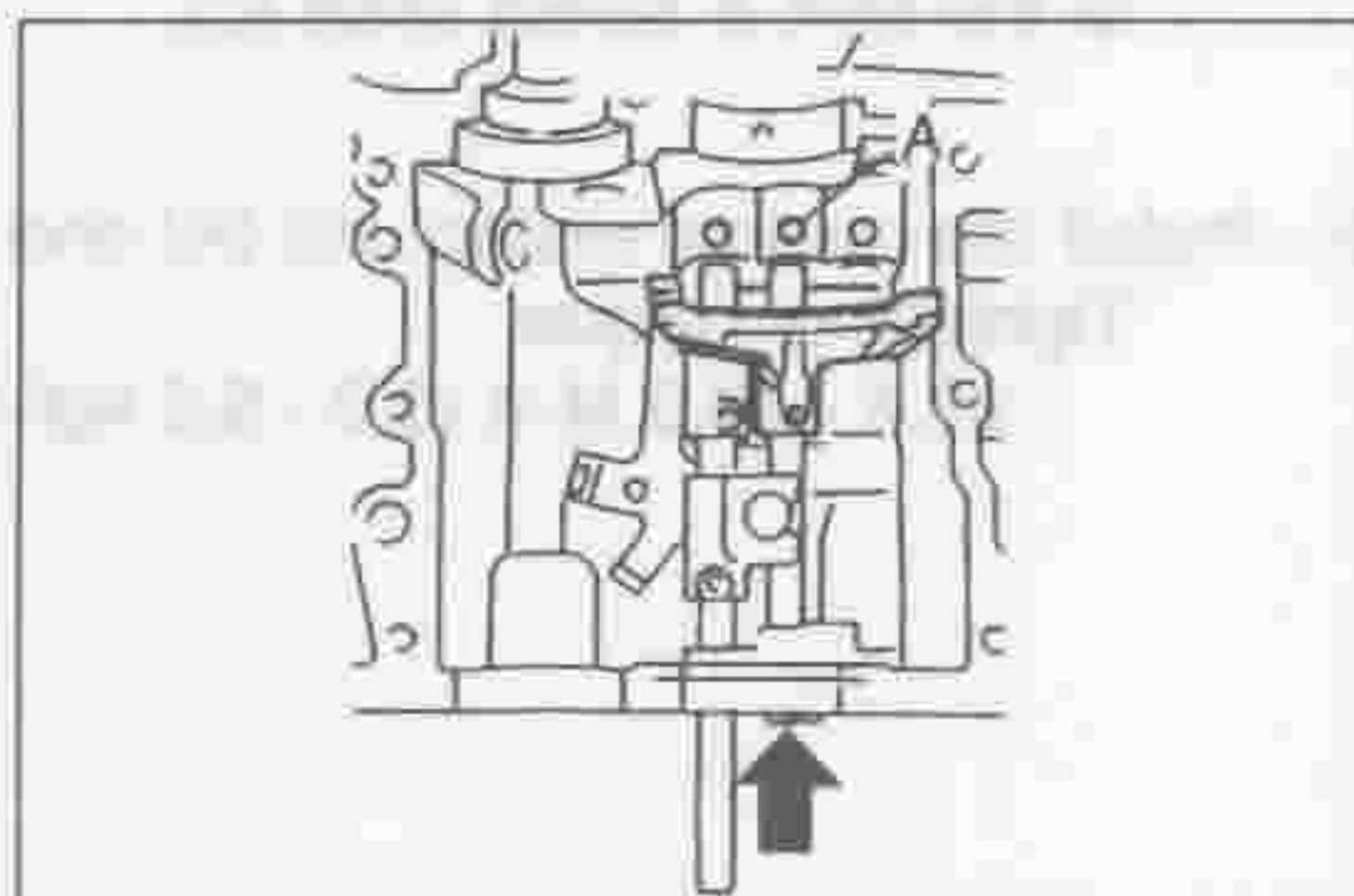


LMT00037-00033

10. While passing the 3rd & 4th shift fork, insert the 3rd & 4th shift fork shaft.

NOTE:

1. Be sure that the roller (small) is inserted.
2. Assemble the 3rd & 4th shift fork in such a way that it is fitted with the shift inner lever.
3. Insert the shift fork shaft, while pushing down the ball with a suitable rod at the section A in the right figure.
4. With the cut-out section of the shift fork shaft facing toward such a direction that the cut-out section is engaged with the ball, insert the shaft up to the neutral position.

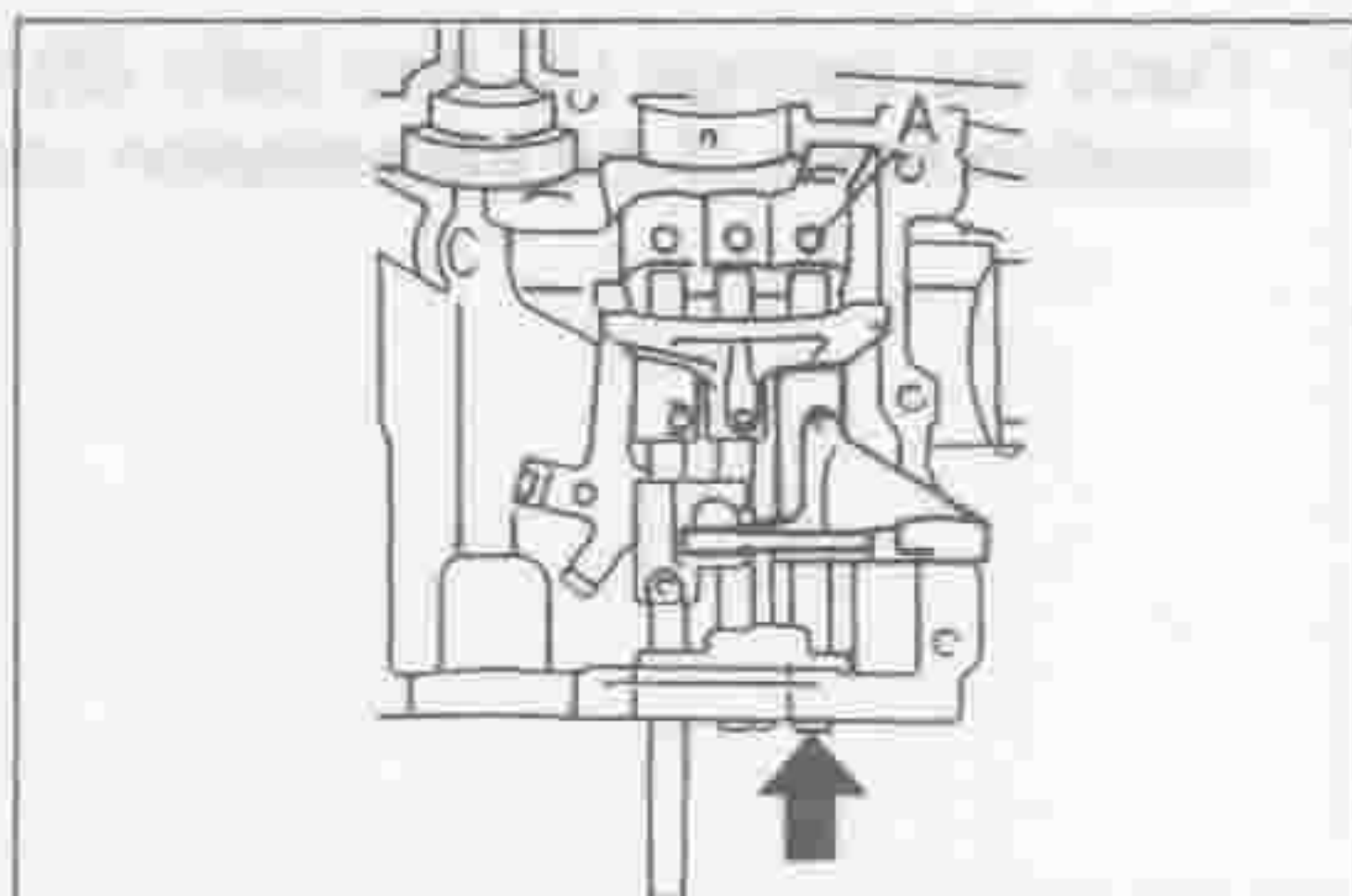


LMT00038-00034

11. While passing the 1st & 2nd shift fork, insert the 1st & 2nd shift fork shaft.

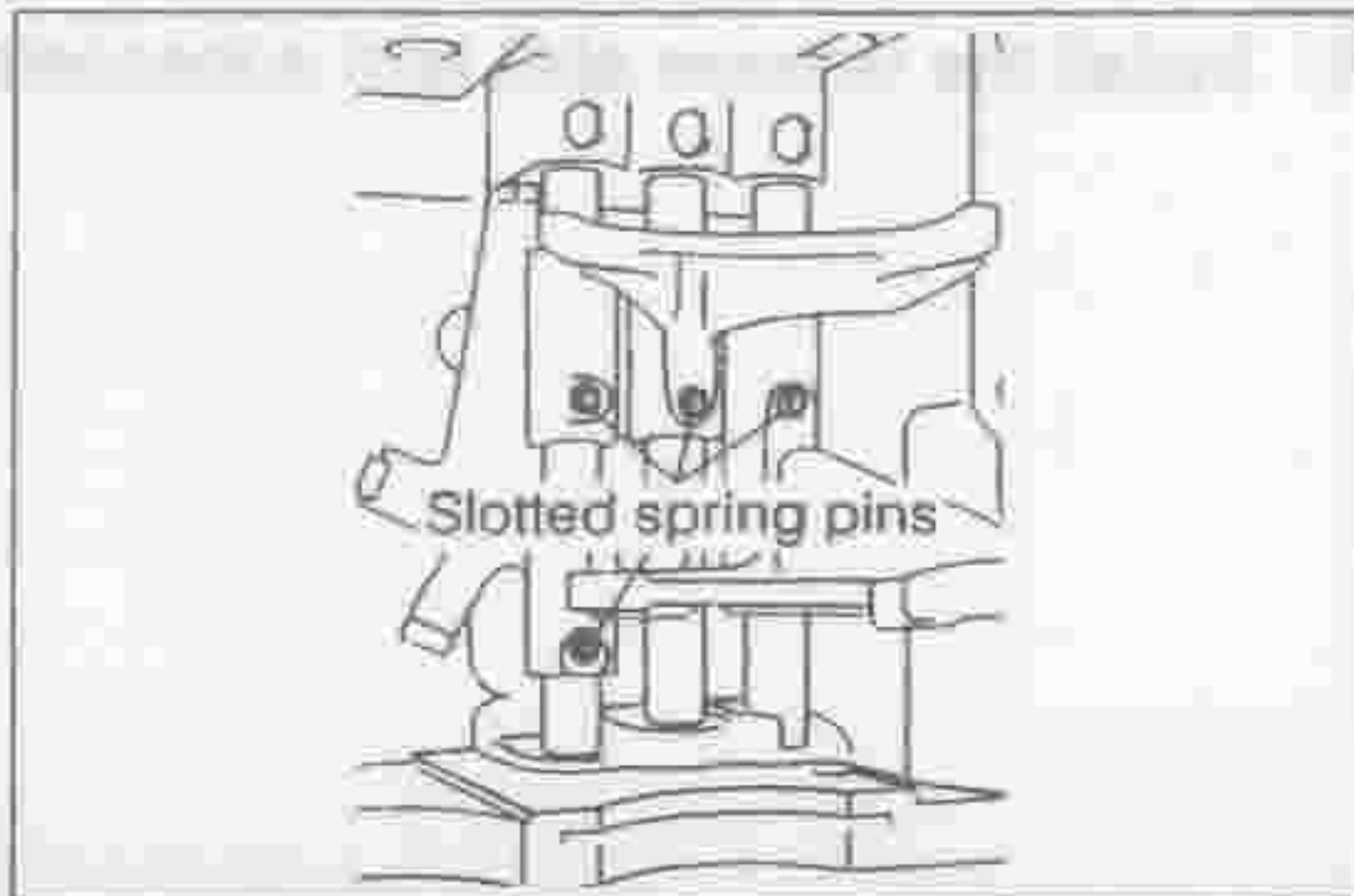
NOTE:

1. Insert the shift fork shaft, while pushing down the ball with a suitable rod at the section A in the right figure.
2. With the cut-out section of the shift fork shaft facing toward such a direction that the cut-out section is engaged with the ball, insert the shaft up to the neutral position.



LMT00039-00035

12. Drive new slotted spring pins (A) in place so as to secure the shift-related parts.

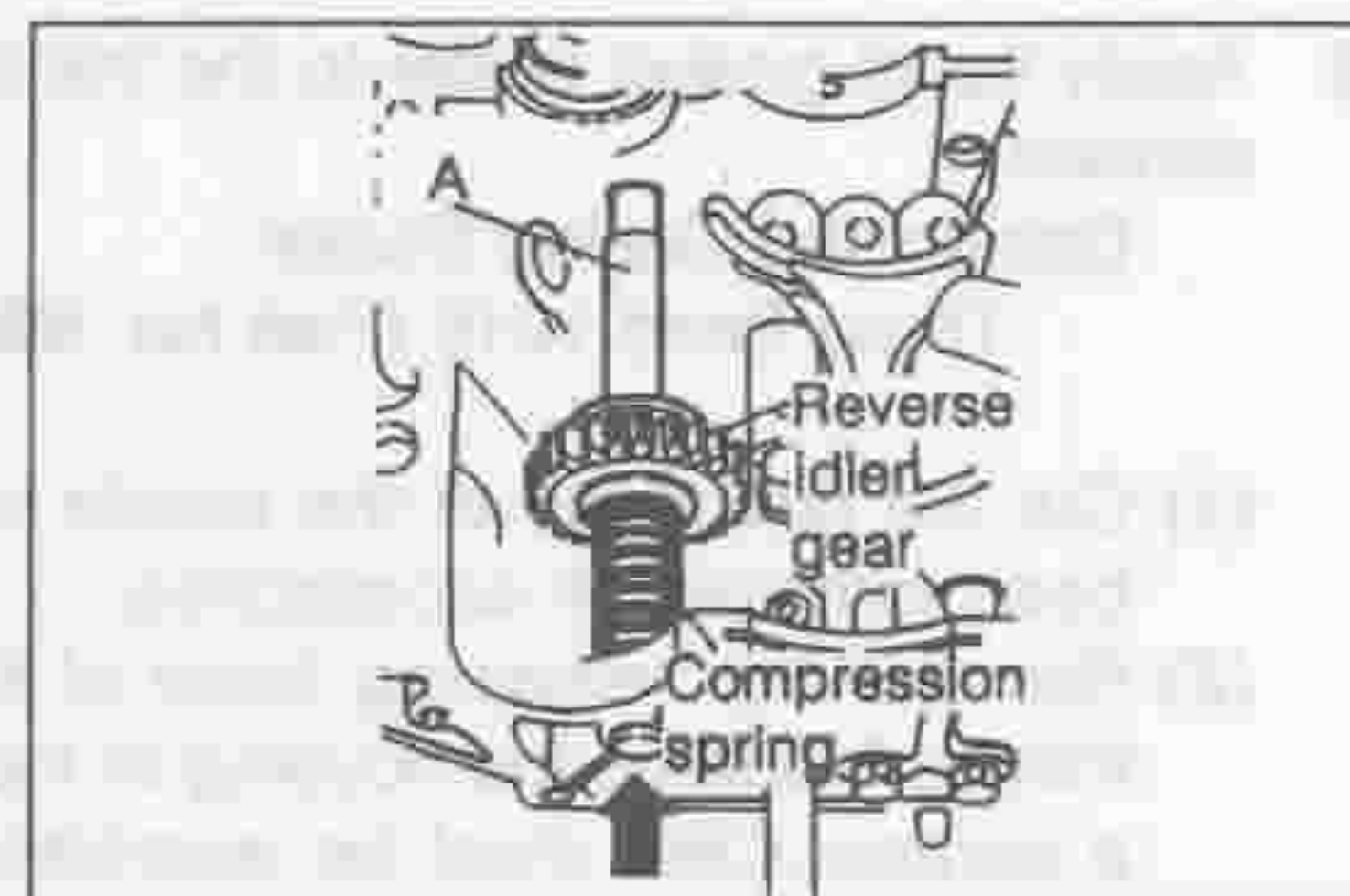


LMT00040-00036

13. While passing the reverse idler gear-related parts, insert the reverse idler gear shaft.

NOTE:

- Fit the reverse idler gear with the reverse shift arm subassembly during the assembling.
- Operate the shift & select outer lever. Be sure that the each shift fork operates normally.



LMT00041-00037

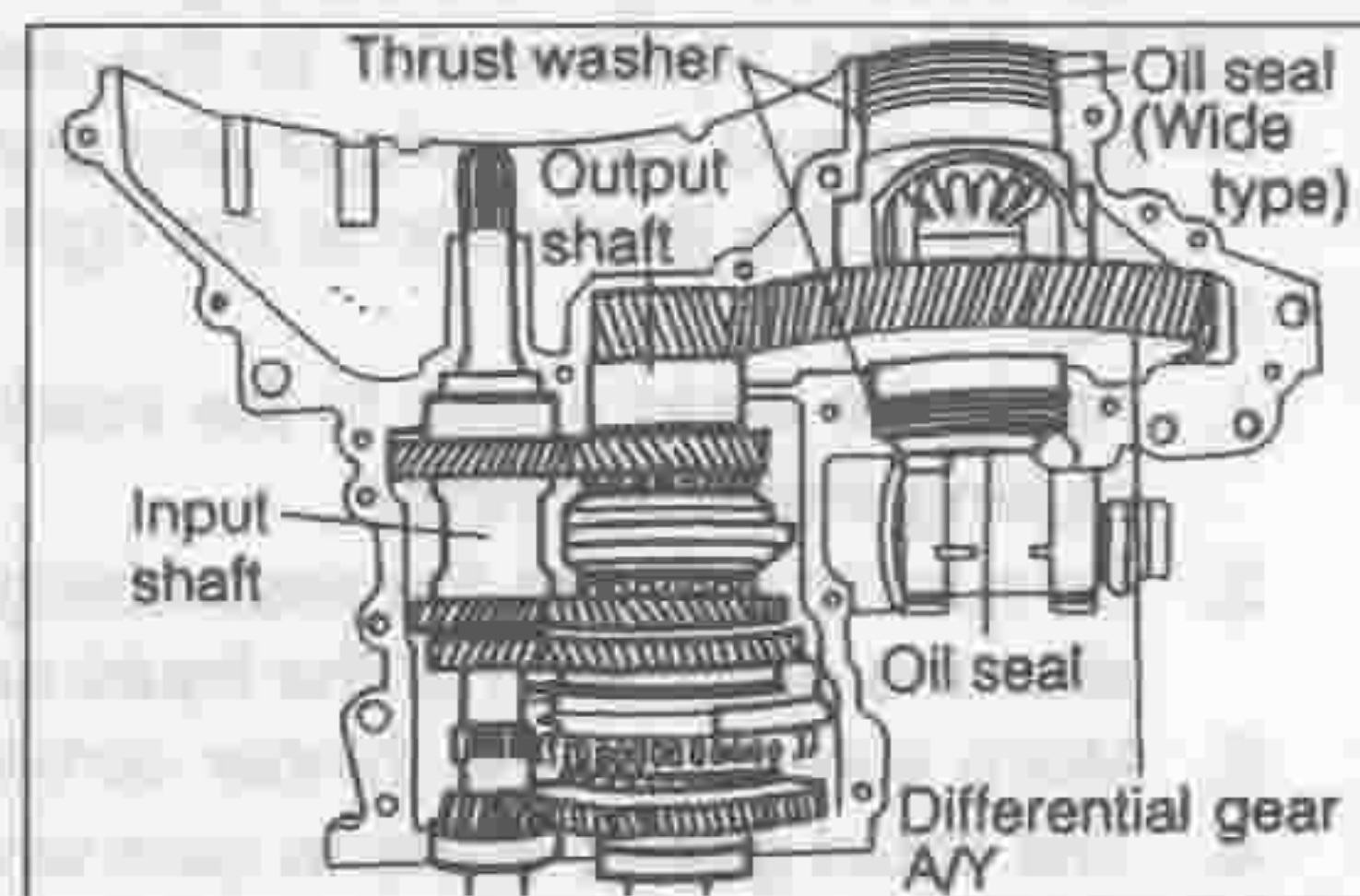
14. Install the following parts to the transmission lowercase.

- (1) Differential gear assembly and thrust washers

NOTE:

- When assembling the differential gear assembly onto the transmission case, select a suitable thrust washer from the table below so that the thrust washer-to-bearing clearance in the thrust direction may not exceed 0.1 mm (0.004 inch).

No.	Washer thickness mm (inch)	Part No.
1	2.5 (0.098)	41366-87701-000
2	2.6 (0.102)	41367-87701-000
3	2.7 (0.106)	41368-87701-000



LMT00042-00038

- (2) Oil seals

NOTE:

- Since the oil seal has its own thickness, be sure to install the oil seal at the correct position.

- (3) Output shaft assembly

NOTE:

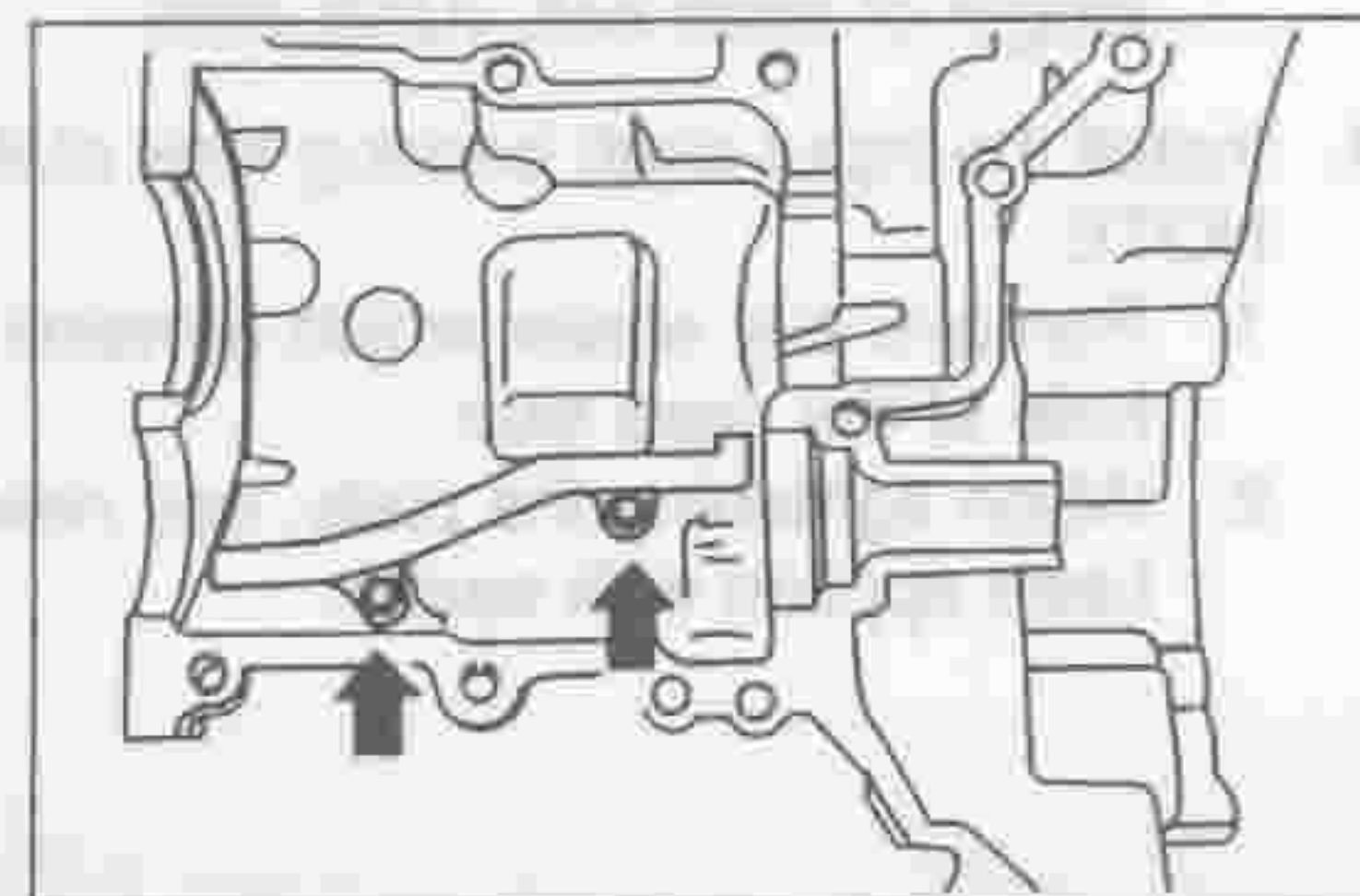
- Align the outer race hole of the bearing at the differential side with the straight pin.

- (4) Input shaft assembly

15. Tighten the oil guide pipe with the two bolts to the transmission upper case.

Tightening Torque:

3.9 - 6.9 N·m (0.4 - 0.7 kgf-m, 2.9 - 5.1 ft-lb)



LMT00043-00039

16. Apply liquid gasket sealer to the transmission case gasket surface.

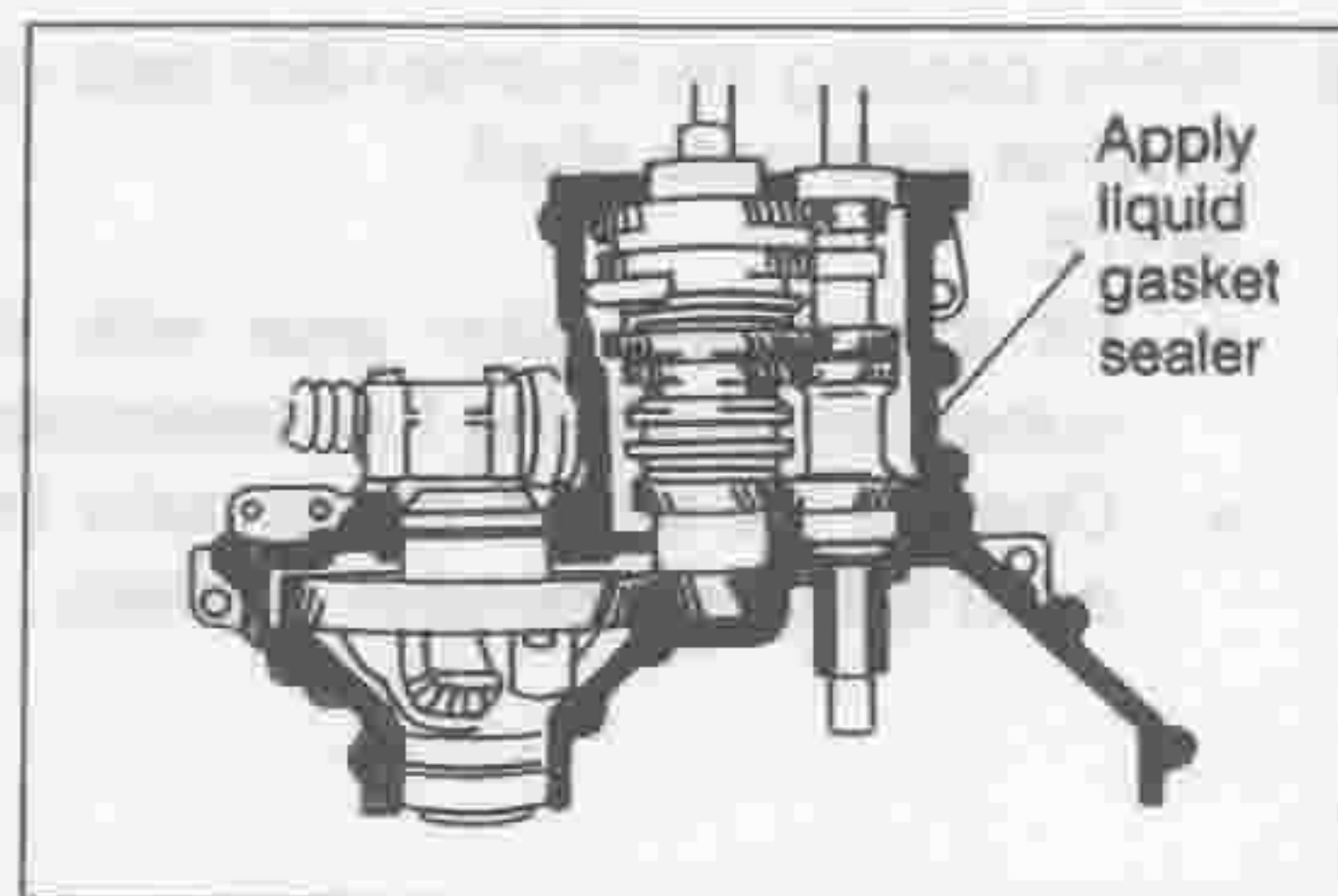
Designated Gasket Sealer:

Three Bond 1216 (Part No. 999-0480-8U90-01)

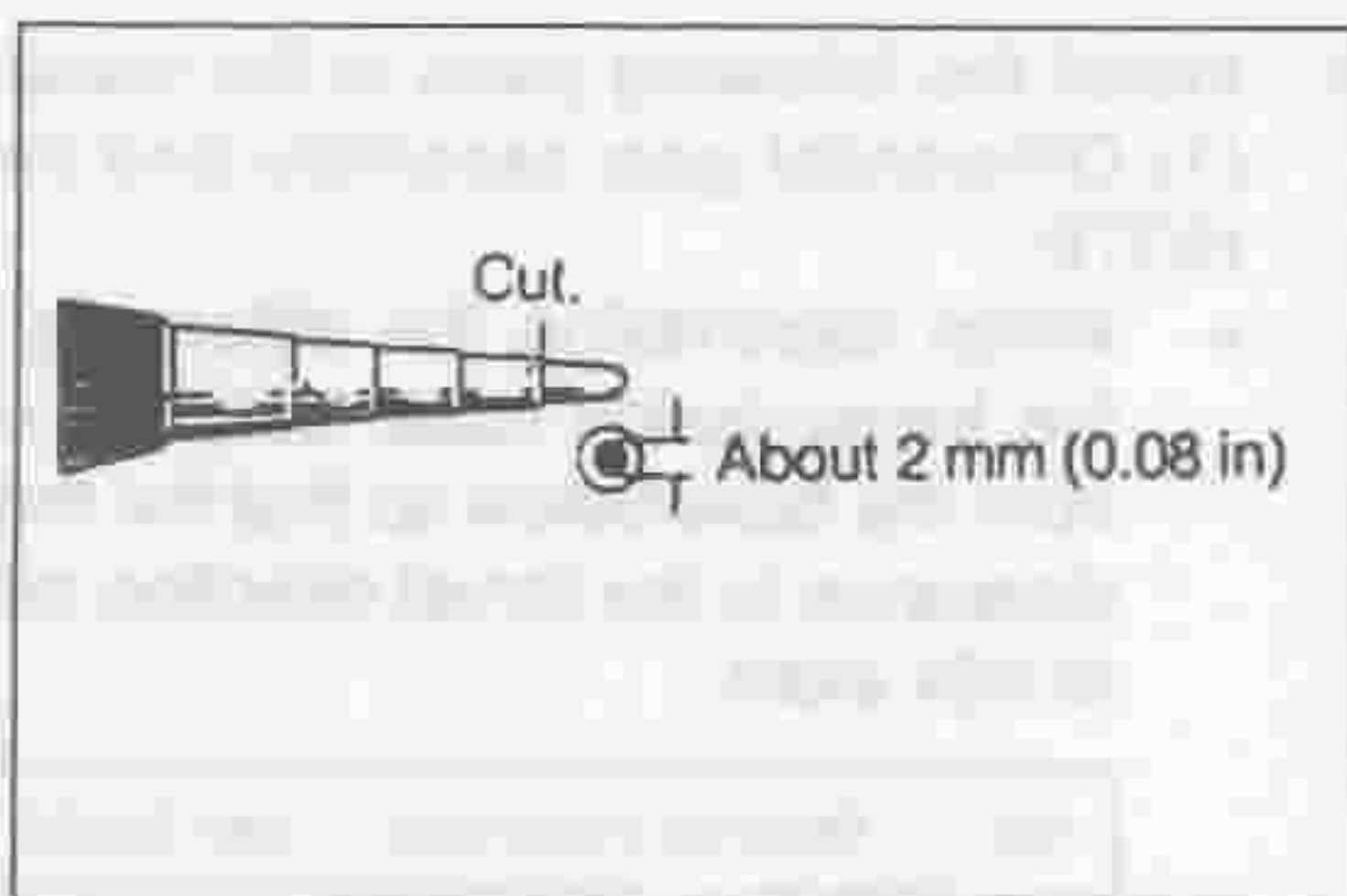
- (1) Cut the first stage of the nozzle of the sealer that has been furnished in accessories.
- (2) Remove any remaining trace of the liquid gasket that maybe found on the housing or the case with thinner or a scraper. Care must be exercised not to scratch the surfaces during the cleaning.
- (3) Apply the liquid sealer to the entire periphery of the housing and case without any unapplied spot, as indicated in the illustration at the right.

NOTE:

1. Apply the liquid sealer to the inside of each hole, excluding those bolt holes.
2. Be sure to perform the assembling within five minutes after the application of the liquid sealer.
3. Make sure to dry the thinner completely.
4. The liquid gasket starts to cure when it react 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.
5. 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.)



LMT00044-00040



LMT00000-00041

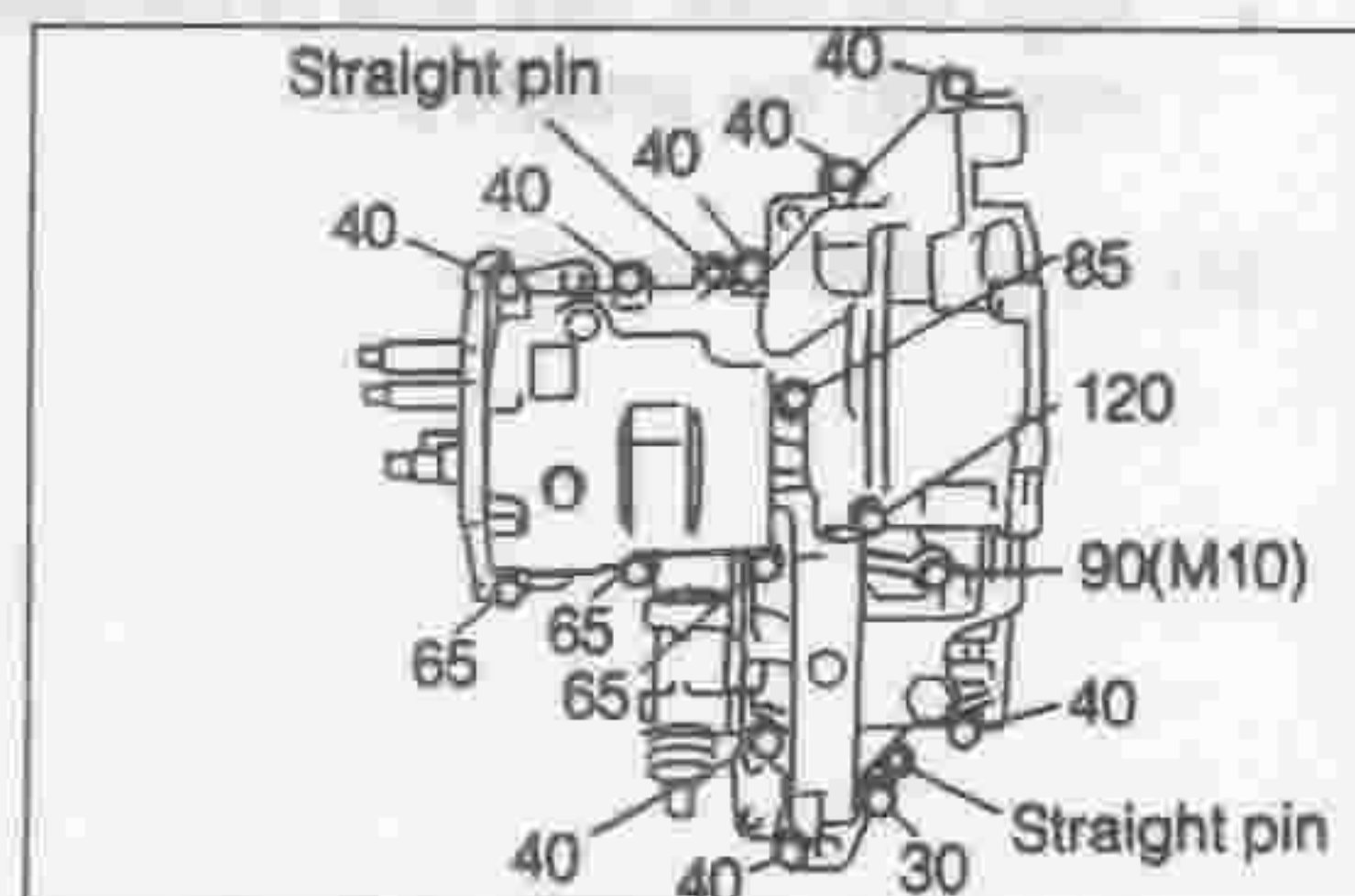
17. Connect the transmission upper case with the transmission lower case and tighten the 15 bolts.

Tightening Torque

(M8): 14.7 - 21.6 N·m
(1.5 - 2.2 kgf-m, 10.8 - 15.9 ft-lb)
(M10): 29.4 - 44.1 N·m
(3.0 - 4.5 kgf-m, 21.7 - 32.5 ft-lb)

NOTE:

1. Be sure that the straight pin is attached properly.
2. The numeral in the right figure denotes the nominal length of each bolt. (Unit: mm)

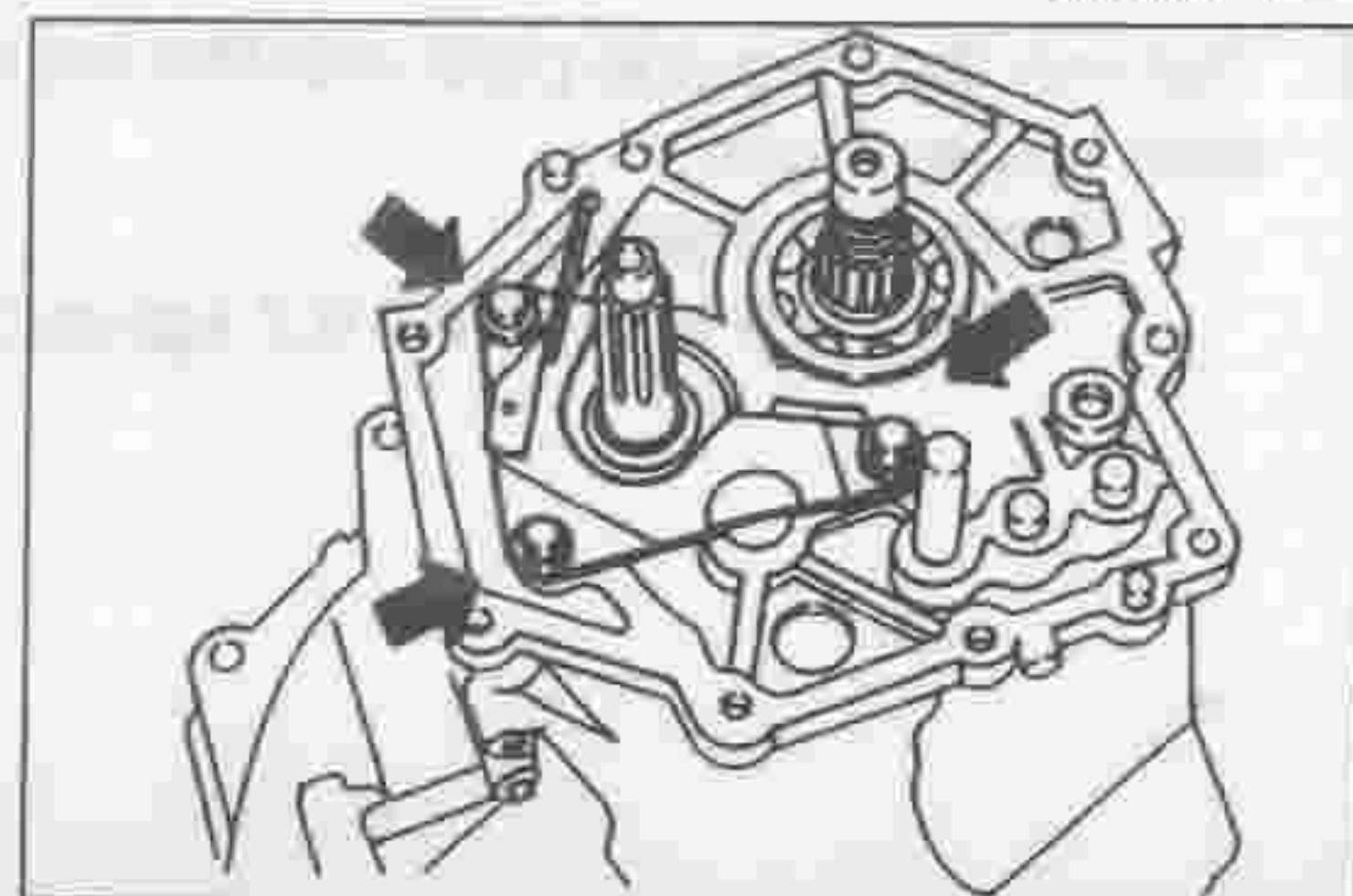


LMT00045-00042

18. Install the input shaft bearing lock plate.

NOTE:

1. Remove any sealer which remains on the threaded hole at the case side.
2. When tightening the plate, use new bolts which have been applied with sealer.



LMT00046-00043

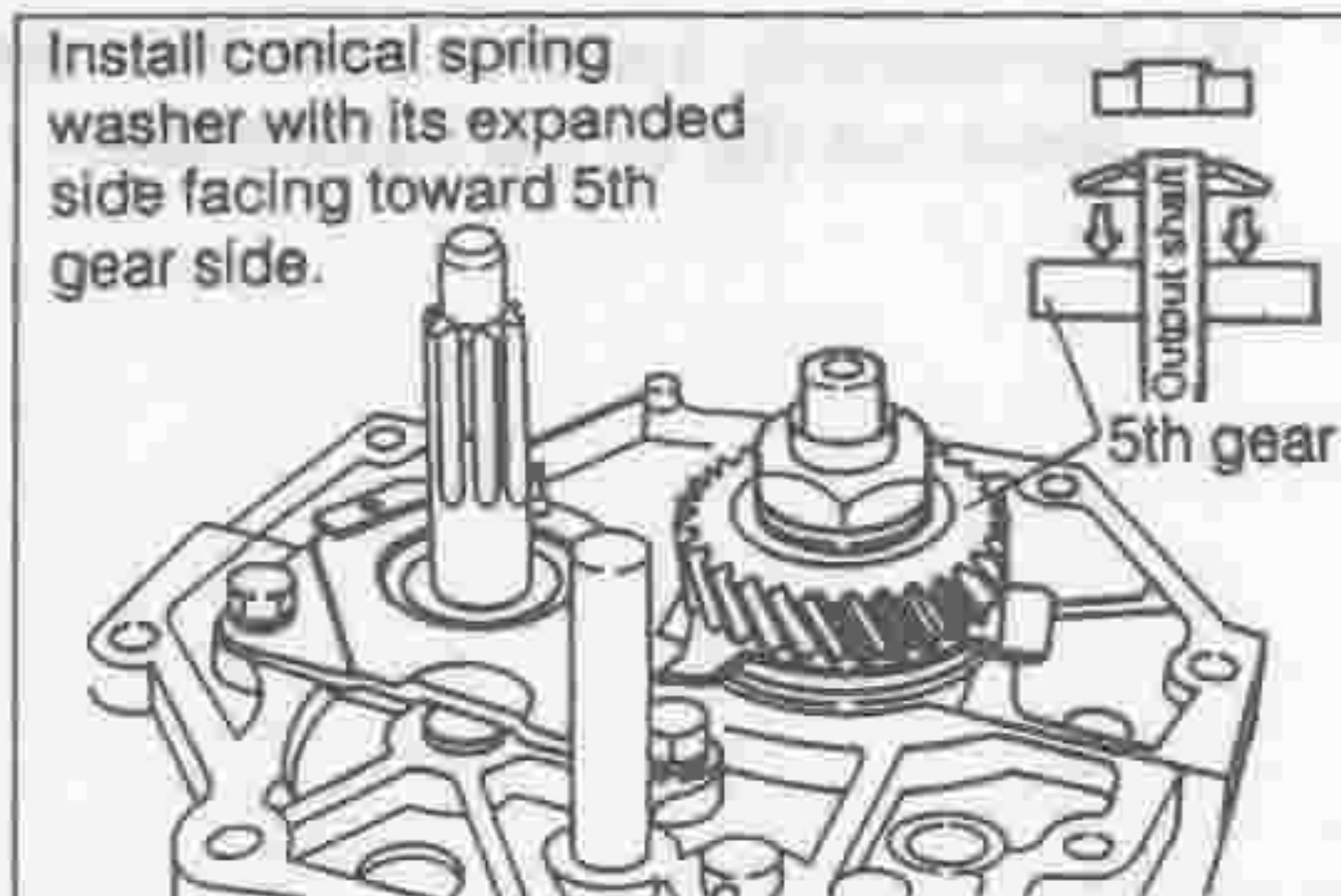
19. Installation of 5th gear-related parts

- (1) Temporarily install the output 5th gear assembly, conical spring washer and lock nut to the output shaft.

NOTE:

- Be sure to install the conical spring washer in the correct direction.

Install conical spring washer with its expanded side facing toward 5th gear side.

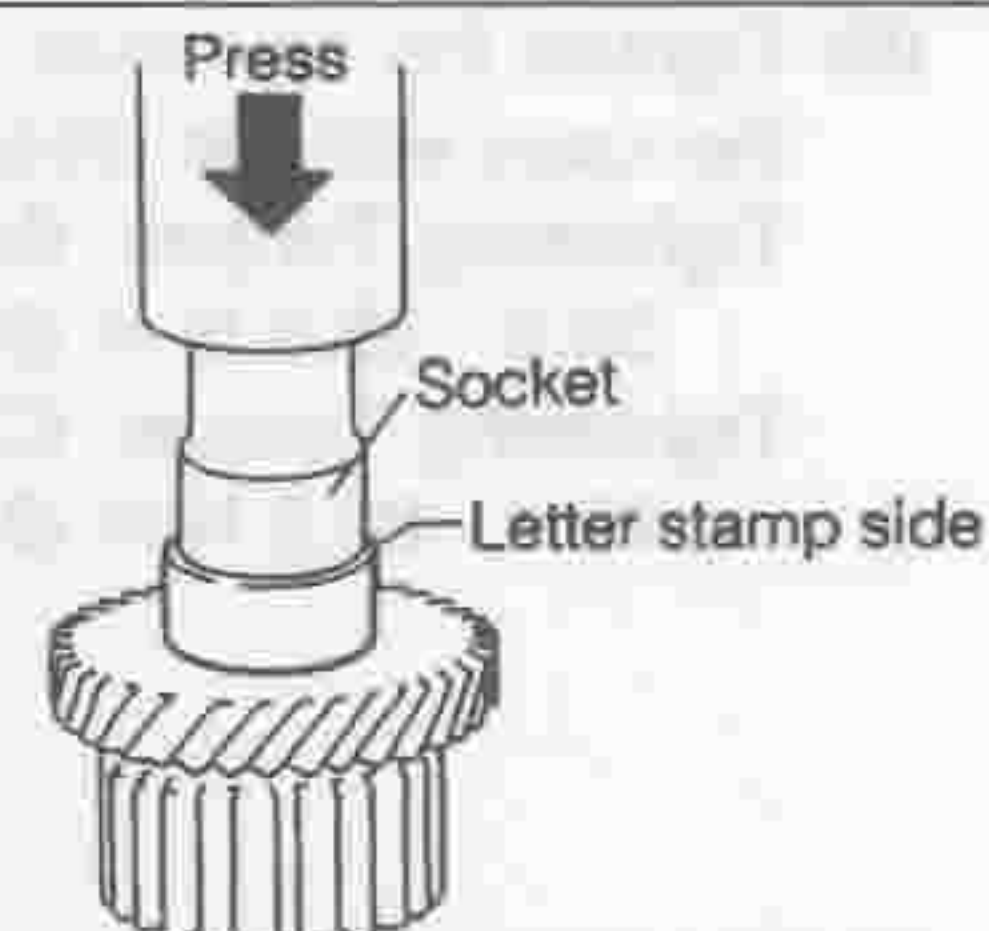


LMT00047-00044

- (2) Install the needle roller bearing to the 5th gear, using a suitable socket portion of socket wrench in conjunction with a press.

NOTE:

1. To install the bearing, be sure to press the side which bears the letter stamping.
2. Be careful not to drive the bearing excessively.

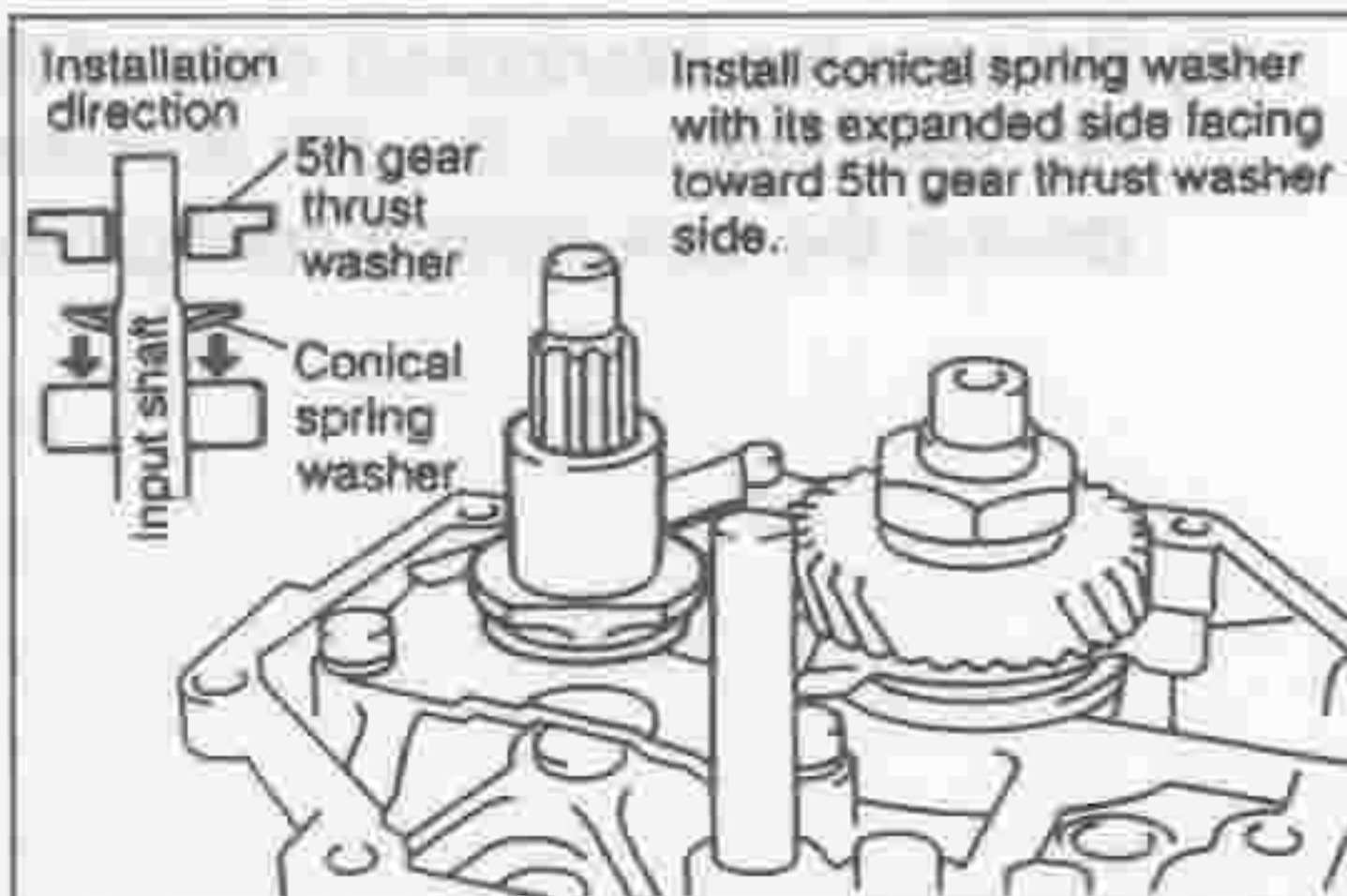


LMT00048-00045

- (3) Pass the conical spring washer, 5th gear thrust washer and bearing inner race through the input shaft.

NOTE:

- Be sure to install the conical spring washer and 5th gear thrust washer in the correct direction.



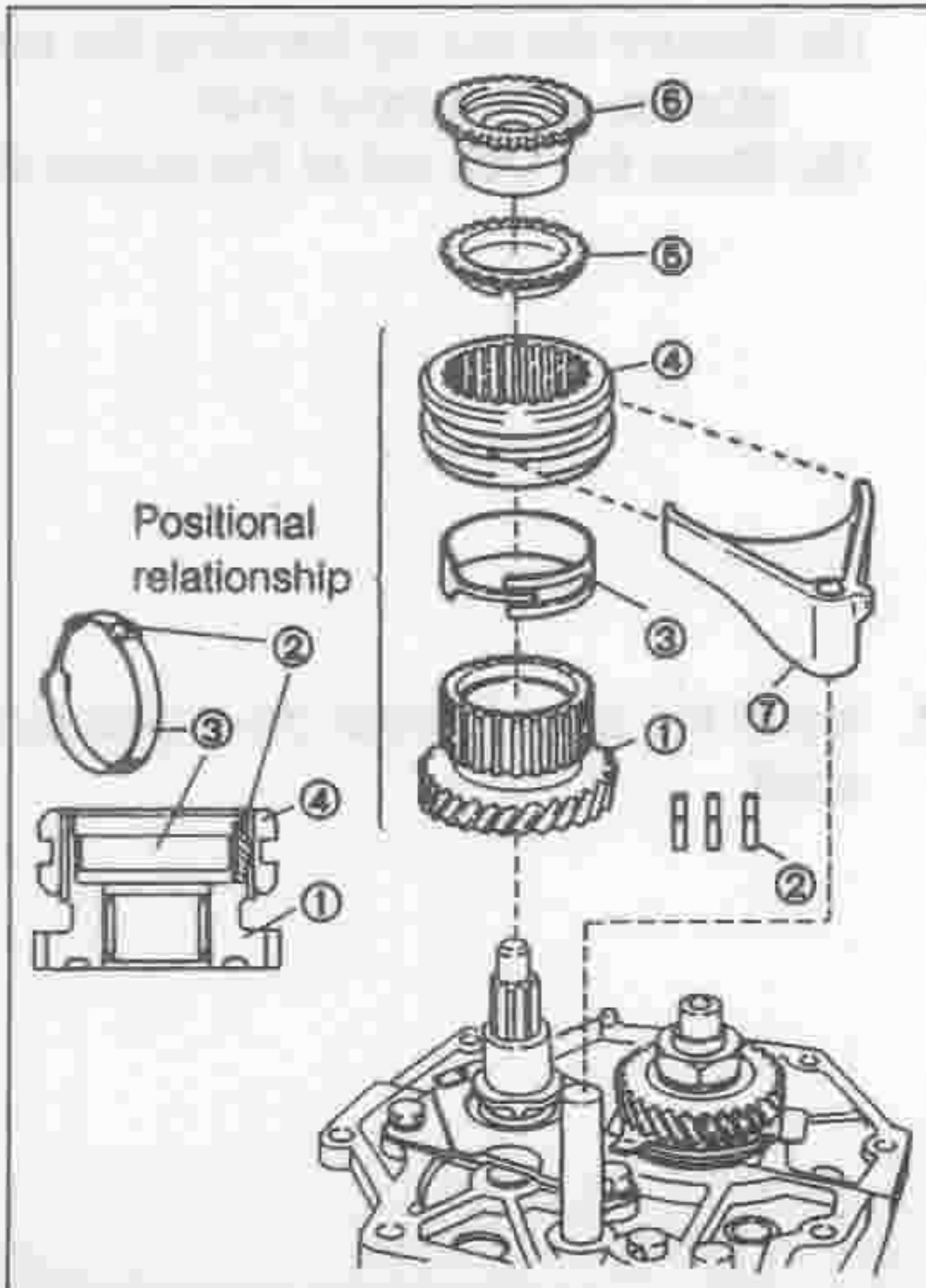
LMT00049-00046

- (4) Assemble the following parts. Install them to the input shaft and 5th & reverse shift fork shaft.

- ① 5th gear
- ② Synchromesh shifting key (3)
- ③ Synchromesh shifting key spring
- ④ Synchronizer hub sleeve (for 5th gear)
- ⑤ Synchronizer ring (for 5th gear)
- ⑥ Synchronizer hub (for 5th gear)
- ⑦ 5th shift fork

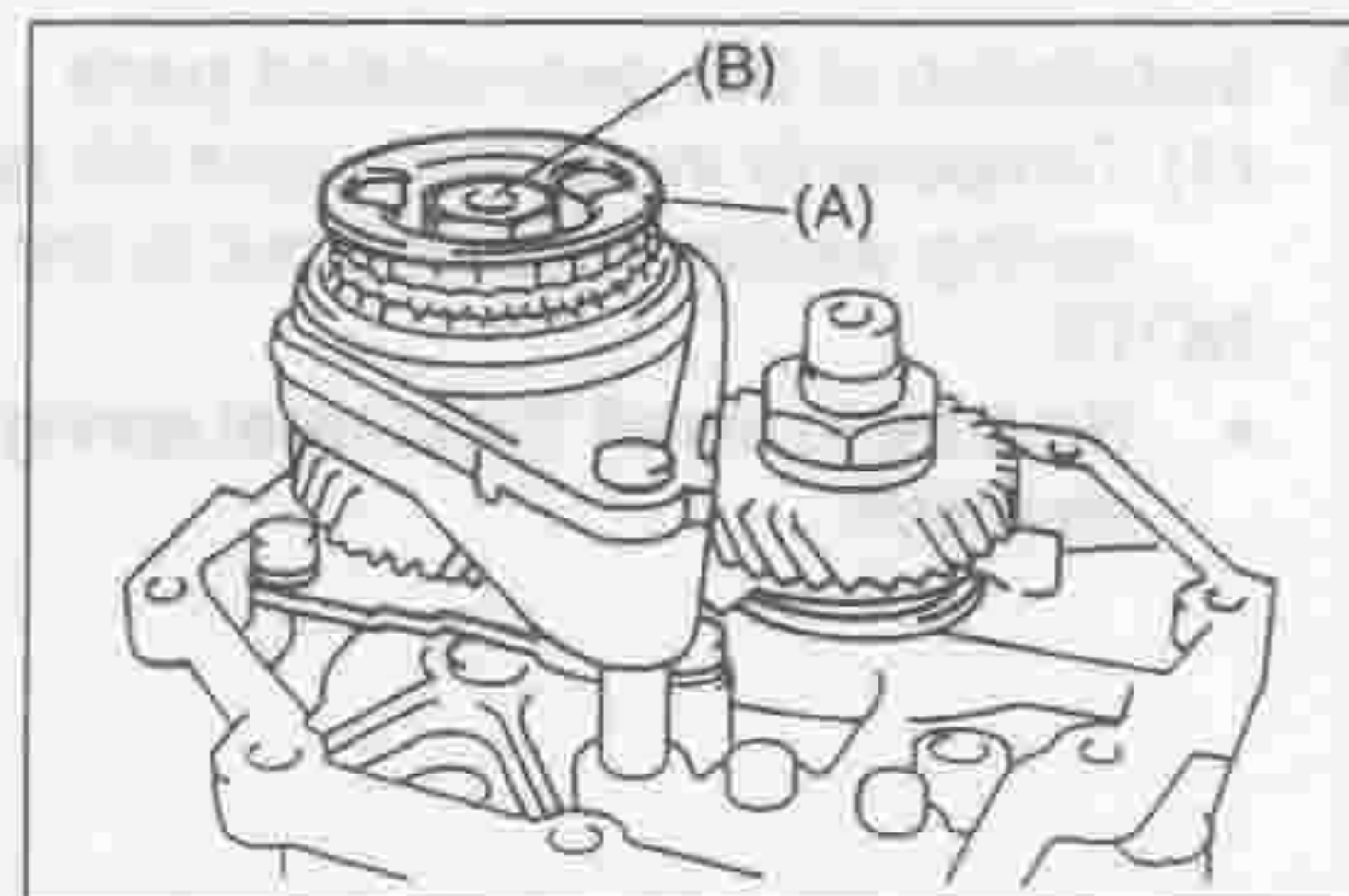
NOTE:

- Do not align the key with the narrow section of the synchromesh shifting key spring.



LMT00050-00047

- (5) Temporarily install a new hub sleeve stopper (A) and a new nut (B) to the input shaft.



LMT00051-00048

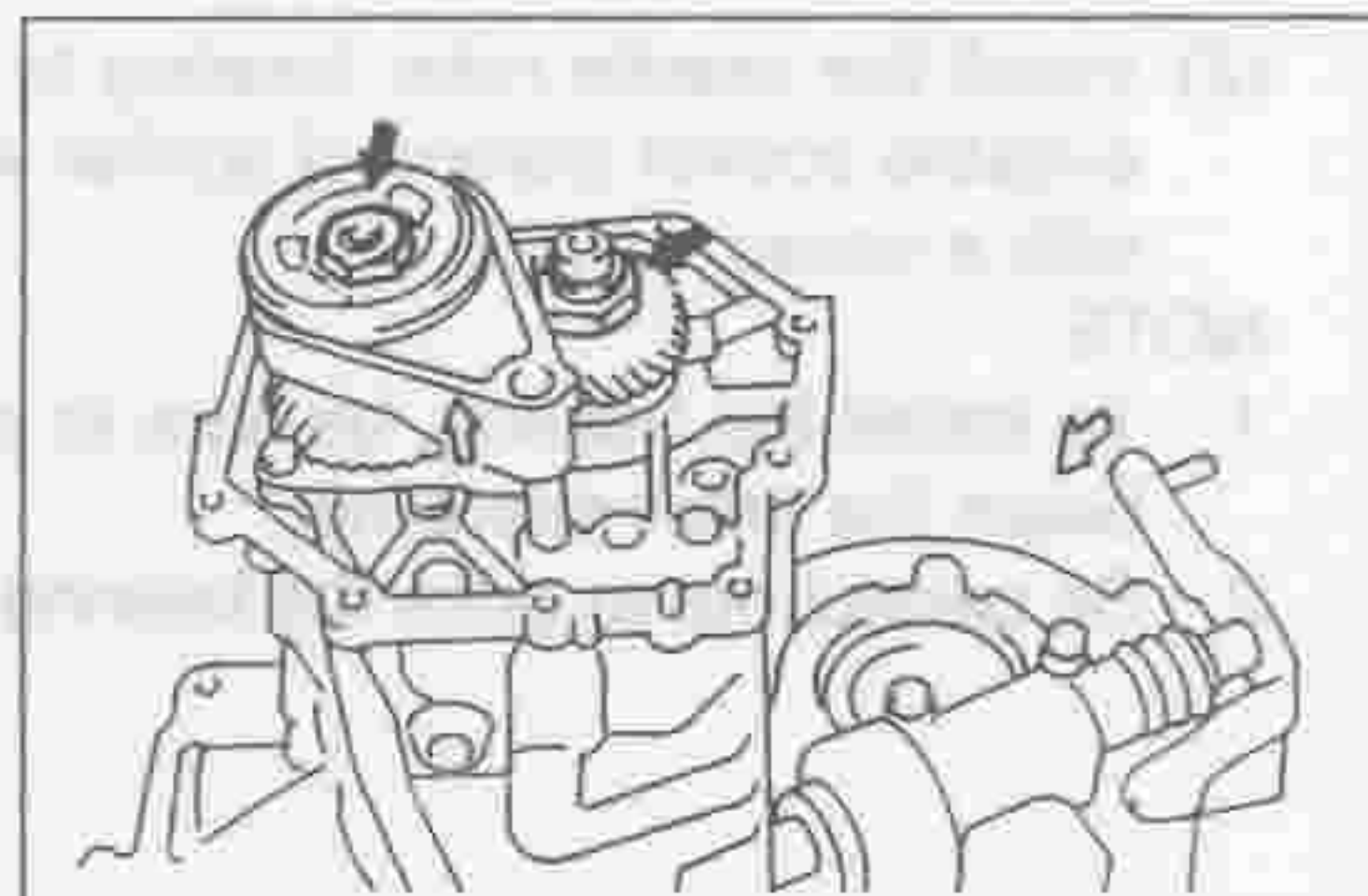
- (6) Tighten the new nuts with two gears interlocked, as is the case with the disassembly.

Tightening Torque: (Input shaft)

58.8 - 68.6 N·m (6.0 - 7.0 kgf-m, 43.4 - 50.6 ft-lb)

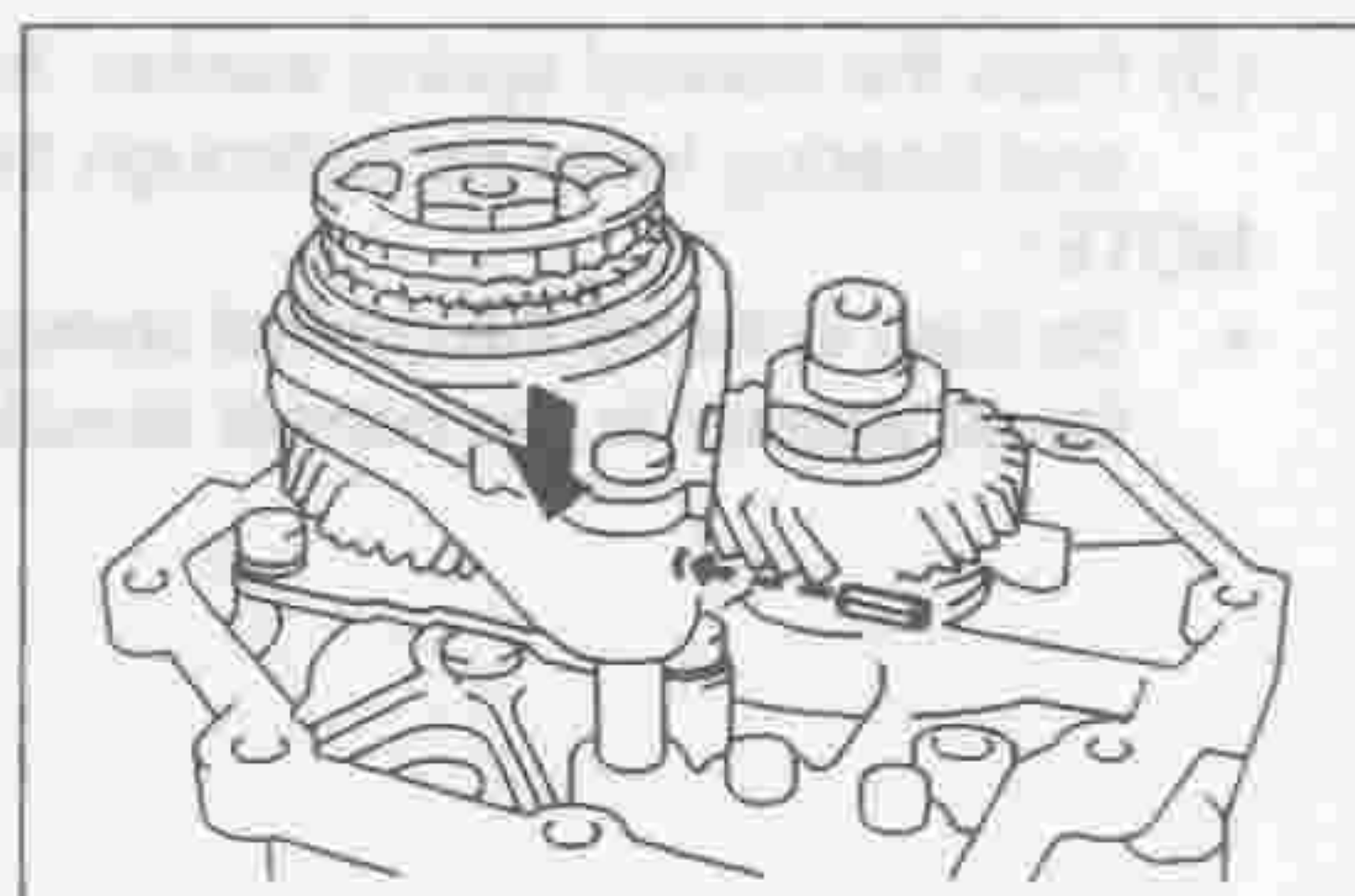
Tightening Torque: (Output shaft)

78.4 - 88.2 N·m (8.0 - 9.0 kgf-m, 57.9 - 65.1 ft-lb)



LMT00052-00049

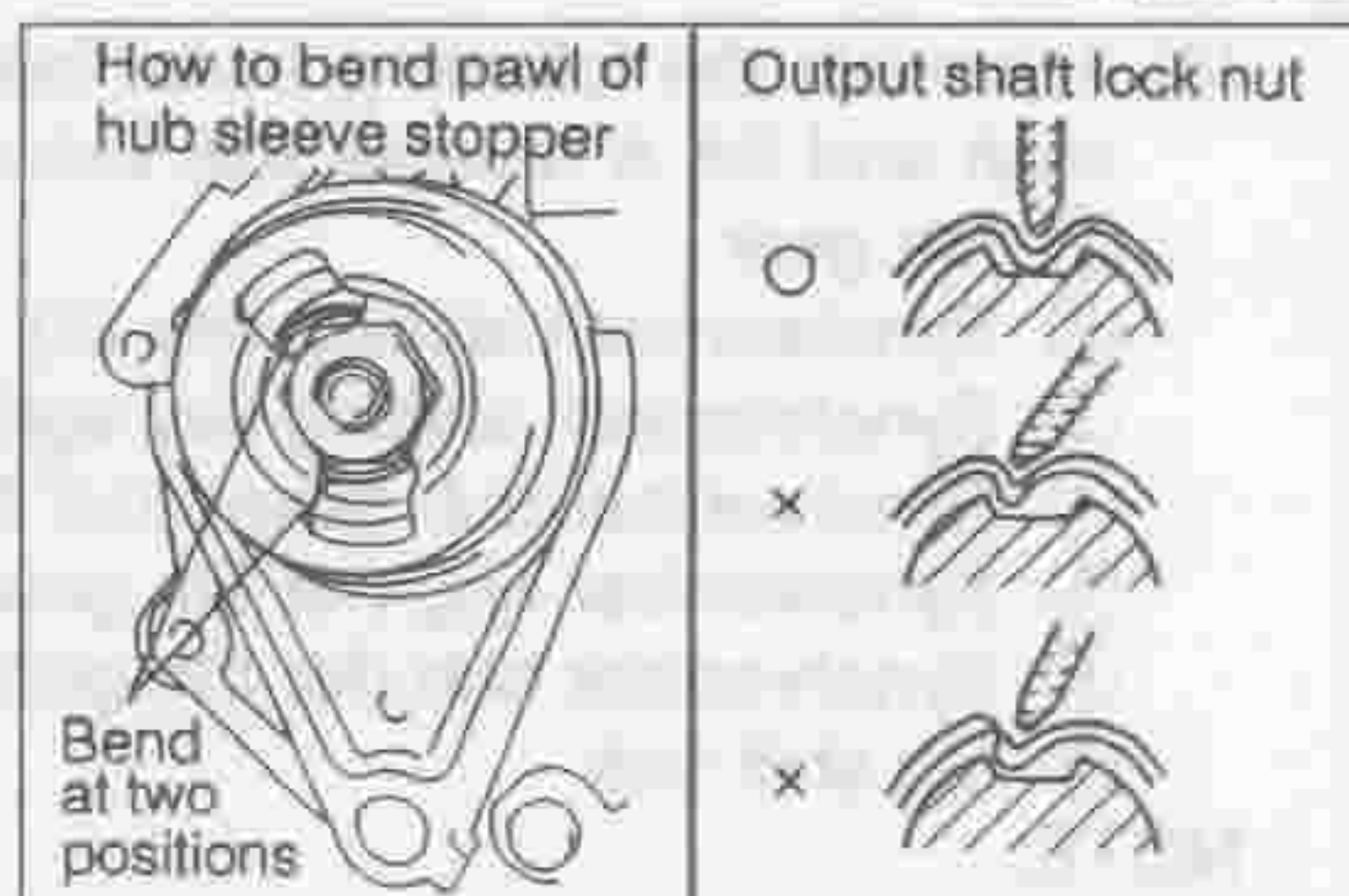
- (7) Release the interlocked state of the gears. Connect the 5th shift fork with the 5th & reverse shift fork shaft by driving the new slotted spring pin.



LMT00053-00050

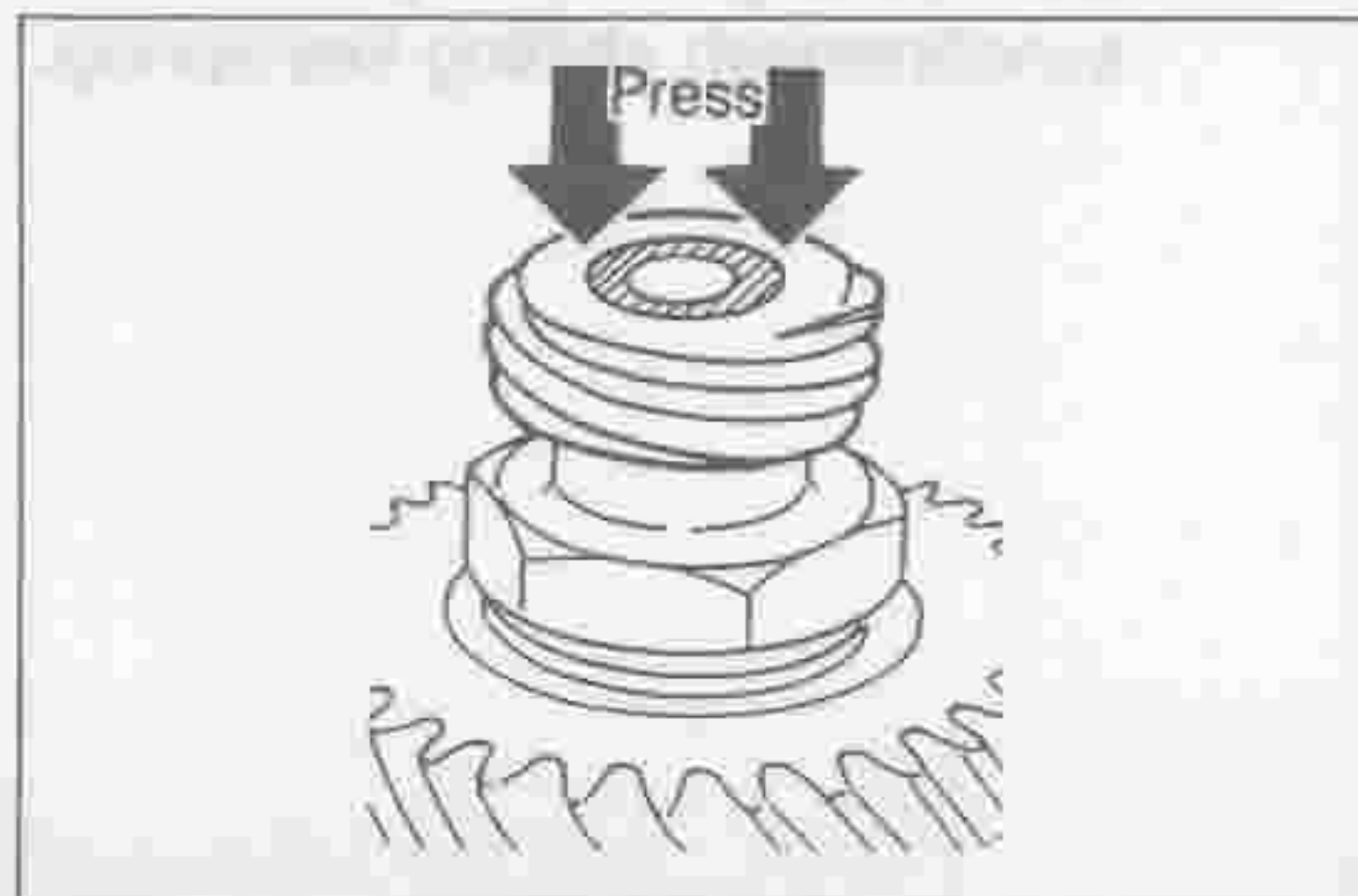
- (8) Secure the nut by bending the pawls of the hub sleeve stopper of the input shaft.

- (9) Stake the lock nut of the output shaft.



LMT00054-00051

20. Install the speedometer drive gear by pressing to the output shaft.

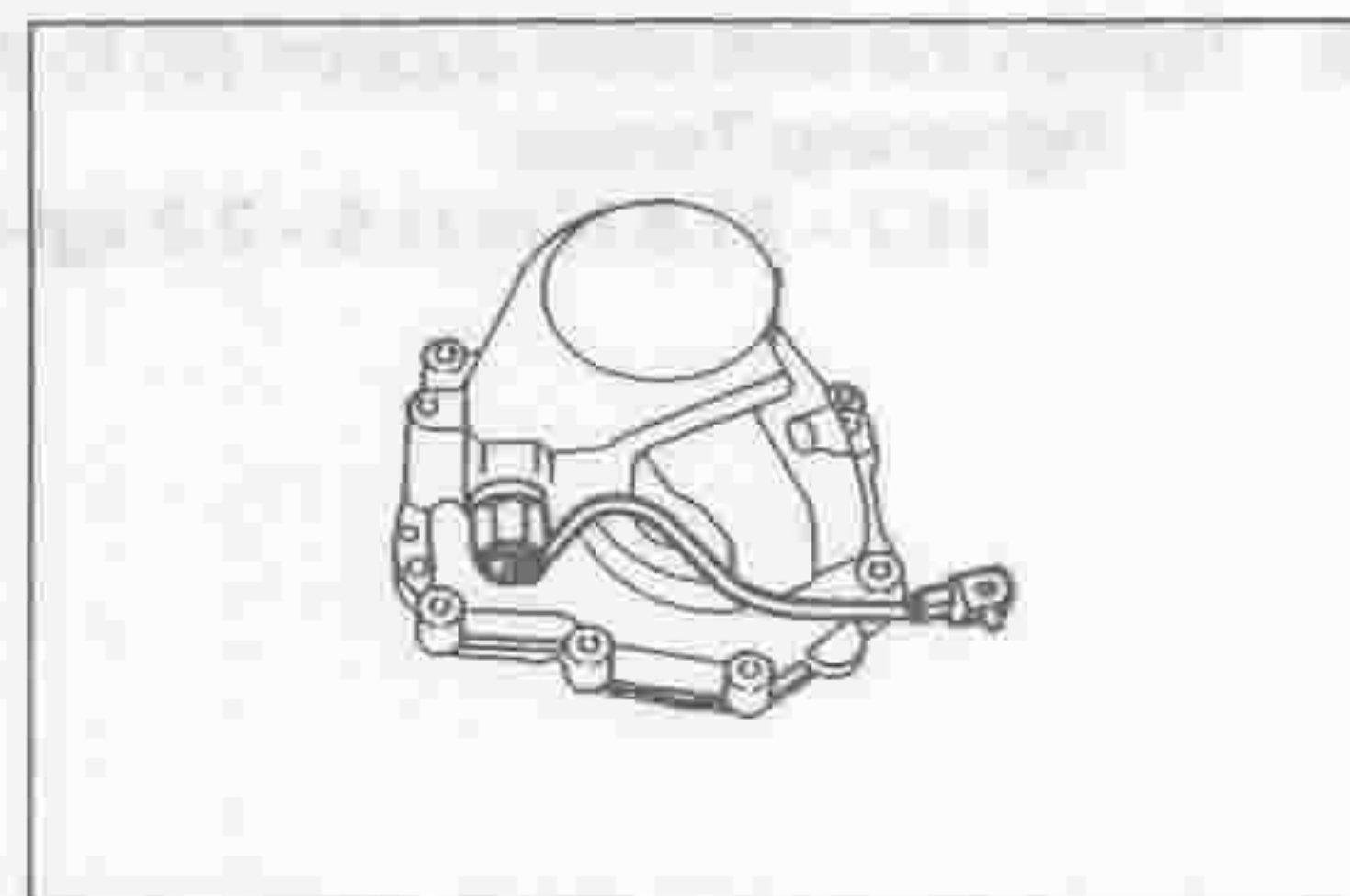


LMT00055-00052

21. With a new gasket interposed, tighten the backup lamp switch to the transmission case cover.

Tightening Torque:

29.4 - 49.0 N·m (3.0 - 5.0 kgf-m, 21.7 - 36.2 ft-lb)



LMT00056-00053

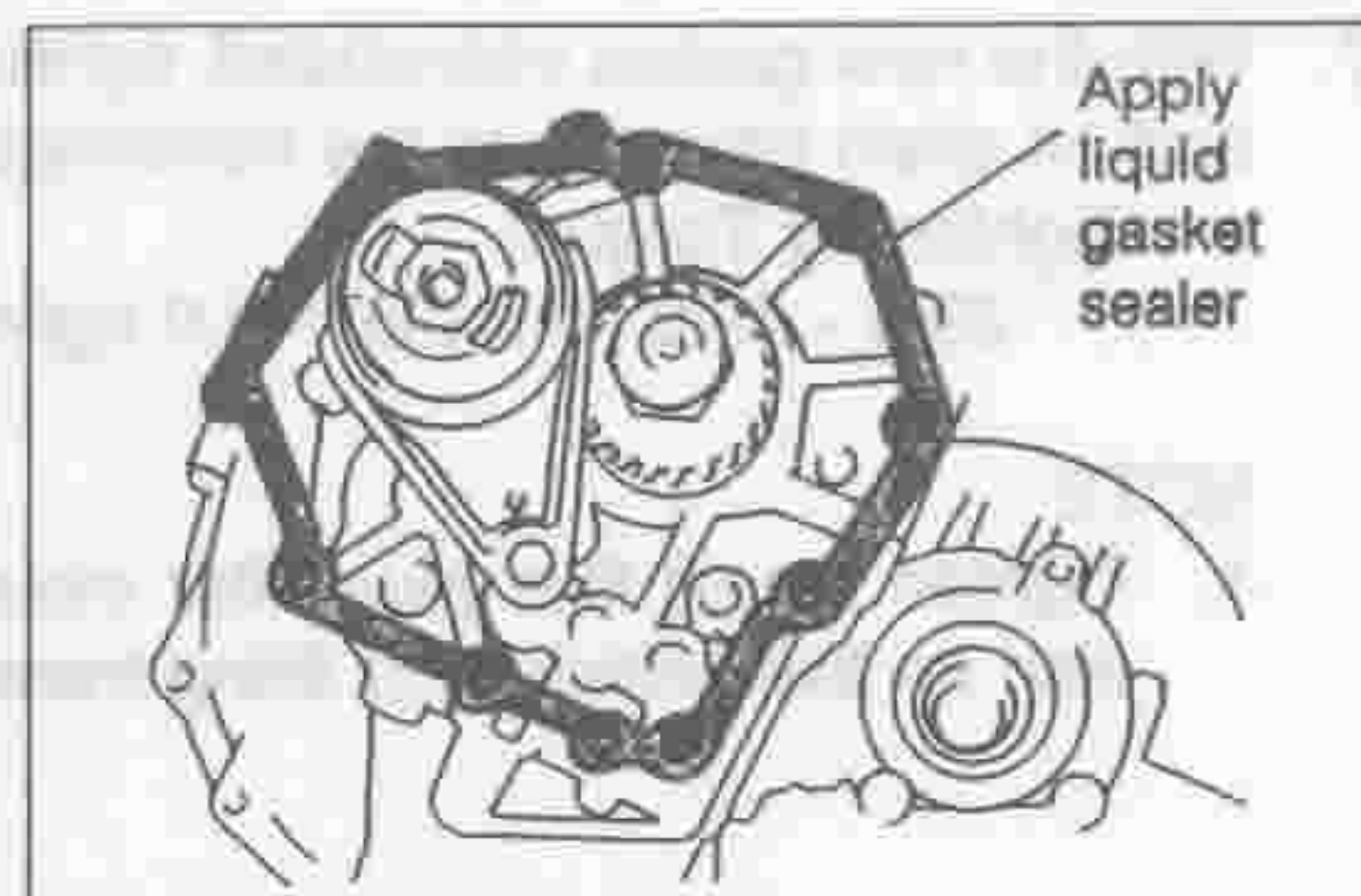
22. Apply liquid gasket sealer to the transmission case cover gasket surface.

Designated Gasket Sealer:

Three Bond 1216 (Part No. 999-0480-8U90-01)

NOTE:

- For your reference, see the section describing liquid gasket sealer application. This section appears at the connection of the transmission case.



LMT00057-00054

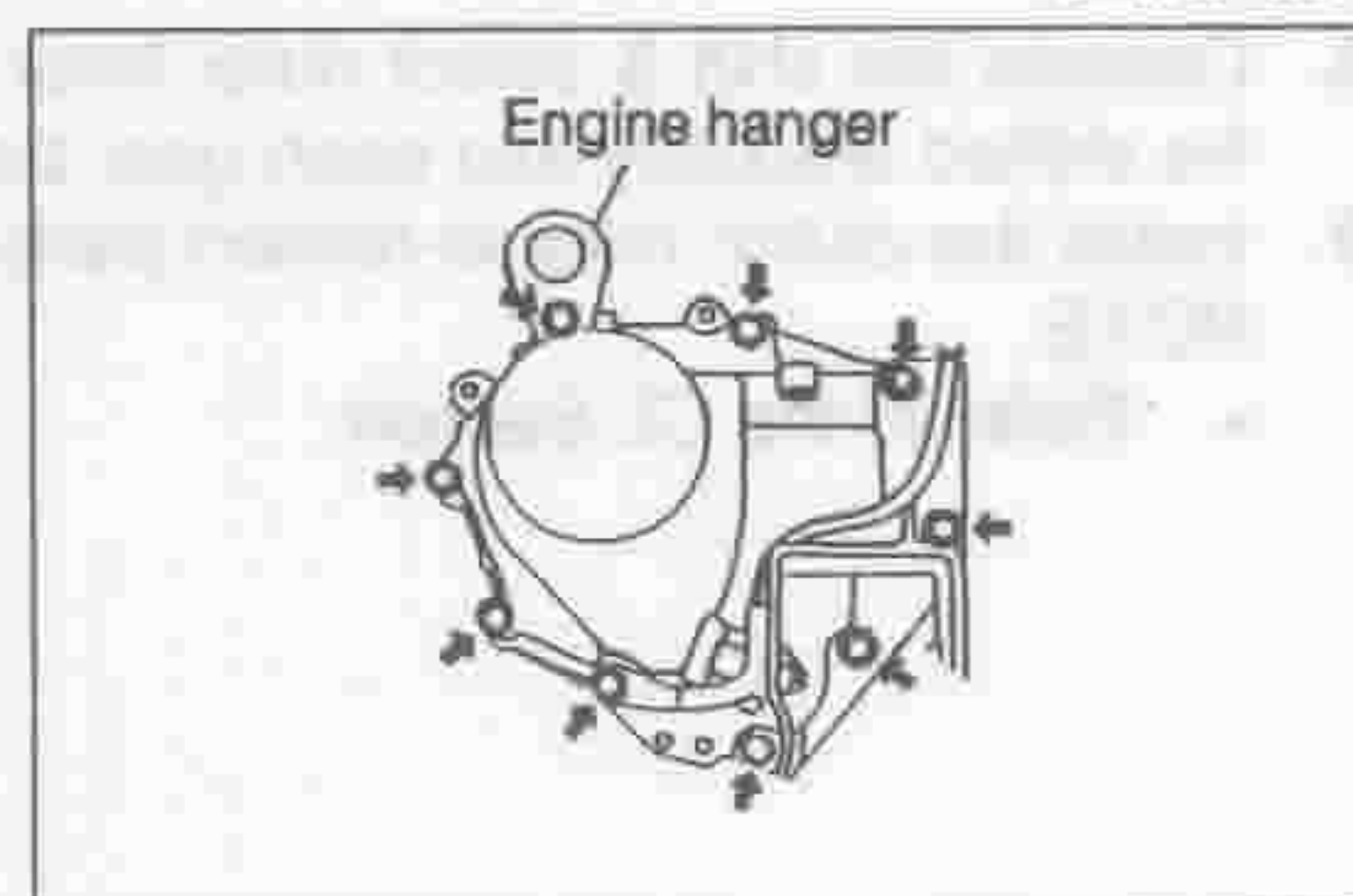
23. Tighten the transmission case cover, engine hanger (A) and engine mounting LH bracket with the nine bolts.

Tightening Torque:

14.7 - 21.6 N·m (1.5 - 2.2 kgf-m, 10.8 - 15.9 ft-lb)

NOTE:

- Be careful not to allow the wire harness of the backup lamp switch to be caught in.
- Be sure that the straight pin is attached properly.



LMT00058-00055

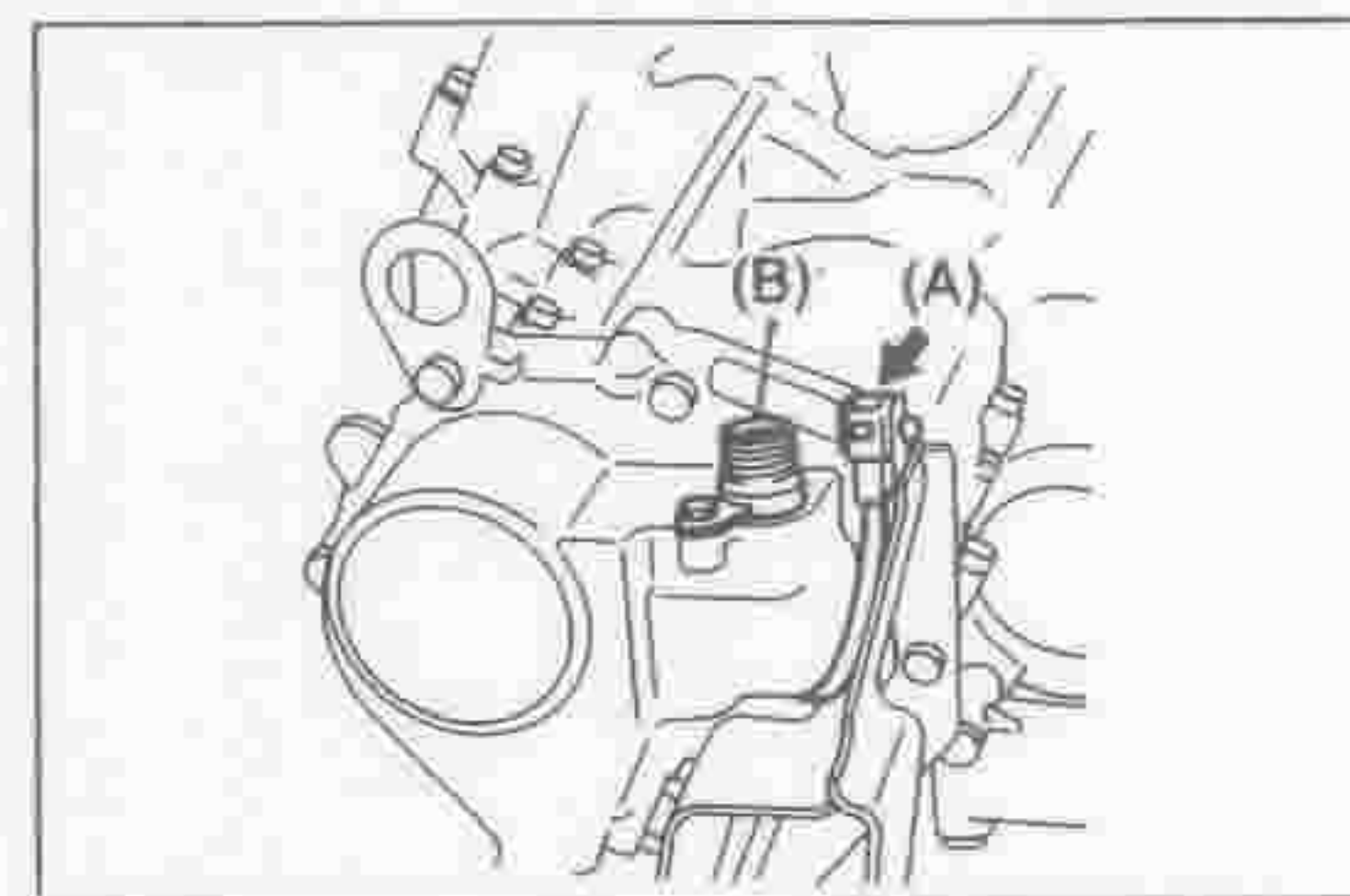
24. Tighten the speedometer shaft sleeve subassembly (B) with a bolt to the transmission case cover.

Tightening Torque:

6.9 - 9.8 N·m (0.7 - 1.0 kgf-m, 5.1 - 7.2 ft-lb)

NOTE:

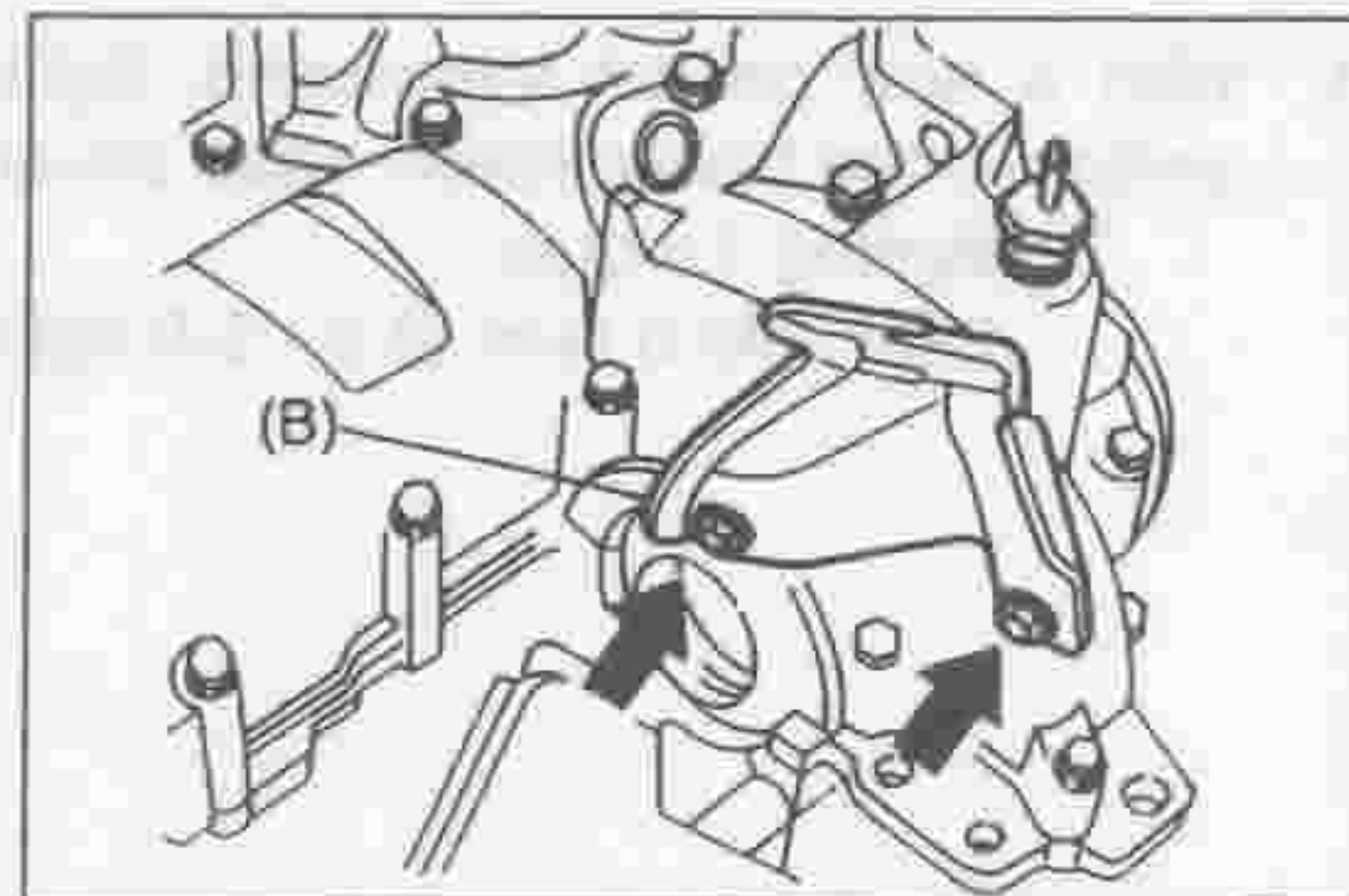
- If any oil seal or O-rings has been removed, install a new oil seal or O-rings.
- Apply the designated gear oil to the rotating and sliding sections of the speedometer driven gear shaft.



LMT00059-00056

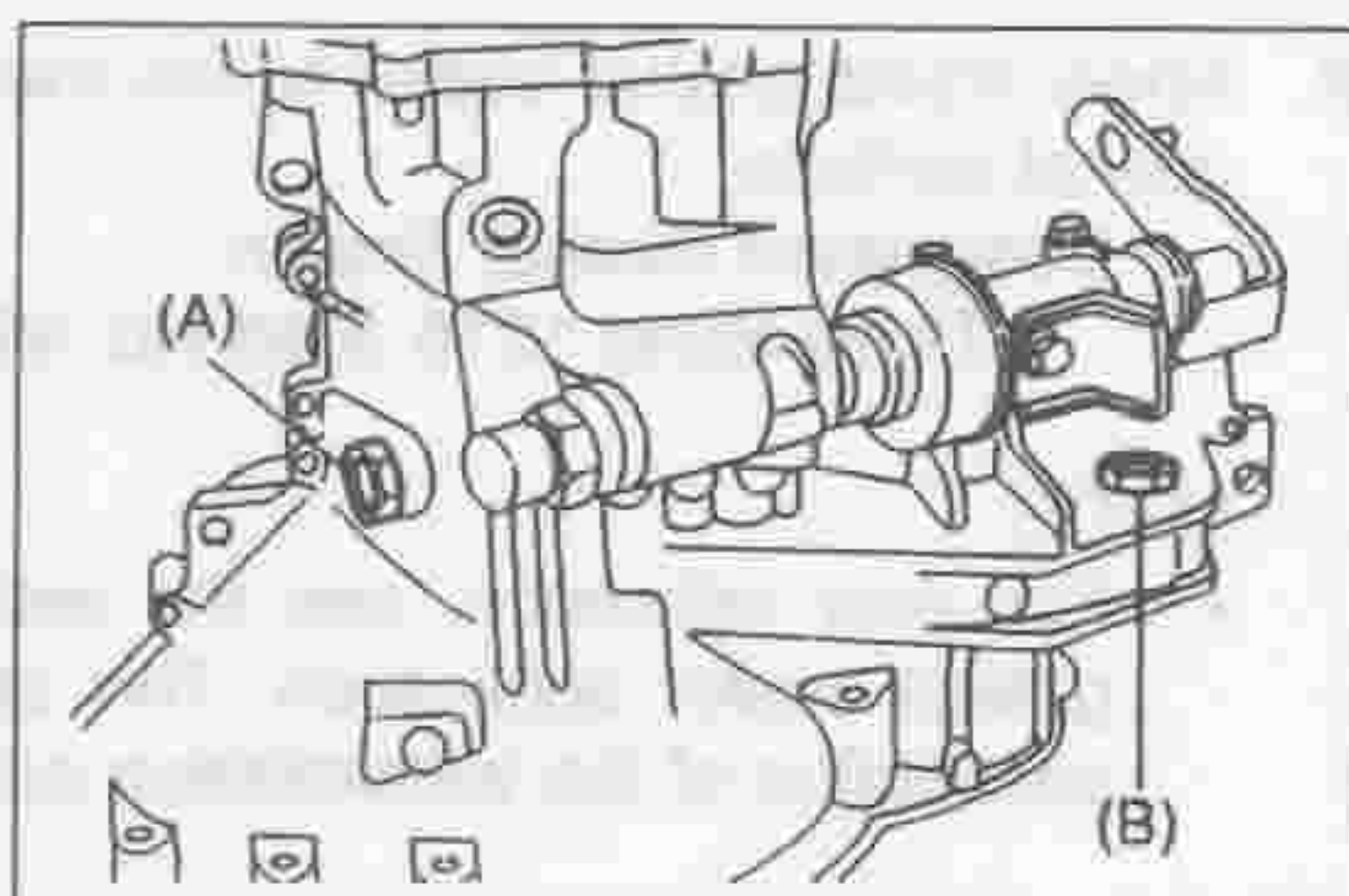
25. Clamp the backup lamp switch connector (A) to the engine mounting LH bracket.

26. Tighten the shift shaft support (B) to the transmission case.
Tightening Torque:
14.7 - 21.6 N·m (1.5 - 2.2 kgf-m, 10.8 - 15.9 ft-lb)



LMT00060-00057

27. With the new gasket interposed, tighten the oil filler plug (A) and oil drain plug (B) to the transmission case.
Tightening Torque:
29.4 - 49.0 N·m (3.0 - 5.0 kgf-m, 21.7 - 36.2 ft-lb)

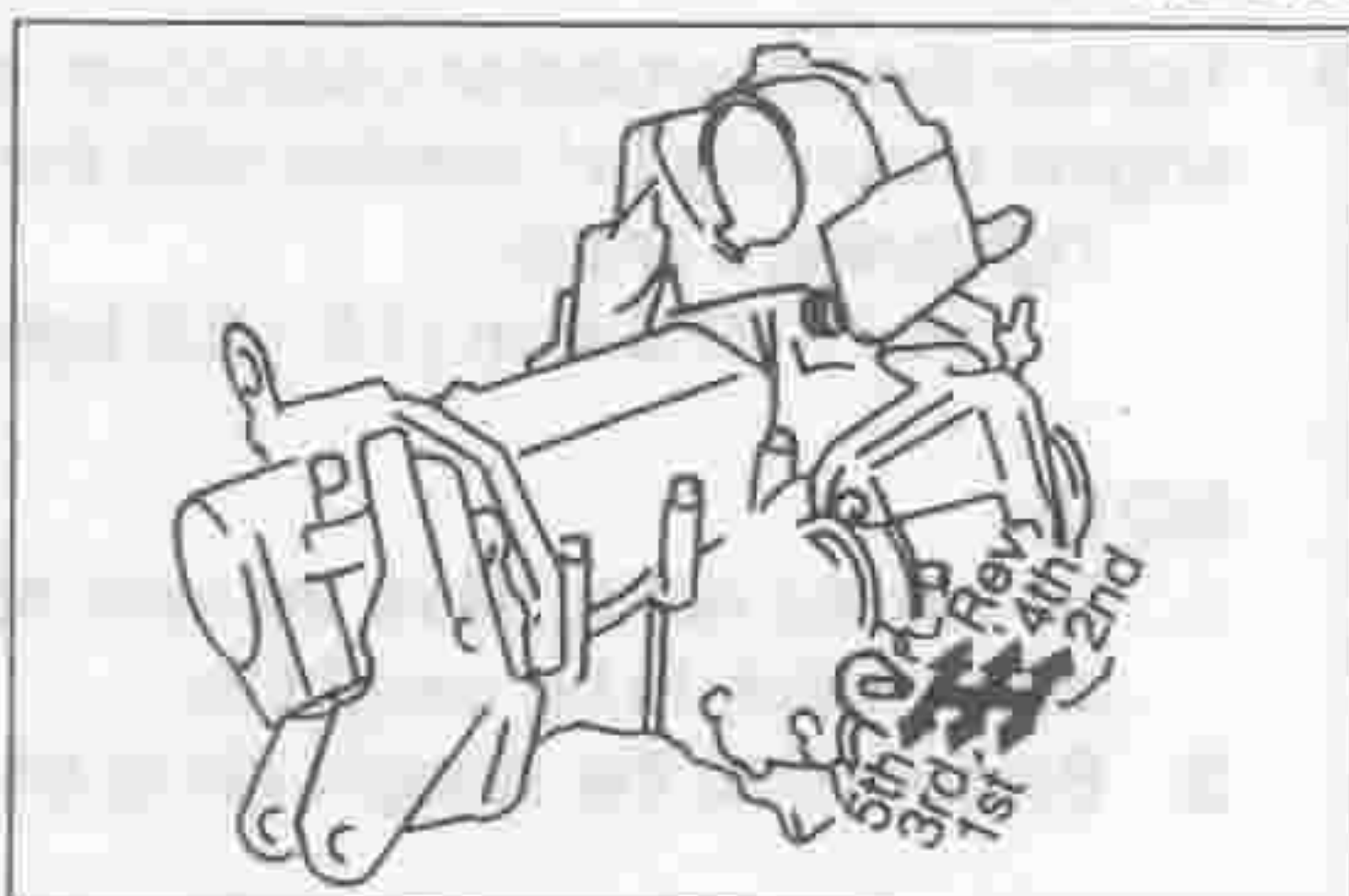


LMT00061-00058

- NOTE:
1. Tighten the oil filler plug after mounting the transmission on the vehicle and filling transmission oil.
28. Operate the shift & select outer lever to ensure that it can be shifted smoothly into each gear position.
29. Install the clutch release-related parts.

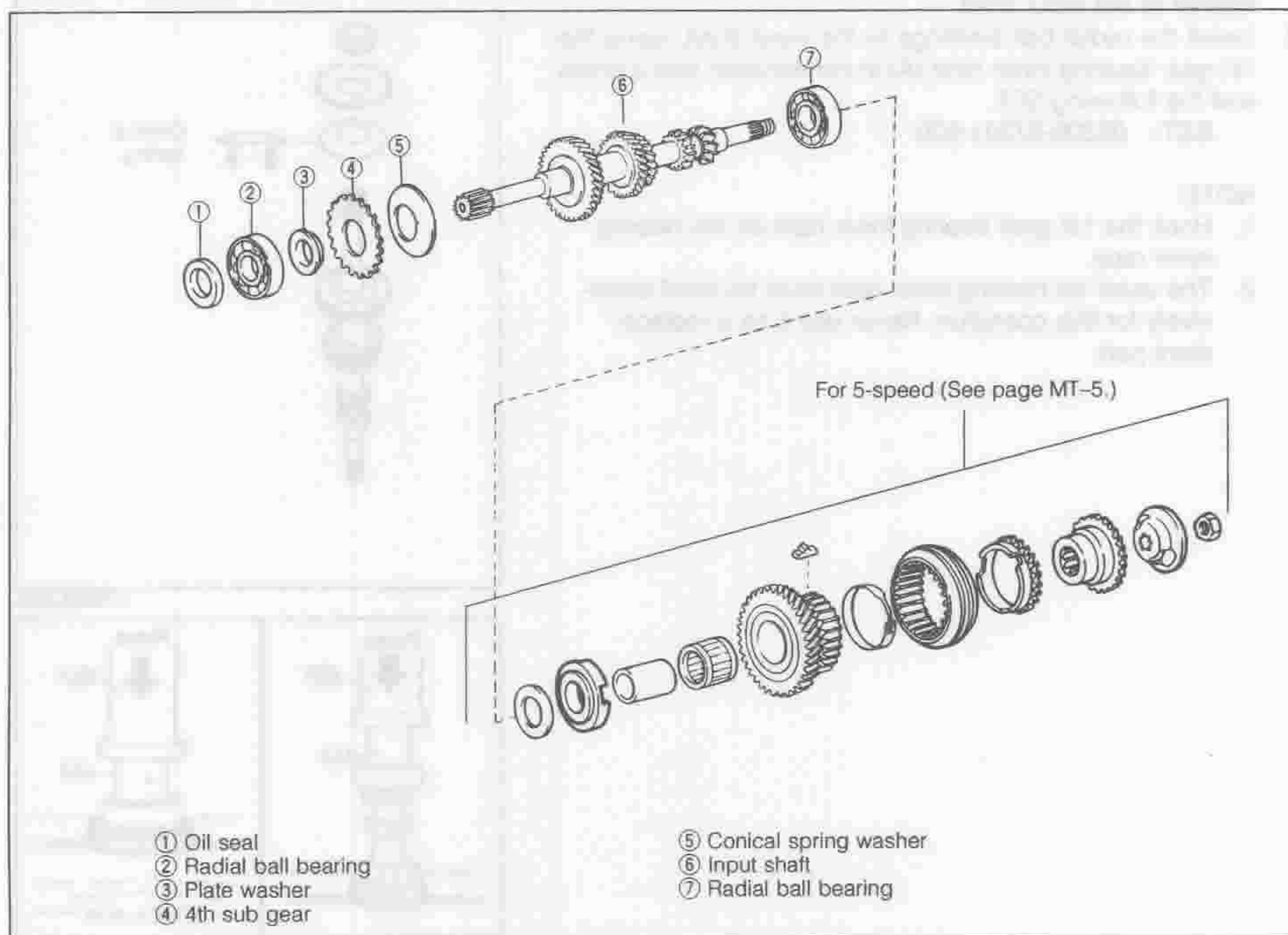
NOTE:

- Refer to the CL Section.



LMT00062-00059

INPUT SHAFT COMPONENTS



LMT00063-00061

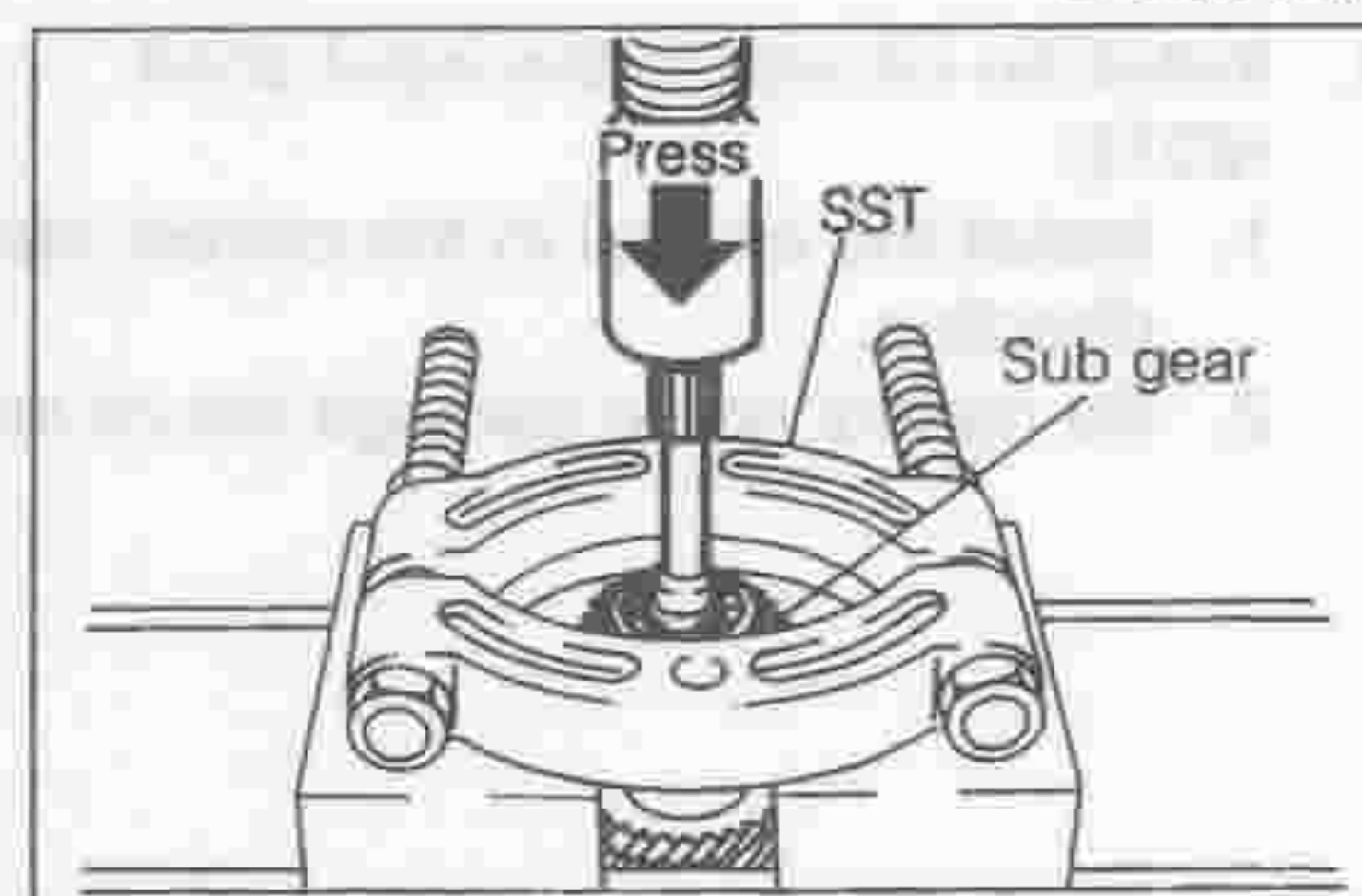
DISASSEMBLY

1. Remove the oil seal from the input shaft.
2. Remove the radial ball bearings and 4th sub gear from the input shaft, using a press in combination with the following SST.

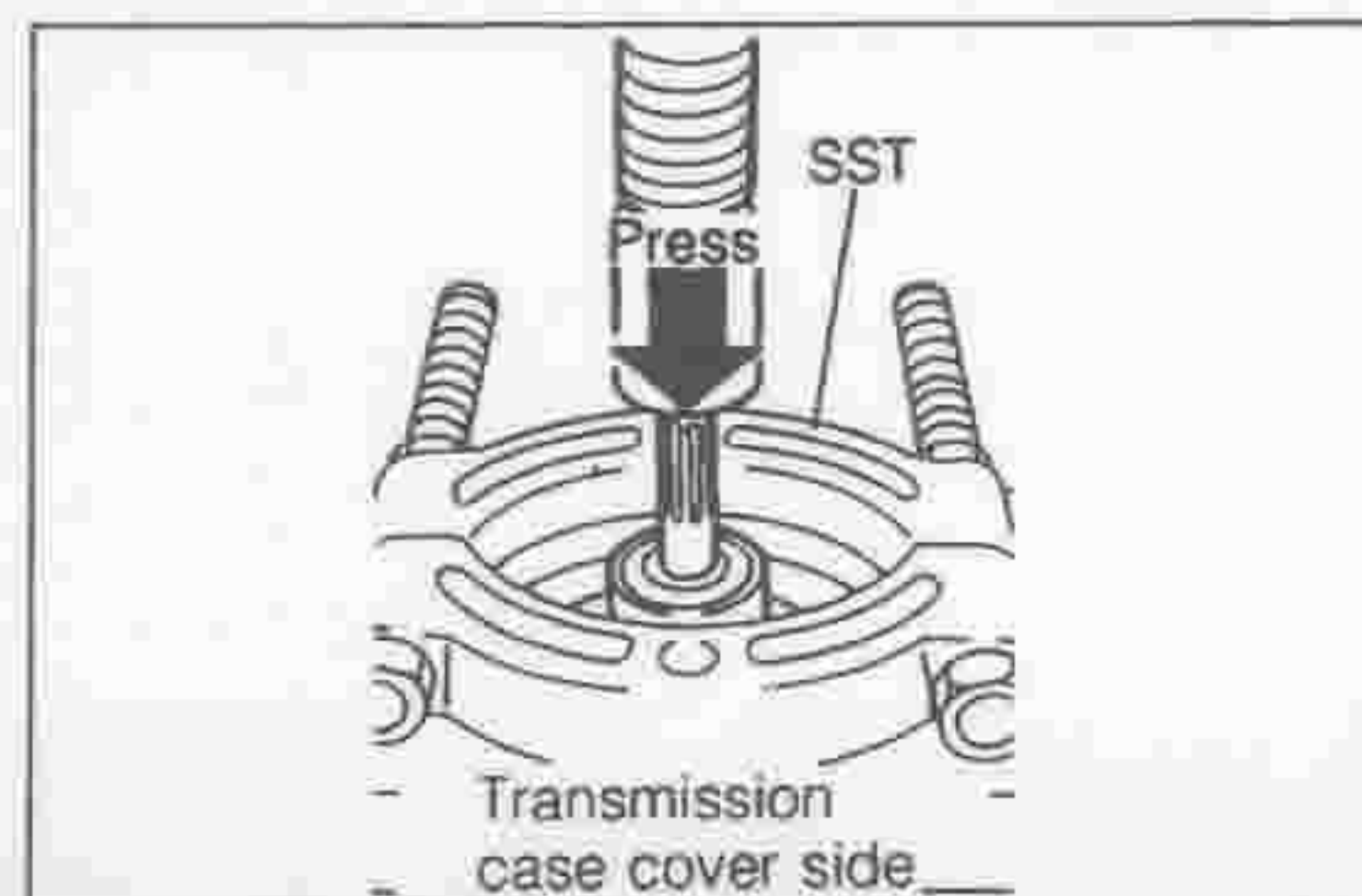
SST: 09950-87701-000

NOTE:

1. Do not remove those bearings which exhibit no abnormality.
2. Never reuse any bearing once it has been removed.



LMT00064-00061



LMT00000-00062

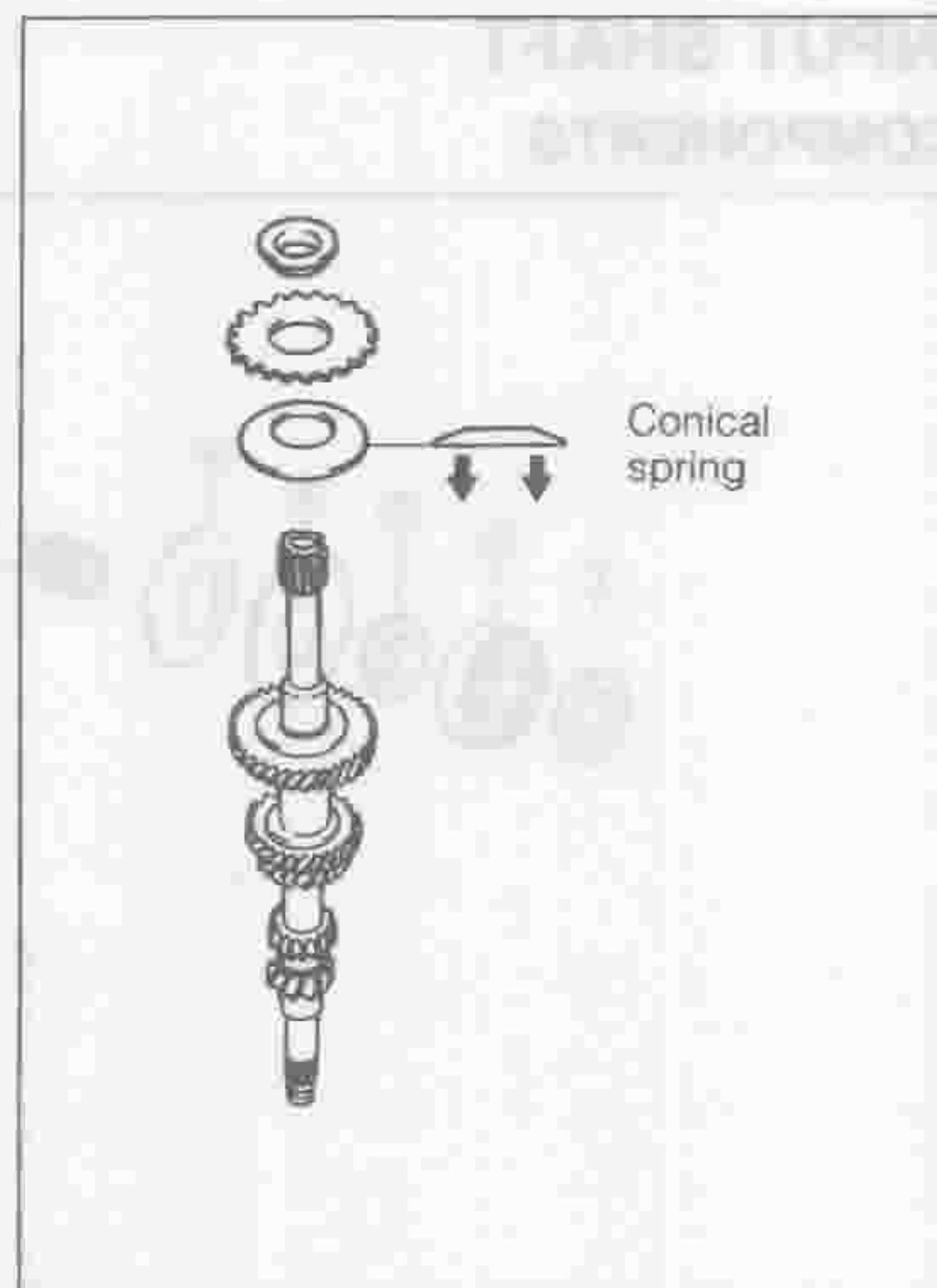
ASSEMBLY

1. Install the conical spring, new sub gear and new plate washer to the input shaft.
2. Install the radial ball bearings to the input shaft, using the 1st gear bearing inner race (A) in combination with a press and the following SST.

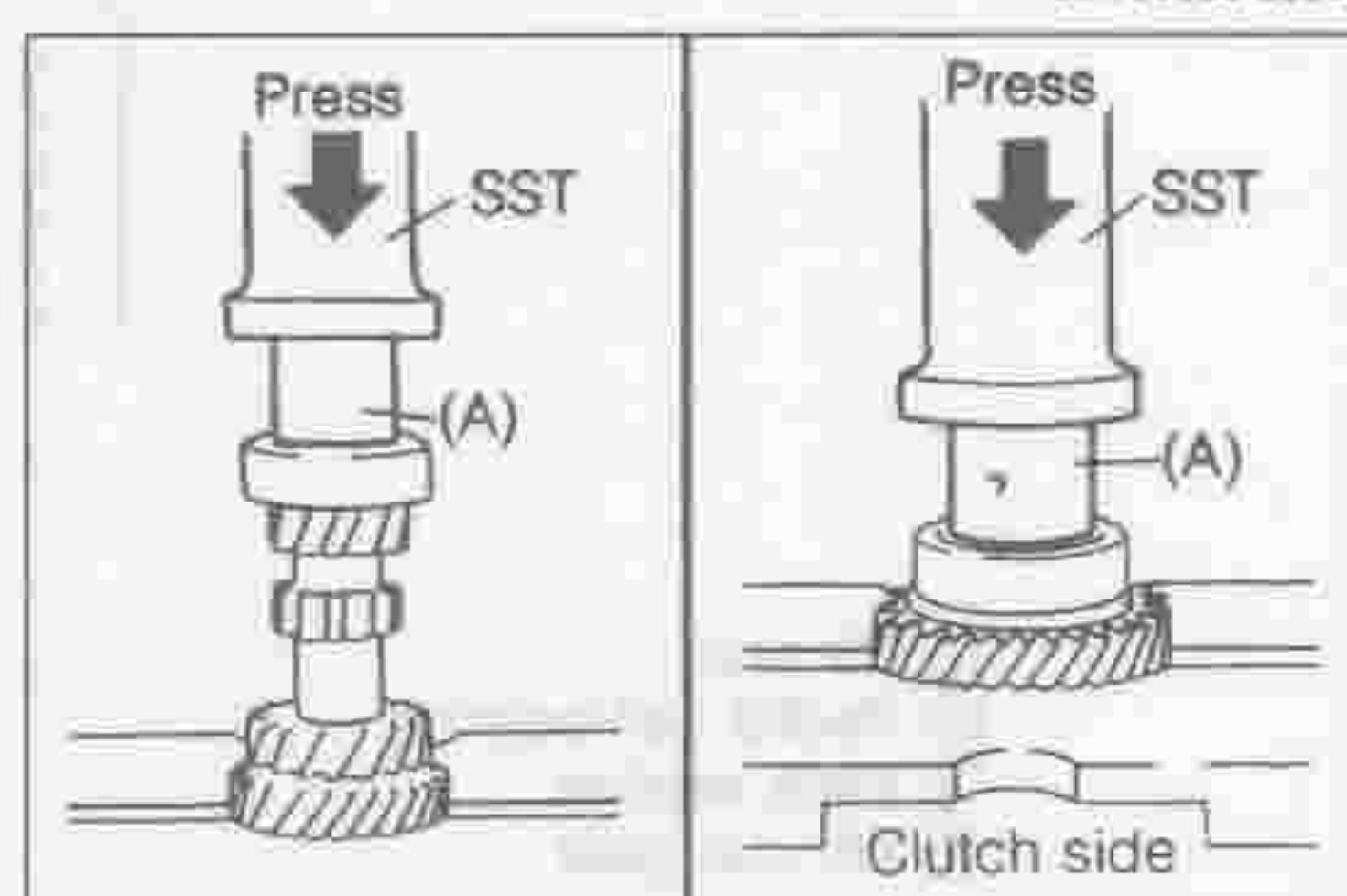
SST: 09309-87201-000

NOTE:

1. Hook the 1st gear bearing inner race on the bearing inner race.
2. The used 1st bearing inner race must be used exclusively for this operation. Never use it as a replacement part.



LMT00065-00063

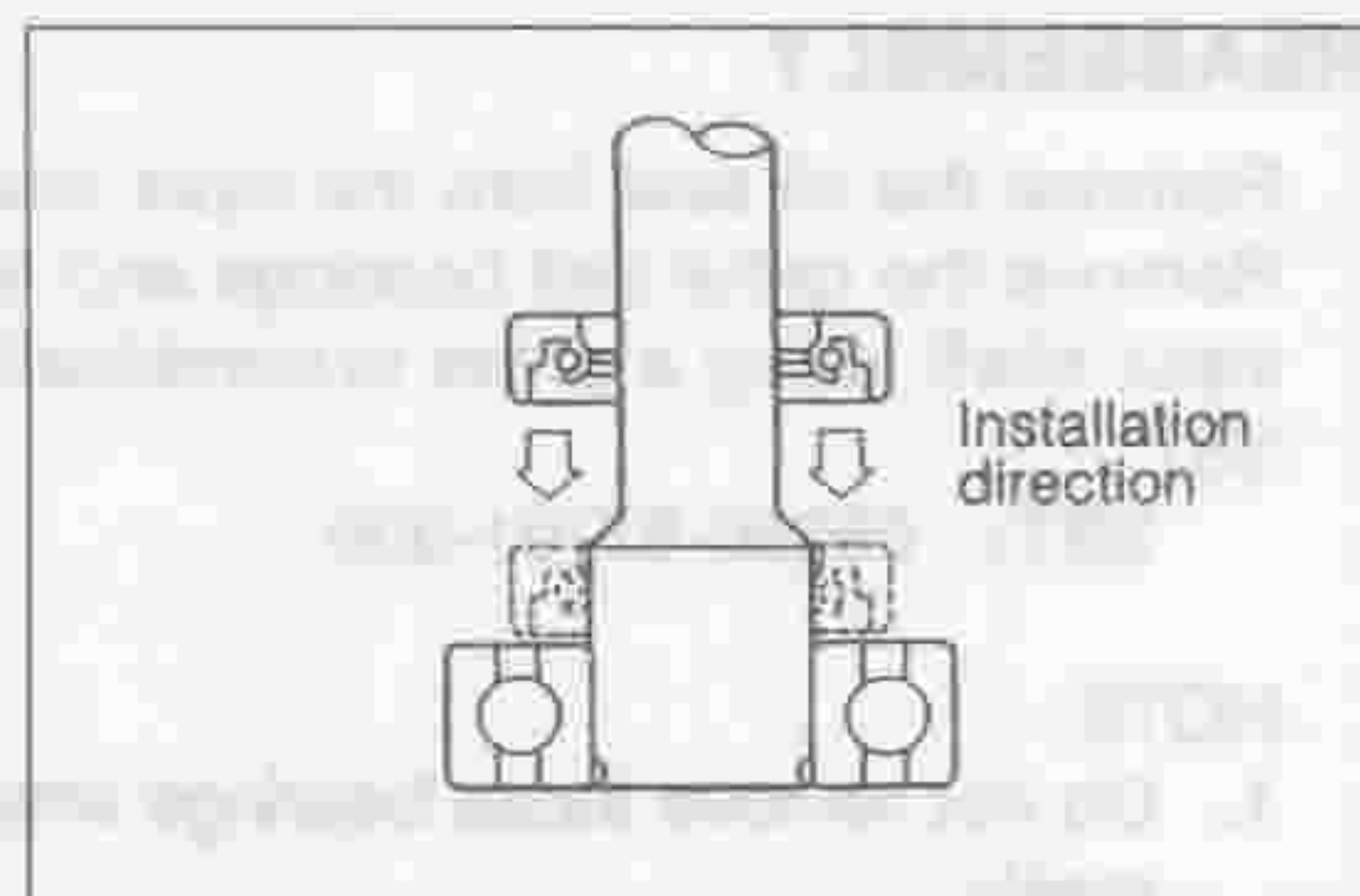


LMT00066-00064

3. Install an oil seal to the input shaft.

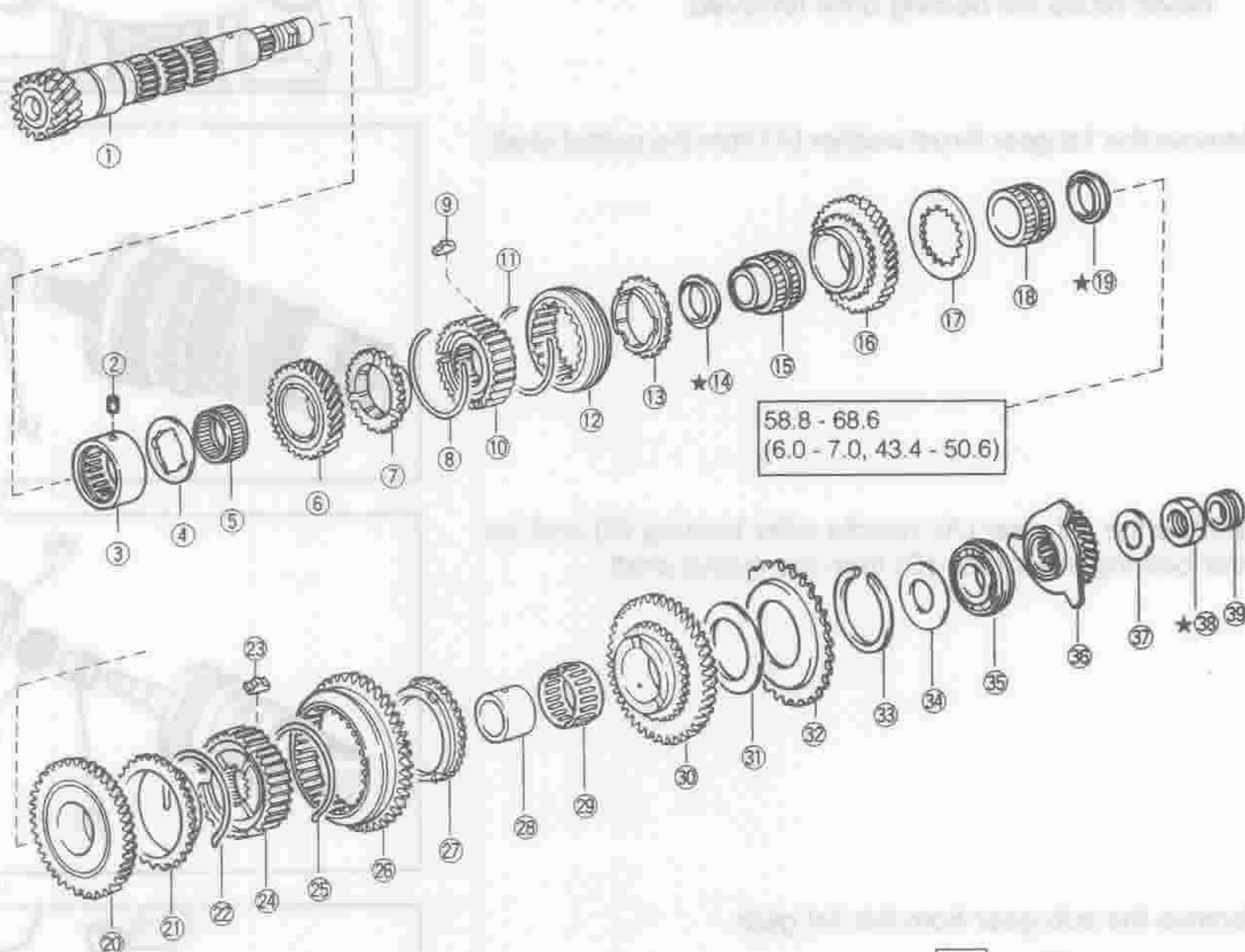
NOTE:

1. Install the oil seal in the correct installing position and direction.
2. Be careful not to damage the oil seal lip section.



LMT00066-00065

OUTPUT SHAFT COMPONENT



- ① Output shaft
- ② Straight pin
- ③ Needle roller bearing
- ④ Plate washer
- ⑤ Needle roller bearing
- ⑥ 4th gear
- ⑦ Synchronizer ring (for 4th gear)
- ⑧ Synchromesh shifting key spring
- ⑨ Synchromesh shifting key (3)
- ⑩ Synchronizer hub
- ⑪ Synchromesh shifting key spring
- ⑫ Synchronizer hub sleeve
- ⑬ Synchronizer ring (for 3rd gear)
- ⑭ 3rd friction damper
- ⑮ 3rd gear bush
- ⑯ 3rd gear
- ⑰ 2nd & 3rd gear thrust washer
- ⑱ 2nd gear bush
- ⑲ 2nd friction damper
- ⑳ 2nd gear

- ㉑ Synchronizer ring (for 2nd gear)
- ㉒ Synchromesh shifting key spring
- ㉓ Synchromesh shifting key (3)
- ㉔ Synchronizer hub
- ㉕ Synchromesh shifting key spring
- ㉖ Reverse gear
- ㉗ Synchronizer ring (for 1st gear)
- ㉘ 1st gear bearing inner race
- ㉙ Needle roller bearing
- ㉚ 1st gear
- ㉛ Conical spring washer
- ㉜ 1st sub gear
- ㉝ Shaft snap ring
- ㉞ 1st gear thrust washer
- ㉟ Radial ball bearing
- ㊱ Output 5th gear assembly
- ㊲ Conical spring washer
- ㊳ Lock nut
- ㊴ Speedometer drive gear

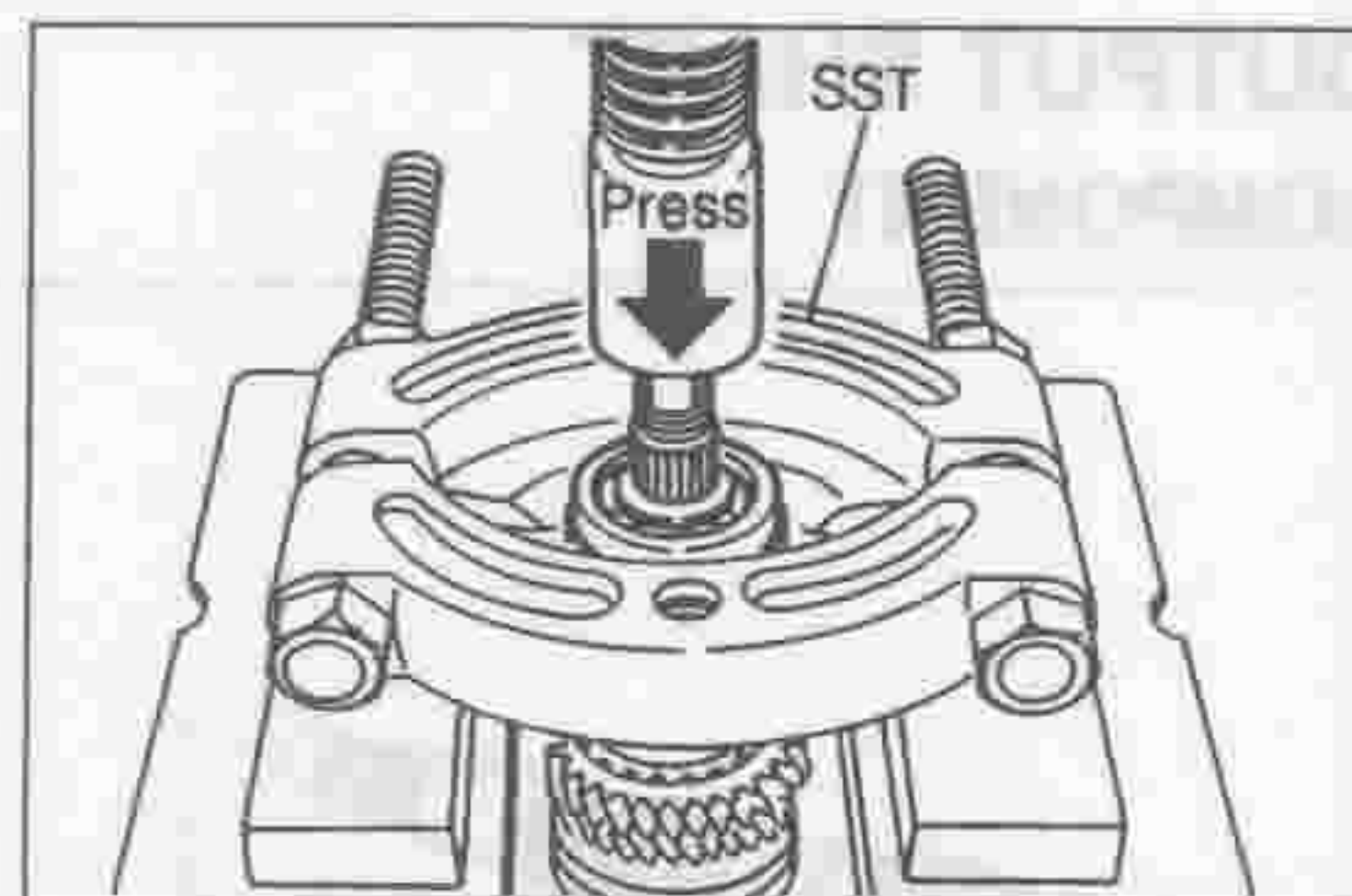
□ : Tightening torque
 Unit : N·m (kgf-m, ft-lb)
 ★ : Non-reusable part

DISASSEMBLY

1. Check each gear for its end play.
2. Remove the radial ball bearing from the output shaft, using a press in combination with the following SST.
SST: 09950-87701-000

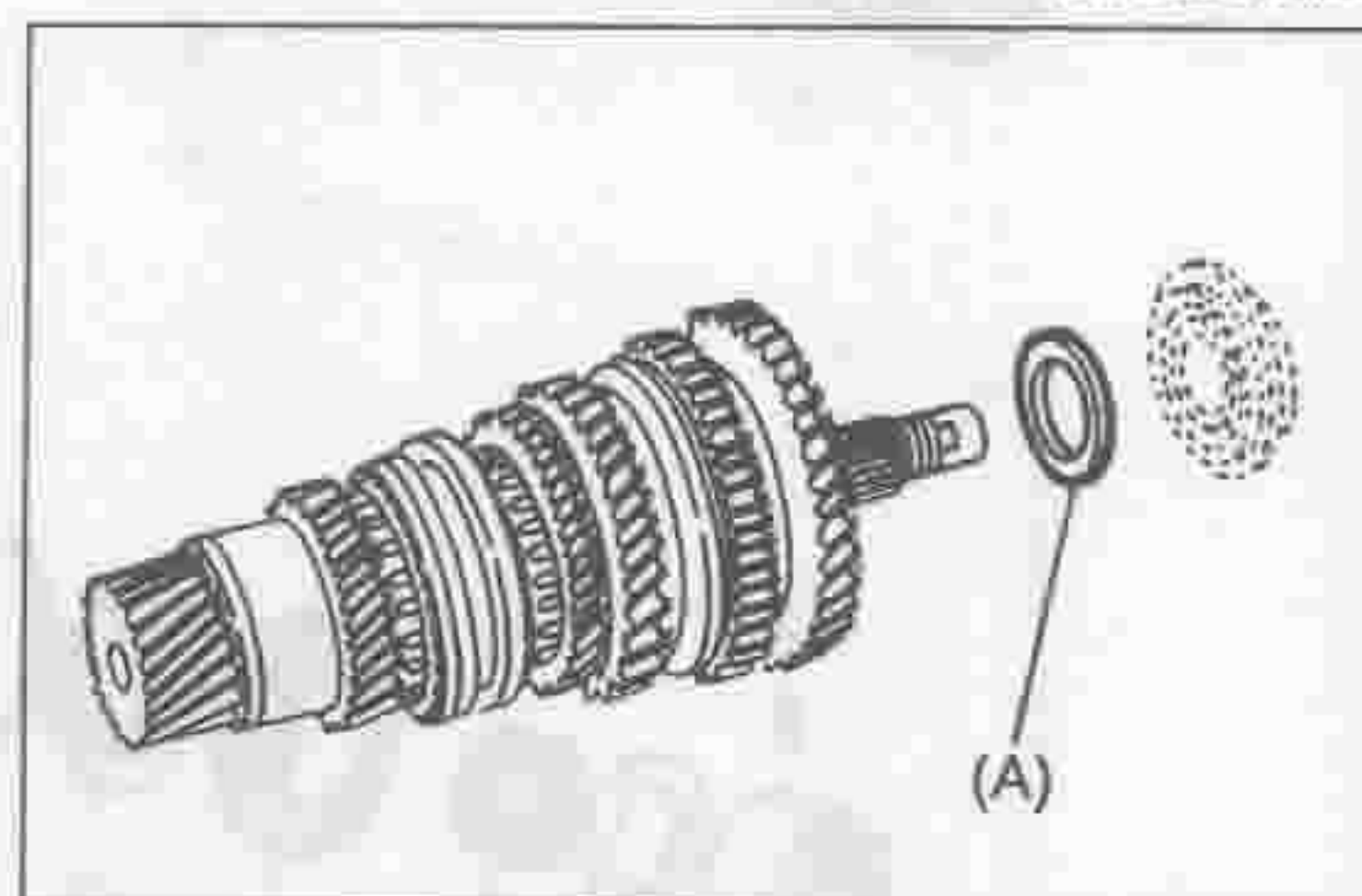
NOTE:

- Never reuse the bearing once removed.



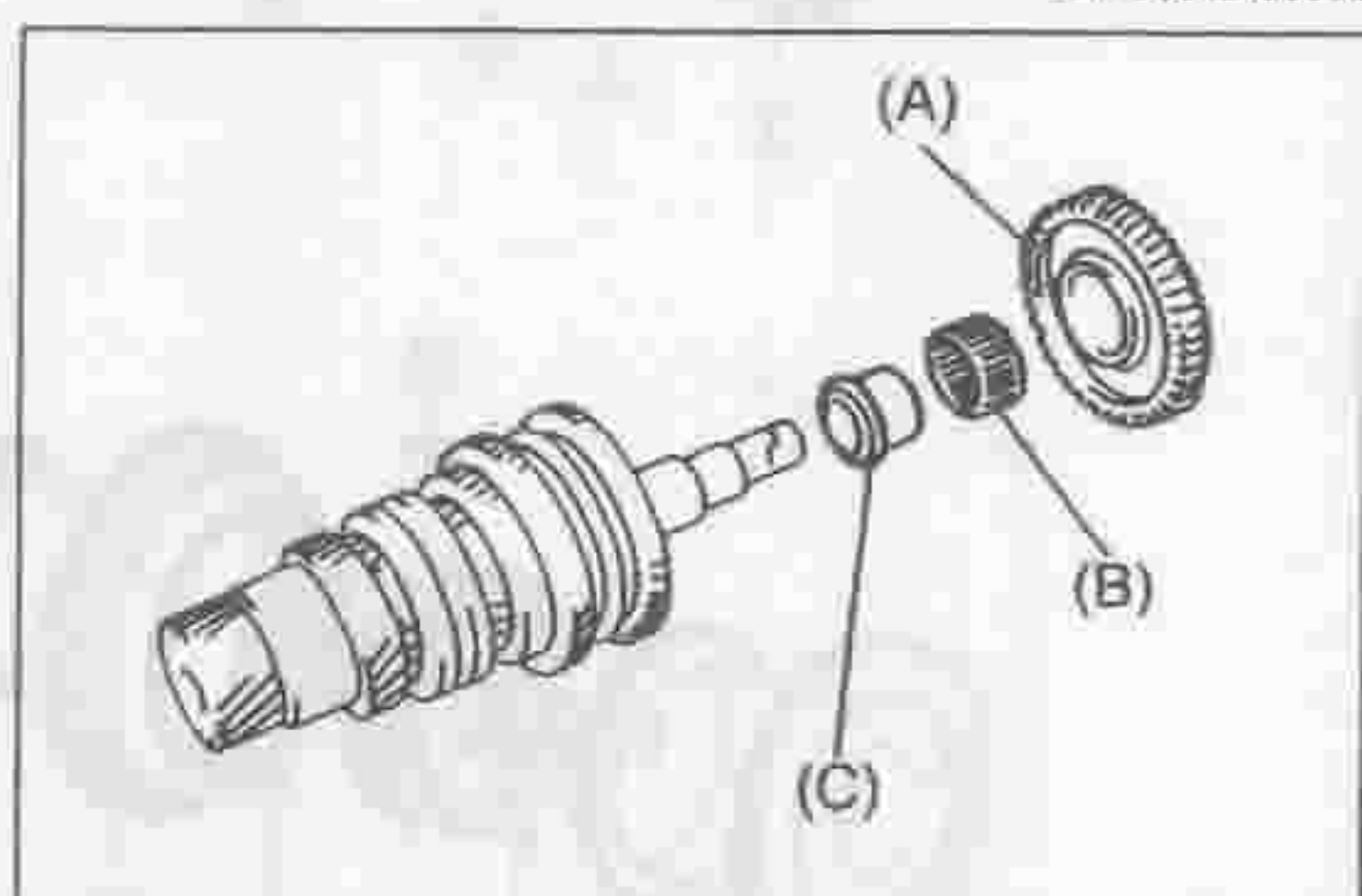
LMT00068-00067

3. Remove the 1st gear thrust washer (A) from the output shaft.



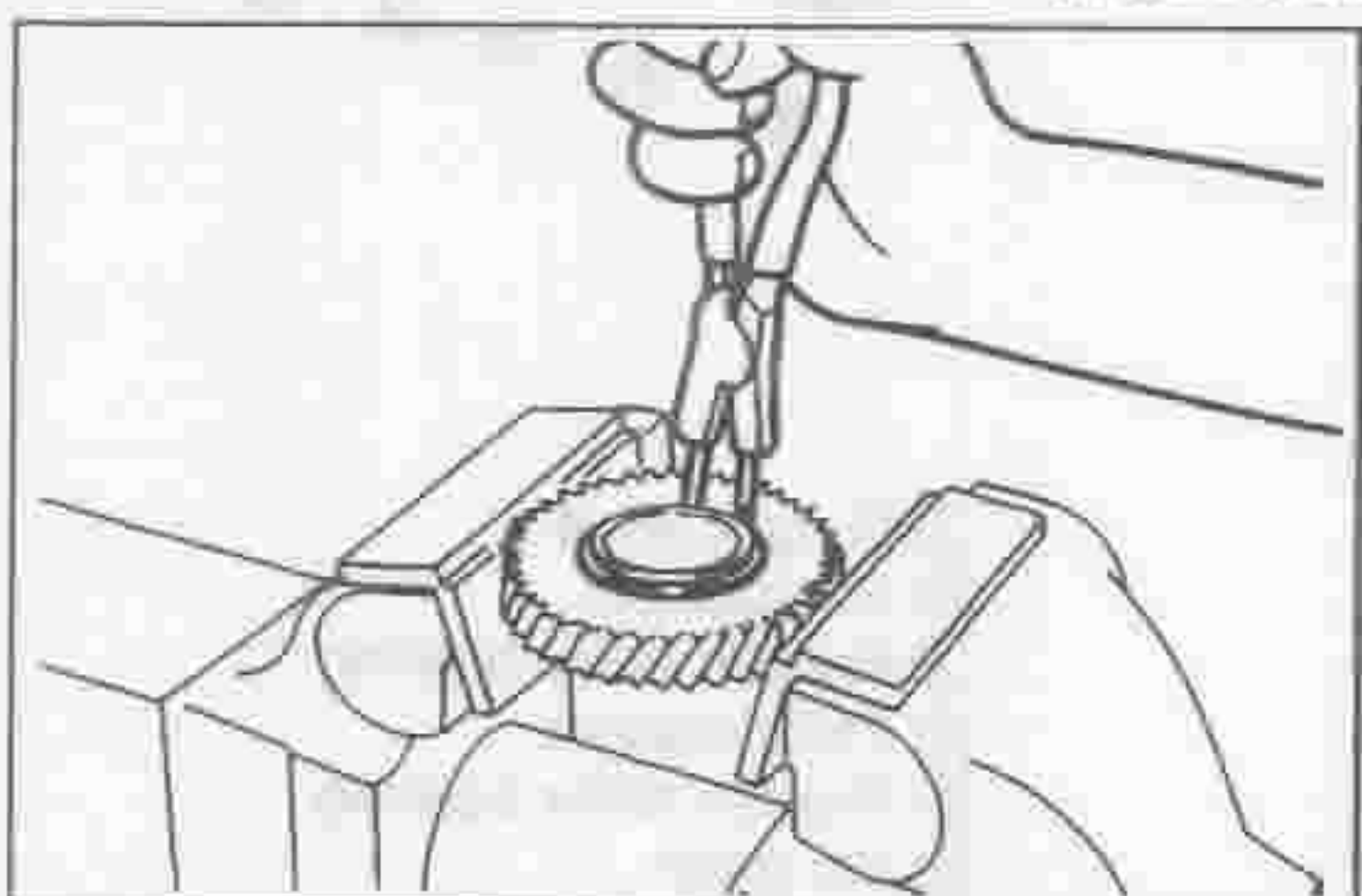
LMT00069-00068

4. Remove the 1st gear (A), needle roller bearing (B) and 1st gear bearing inner race (C) from the output shaft.



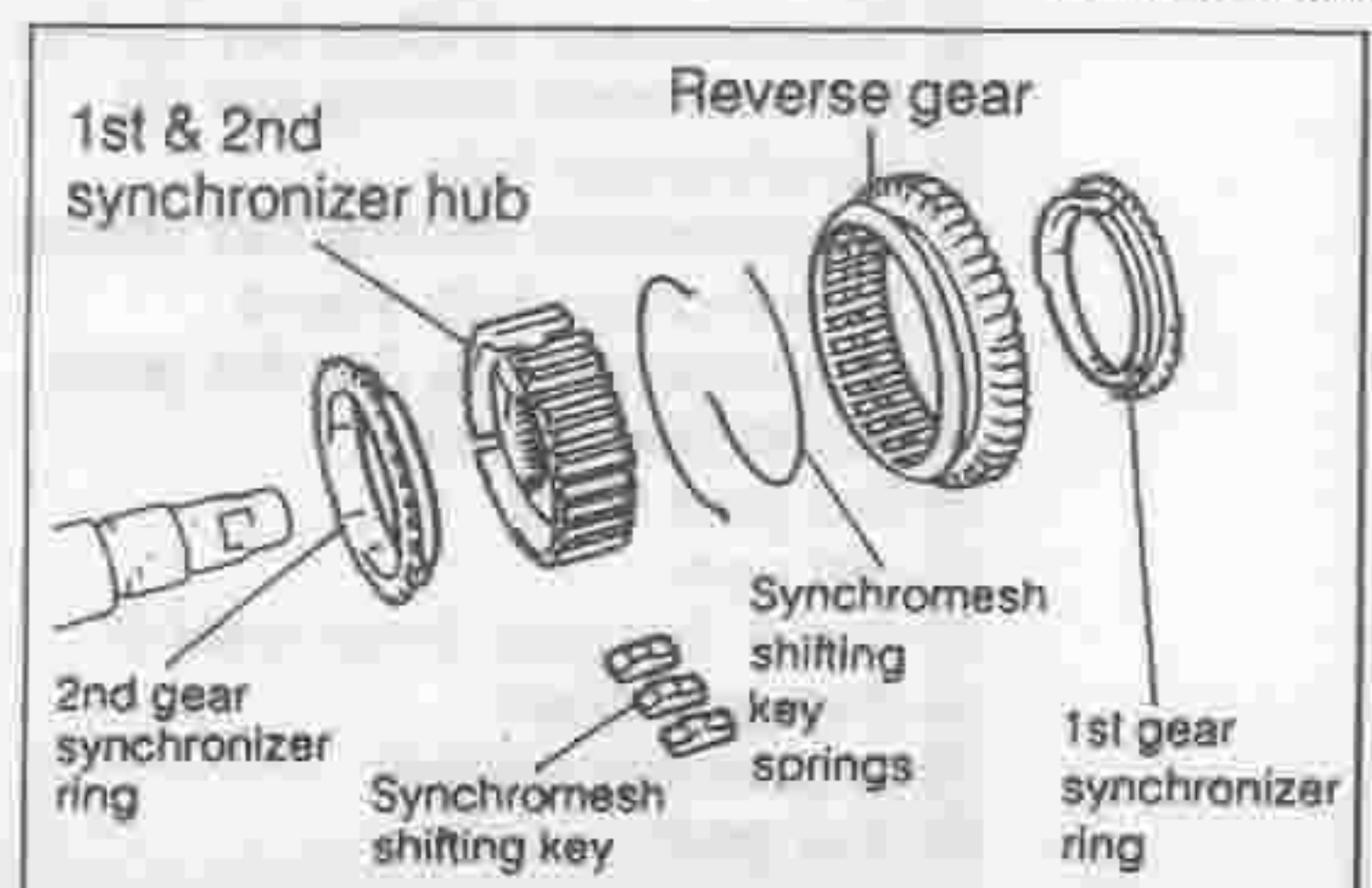
LMT00070-00069

5. Remove the sub gear from the 1st gear.



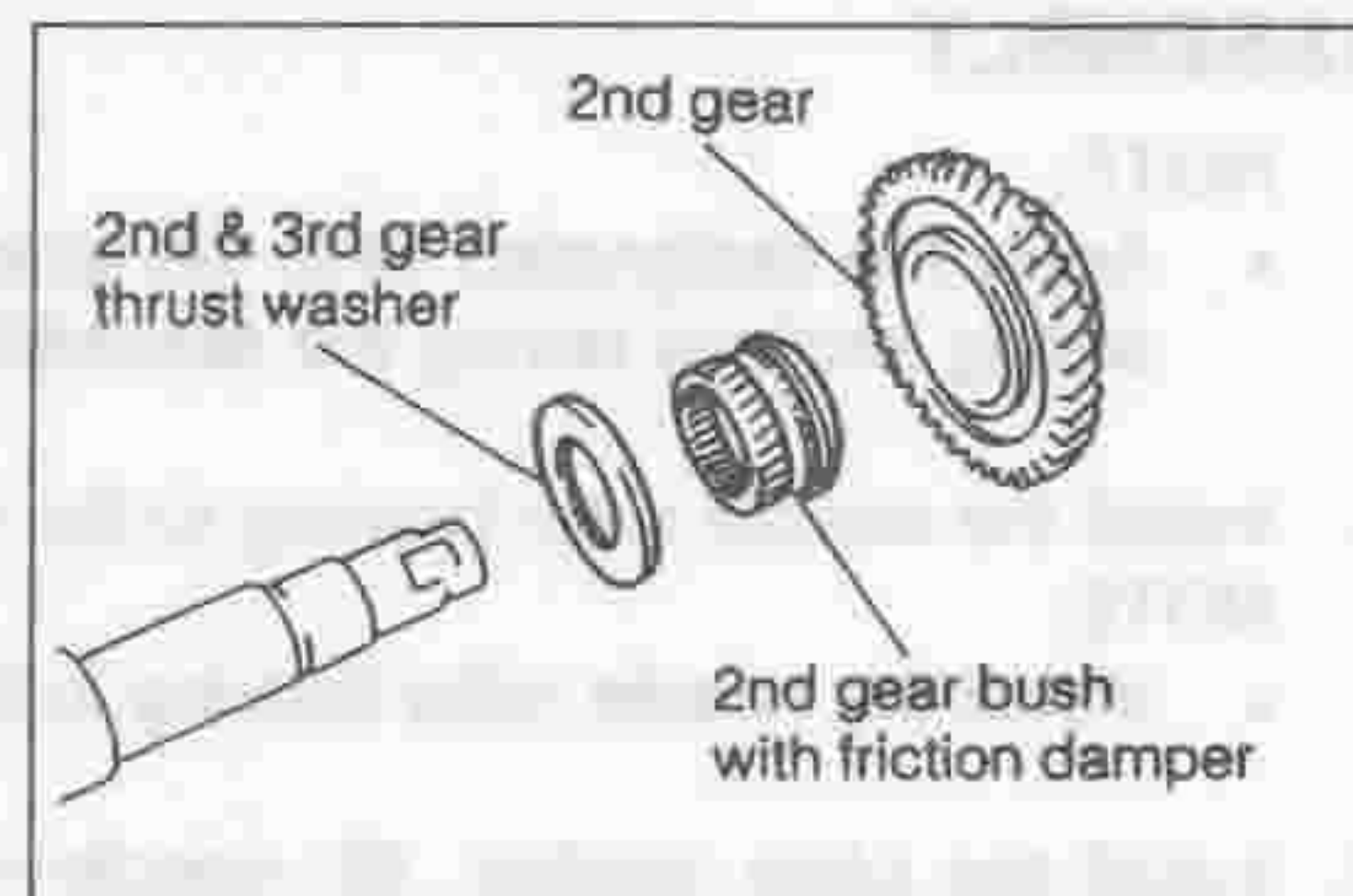
LMT00071-00070

6. Remove the following parts from the output shaft; 1st gear synchronizer ring, reverse gear, synchromesh shifting key springs, synchromesh shifting keys, 1st & 2nd synchronizer hub and 2nd gear synchronizer ring.



LMT00072-00071

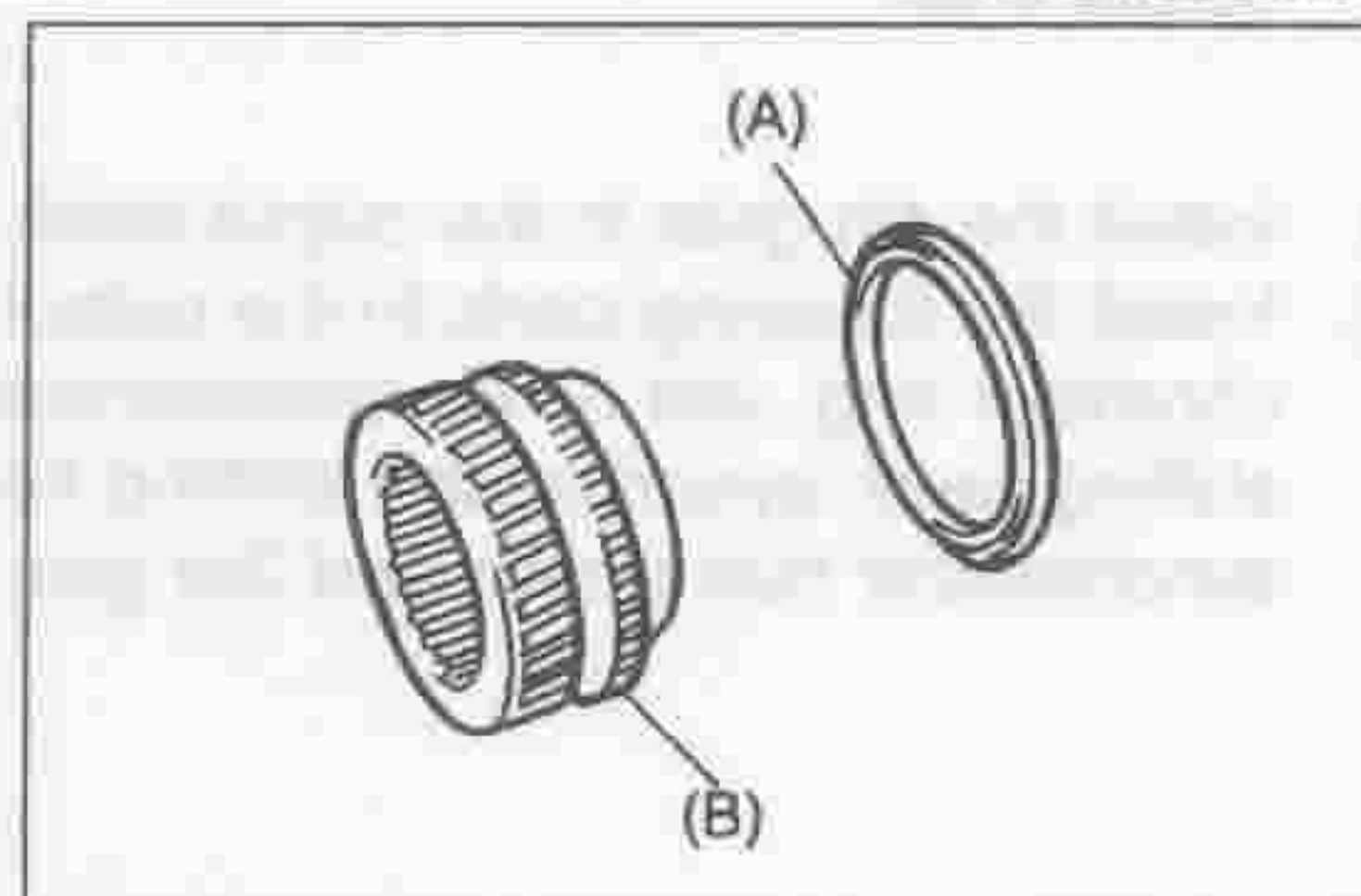
7. Remove the following parts from the output shaft; 2nd gear, 2nd gear bush with friction damper and 2nd & 3rd gear thrust washer.



LMT00073-00072

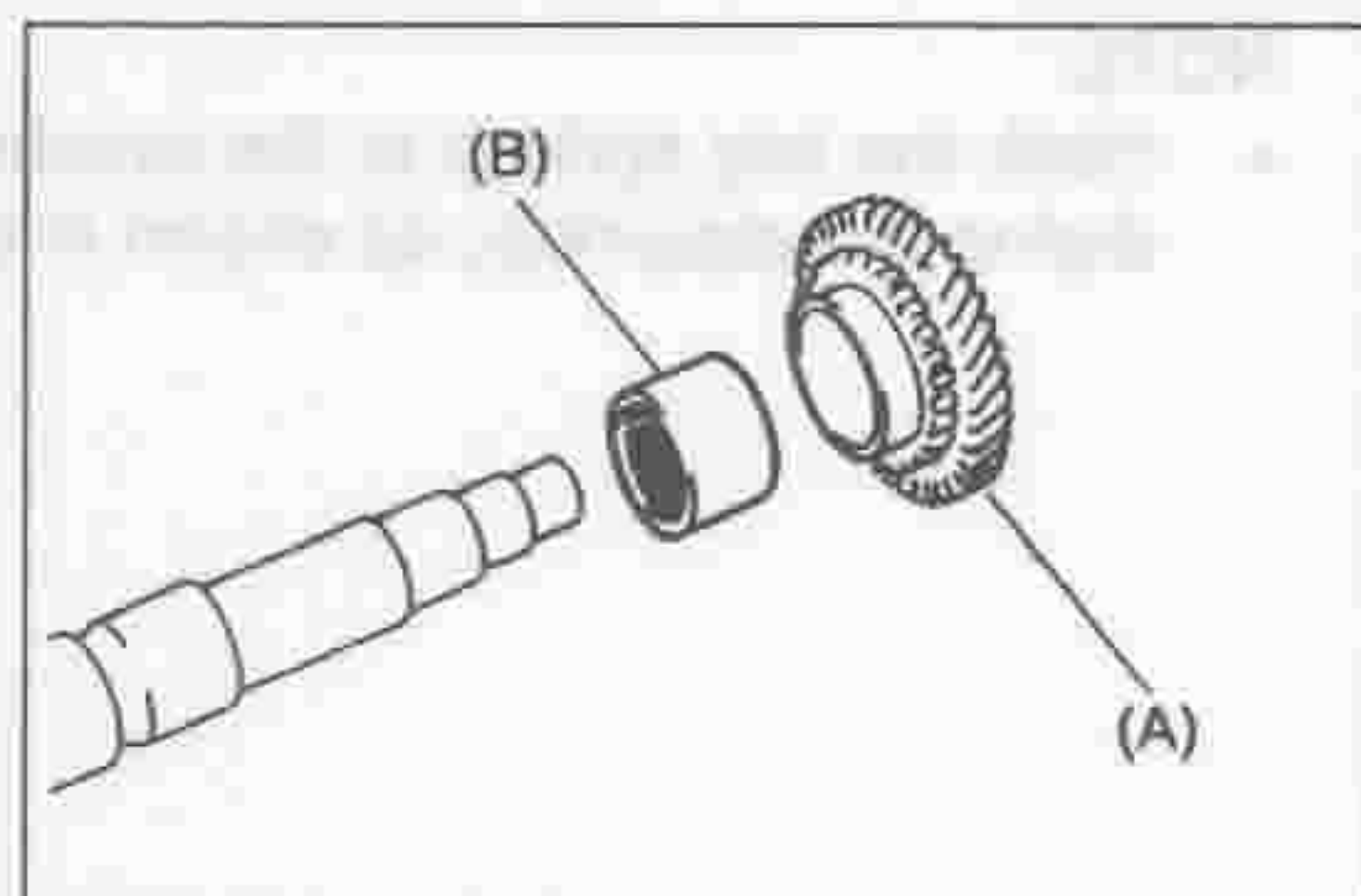
8. Remove the friction damper (A) from the 2nd gear bush (B).
NOTE:

1. Do not remove the 2nd gear bush and friction damper, unless they exhibit any abnormality.
2. Never reuse the friction damper that has been once removed.



LMT00074-00073

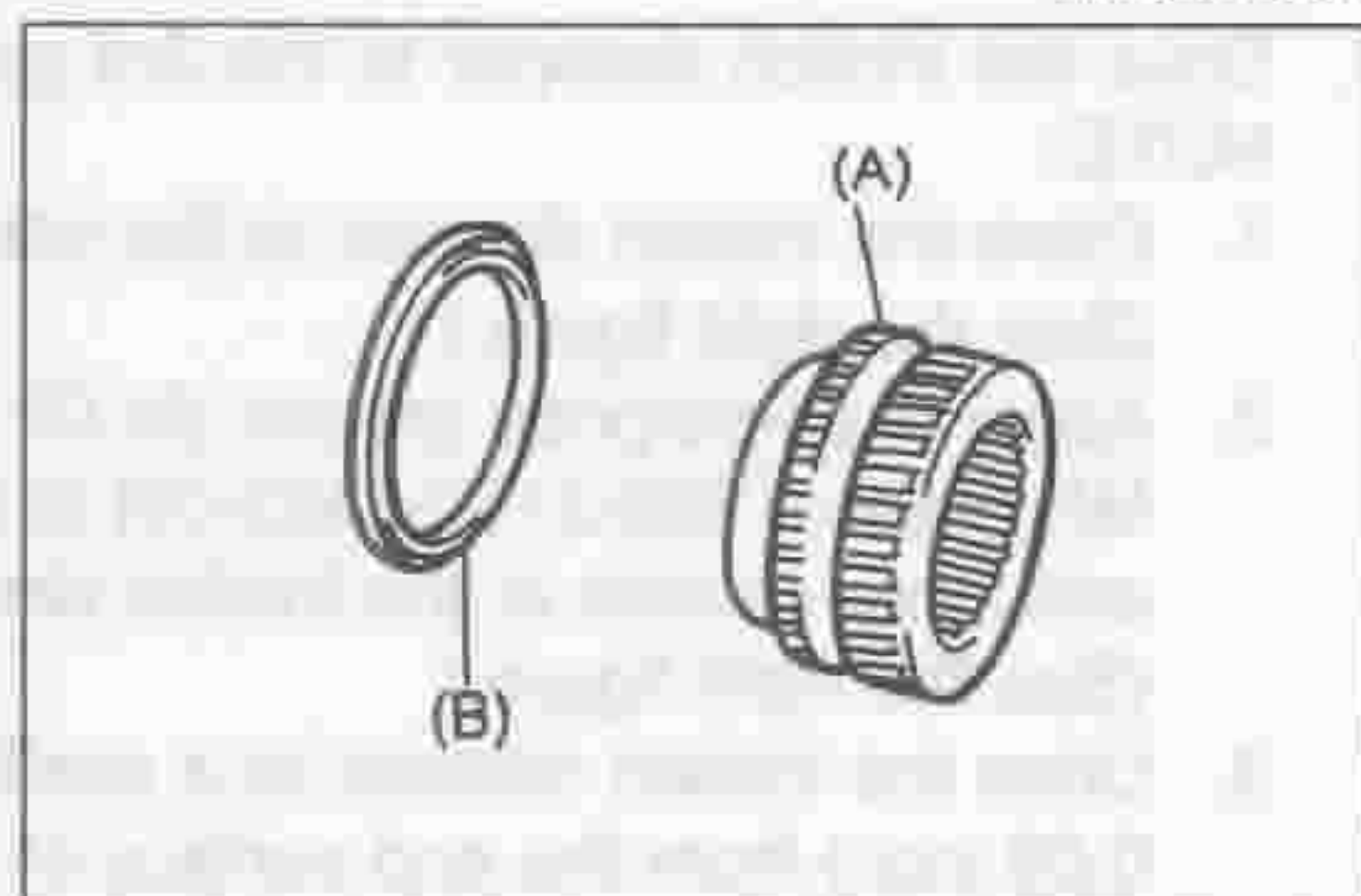
9. Remove the 3rd gear (A) and 3rd gear bush with friction damper (B) from the output shaft.



LMT00075-00074

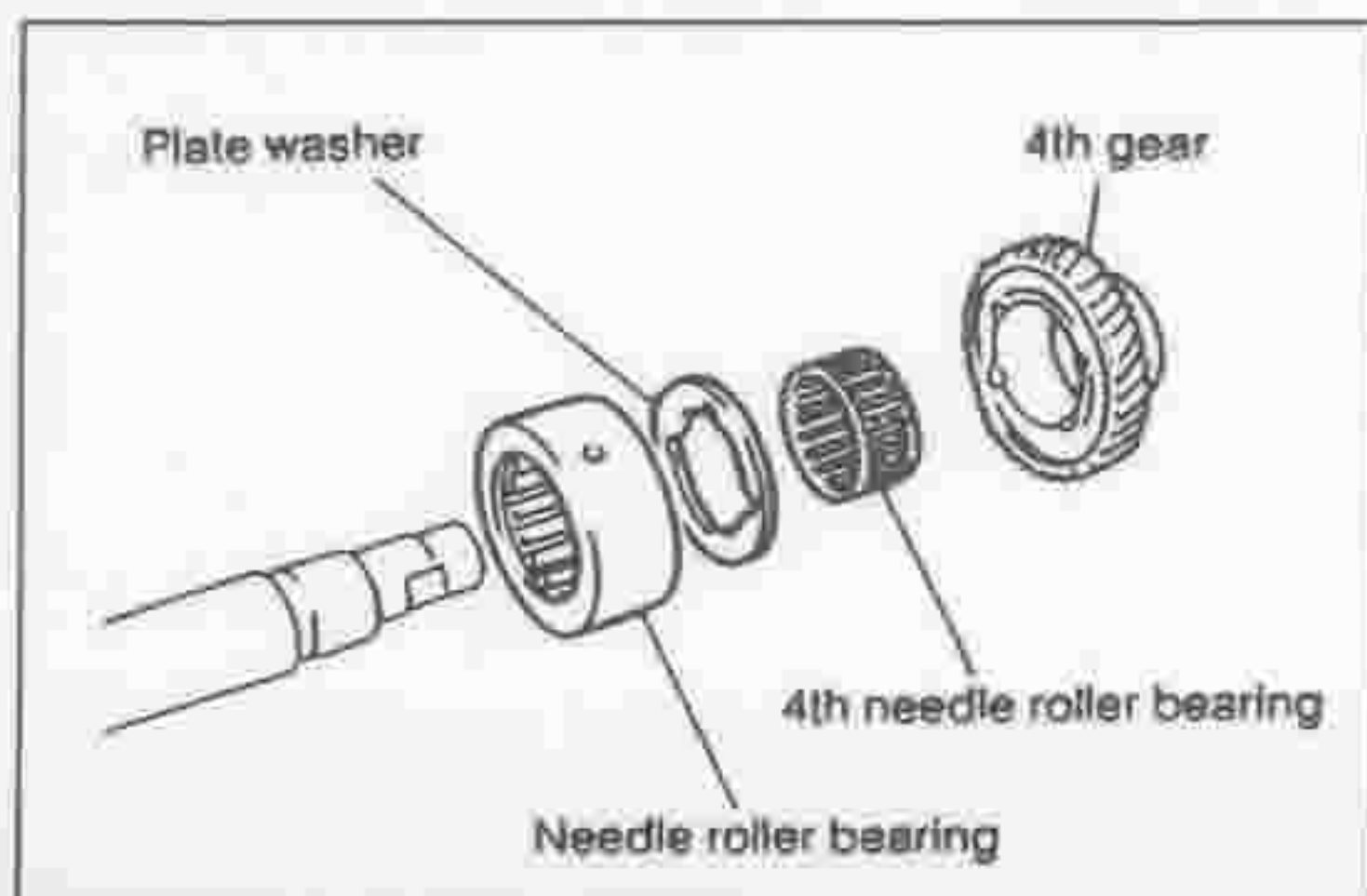
10. Remove the friction damper (B) from the 3rd gear bearing inner race (A).
NOTE:

1. Do not remove the 3rd gear bush and friction damper, unless they exhibit any abnormality.
2. Never reuse the friction damper that has been once removed.



LMT00076-00075

11. Remove the following parts from the output shaft; 4th gear, 4th needle roller bearing, plate washer and needle roller bearing.



LMT00077-00076

ASSEMBLY

NOTE:

- Apply the designated oil to the gear rotating sections or sliding sections during the assembly.

1. Install the needle roller bearing to the output shaft.

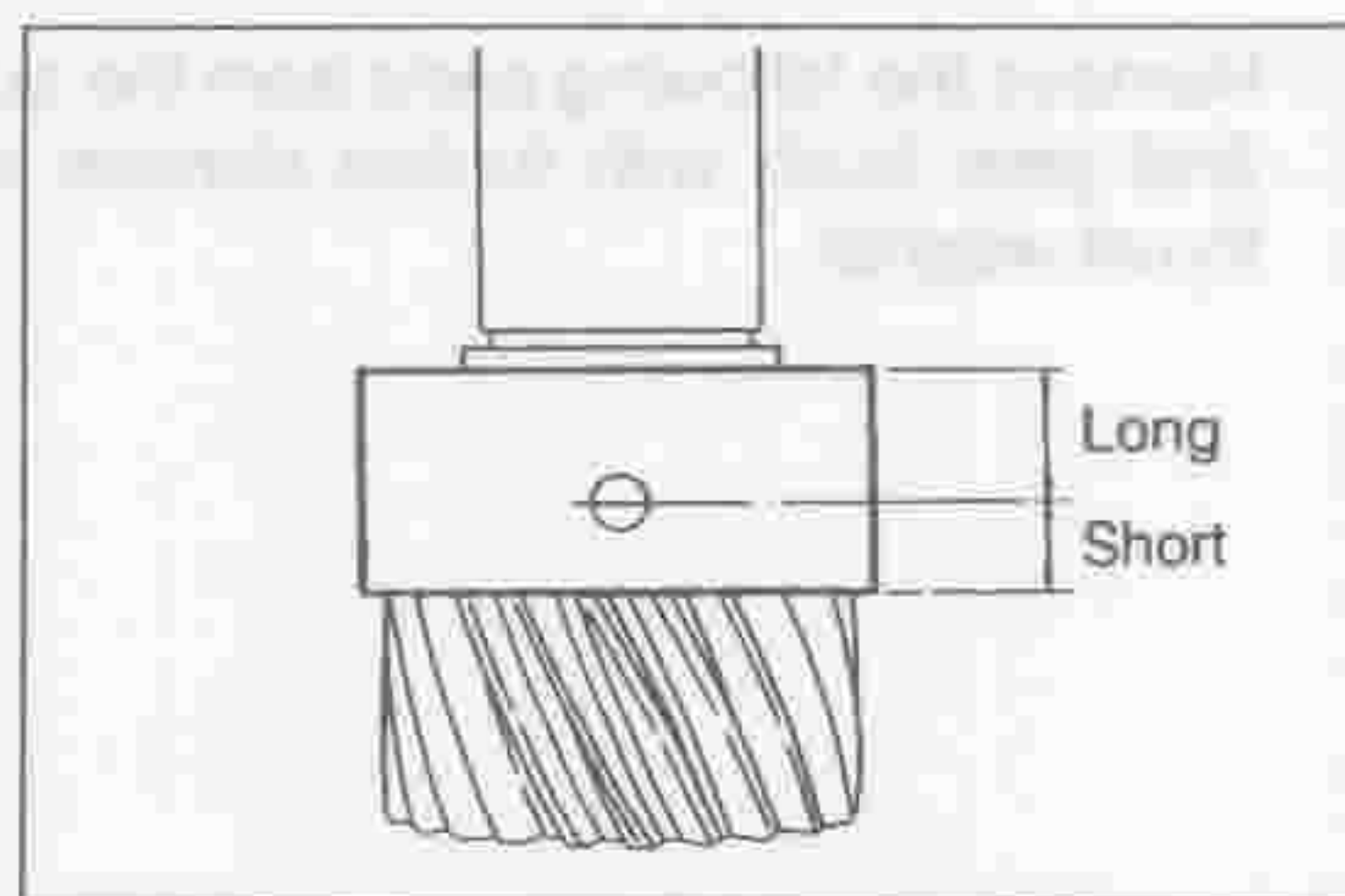
NOTE:

- Install the needle roller bearing in the correct direction.

2. Install the plate washer, 4th needle roller bearing to the output shaft.

3. Install the 4th gear to the output shaft.

4. Install the following parts to the output shaft; 4th gear synchronizer ring, 3rd & 4th synchronizer hub, synchromesh shifting keys, synchromesh shifting key springs, 3rd & 4th synchronizer hub sleeve and 3rd gear synchronizer ring.

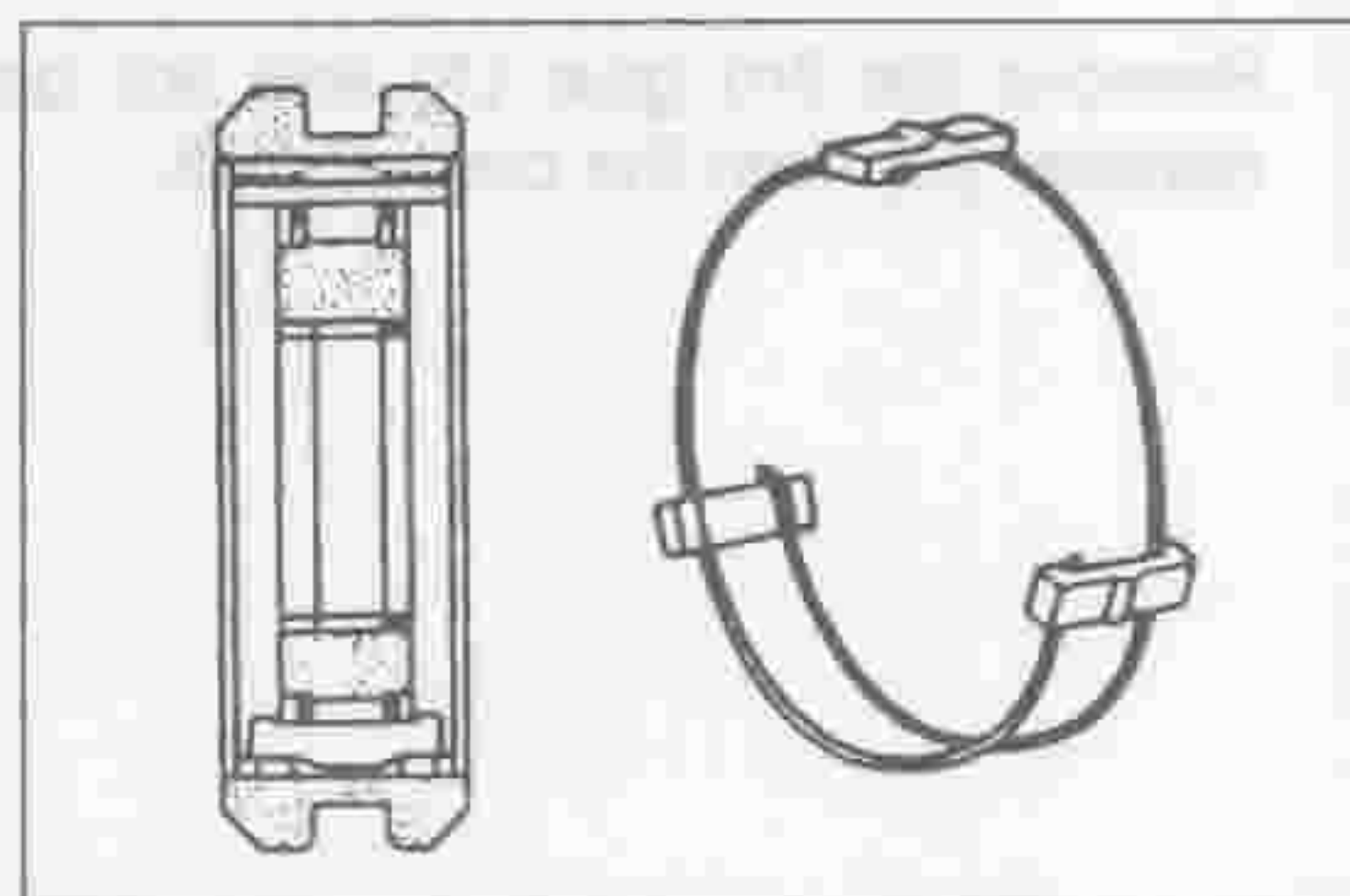


LMT00078-00077

LMT00079-00000

NOTE:

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

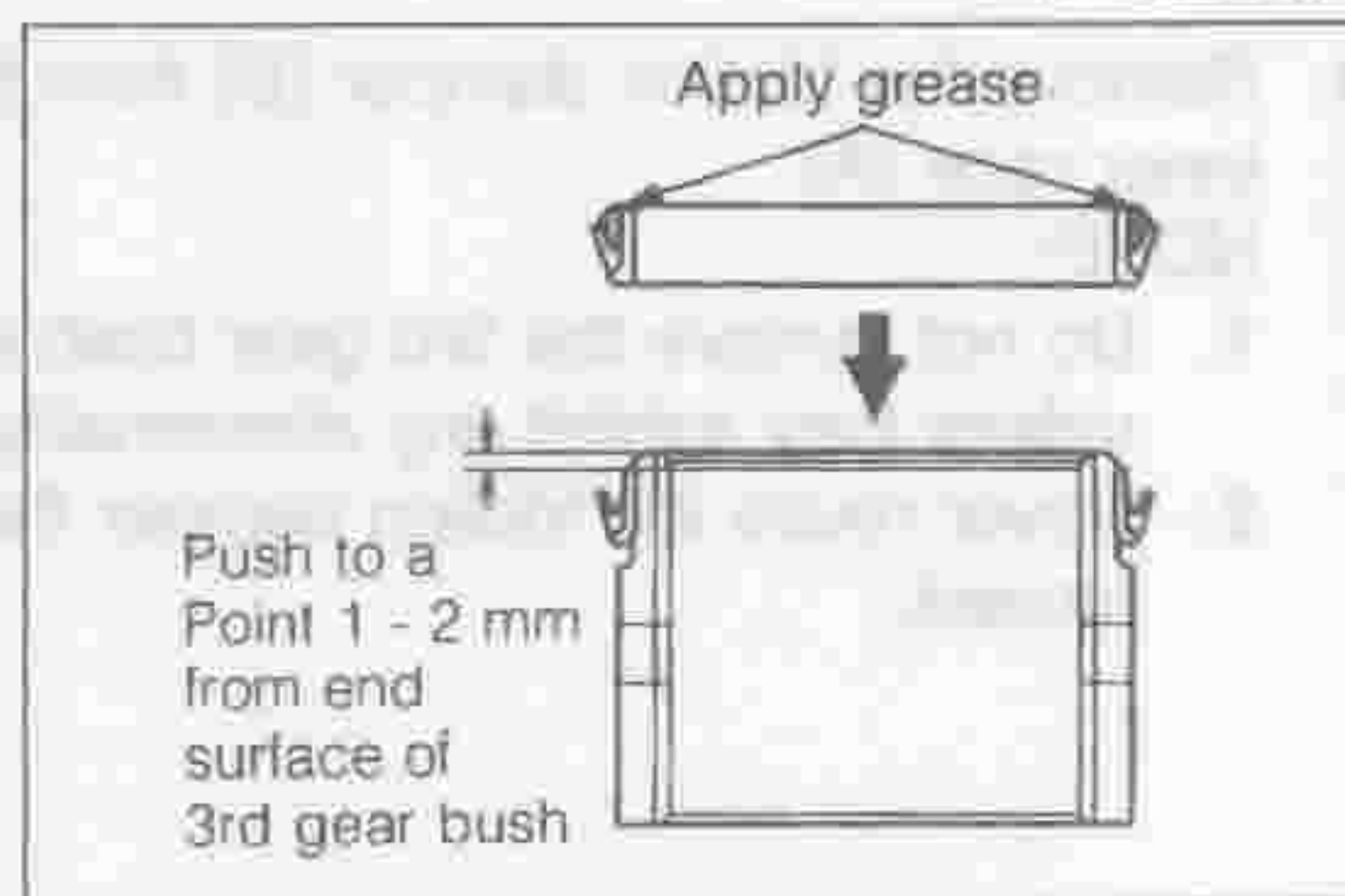


LMT00080-00078

5. Drive the friction damper to the 3rd gear bush.

NOTE:

1. Drive the friction damper in the correct direction. (See the right figure.)
2. Apply multi-purpose grease (NLGI No. 2) [DAIHATSU MP grease: 999-2102-8483-00] to the whole peripheral inner section of the friction damper lip. (See the right figure.)
3. Drive the friction damper to a position 1 - 2 mm (0.04 - 0.08 inch) from the end surface of the 3rd gear bush.

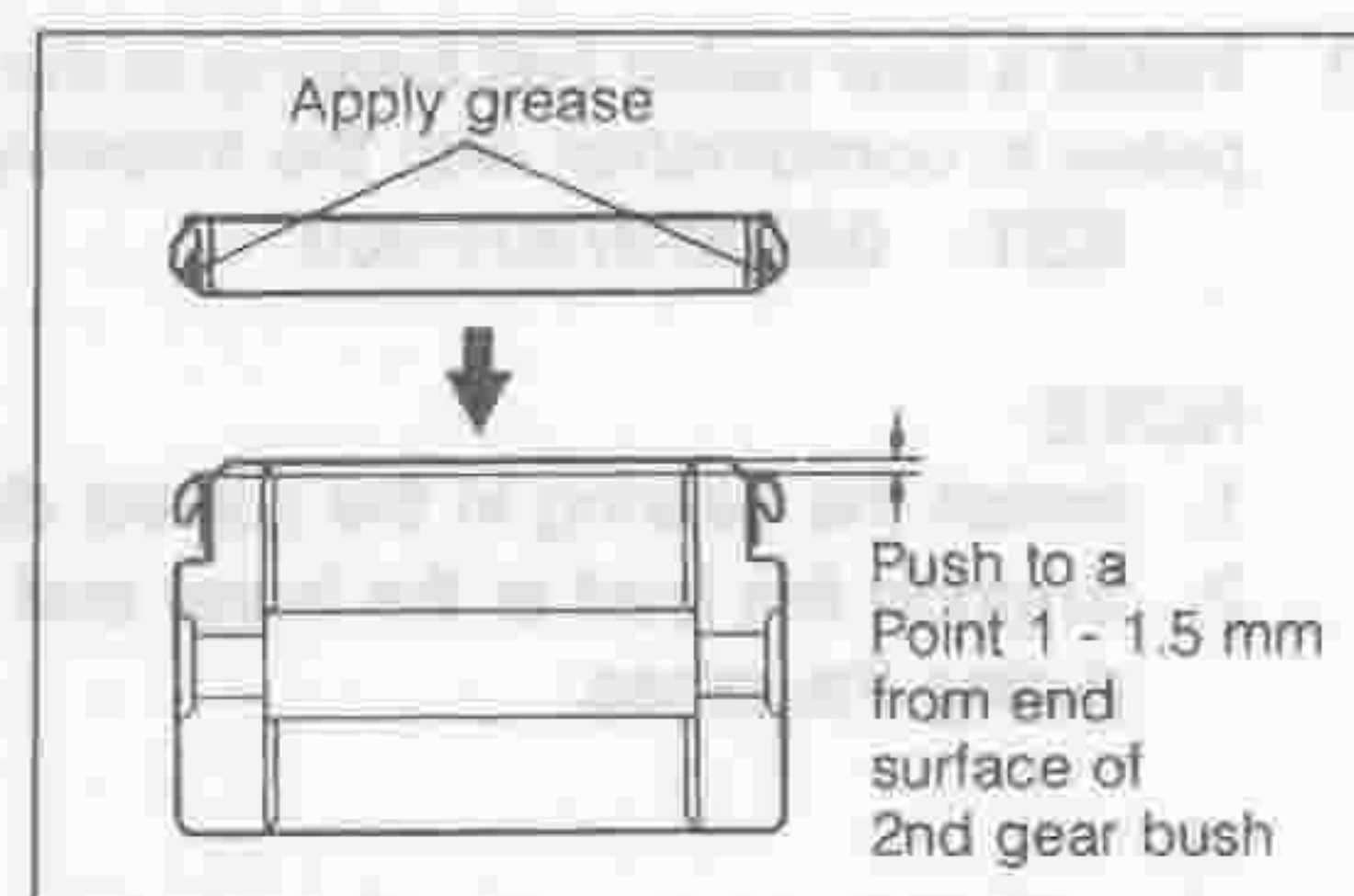


LMT00081-00079

6. Install the 3rd gear bush with friction dumper and 3rd gear to the output shaft.
7. Drive the friction damper to the 2nd gear bush.

NOTE:

1. Drive the friction damper in the correct direction.
(See the right figure.)
2. Apply multi-purpose grease (NLGI No. 2) [DAIHATSU MP grease: 999-2102-8483-00] to the whole peripheral inner section of the friction damper lip.
(See the right figure.)
3. Drive the friction damper to a position 1 - 1.5 mm (0.04 - 0.06 inch) from the end surface of the 2nd gear bush.



LMT00082-00080

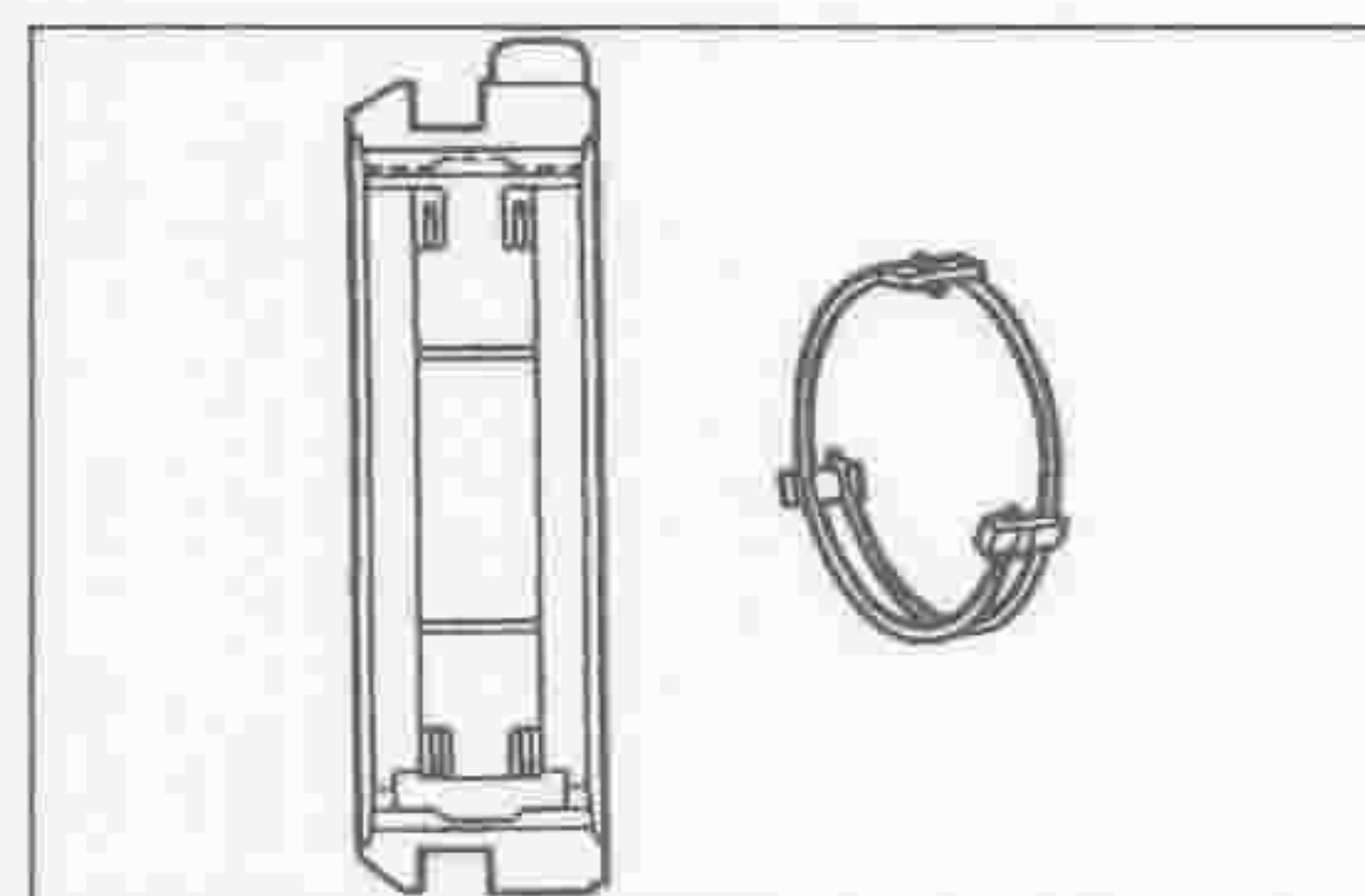
8. Install the 2nd & 3rd gear thrust washer, 2nd gear bush with friction damper and 2nd gear to the output shaft.
(See the step 8 in DISASSEMBLY procedure.)

LMT00083-00000

9. Install the following parts to the output shaft; 2nd gear synchronizer ring, 1st & 2nd synchronizer hub, synchromesh shifting keys, synchromesh shifting key springs, reverse gear and 1st gear synchronizer ring.

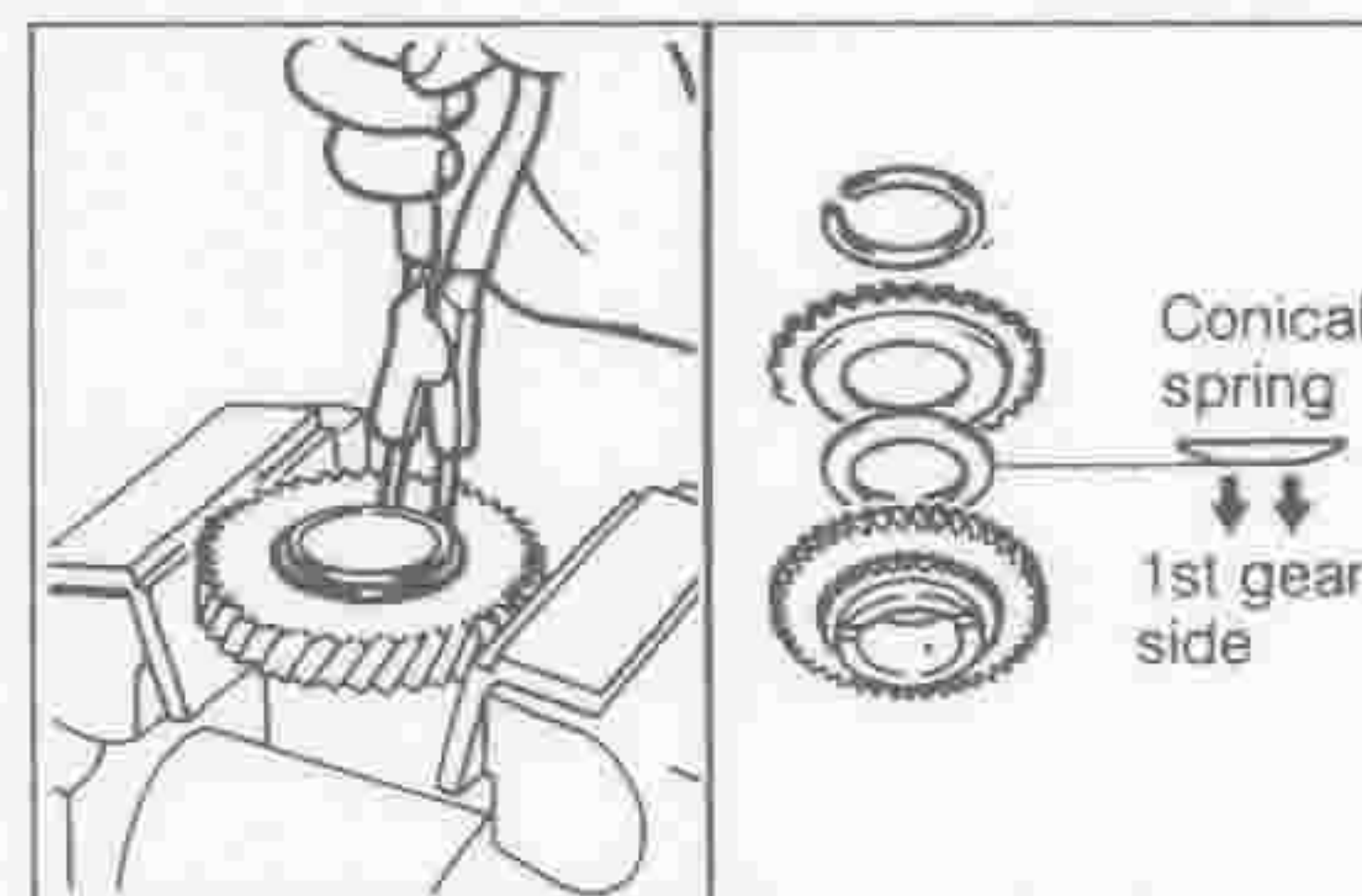
NOTE:

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



LMT00084-00081

10. Install the sub gear to the 1st gear.



LMT00085-00082

11. Install the following parts to the output shaft; 1st gear bearing inner race, 1st needle roller bearing and 1st gear.
12. Install the 1st gear thrust washer to the output shaft.

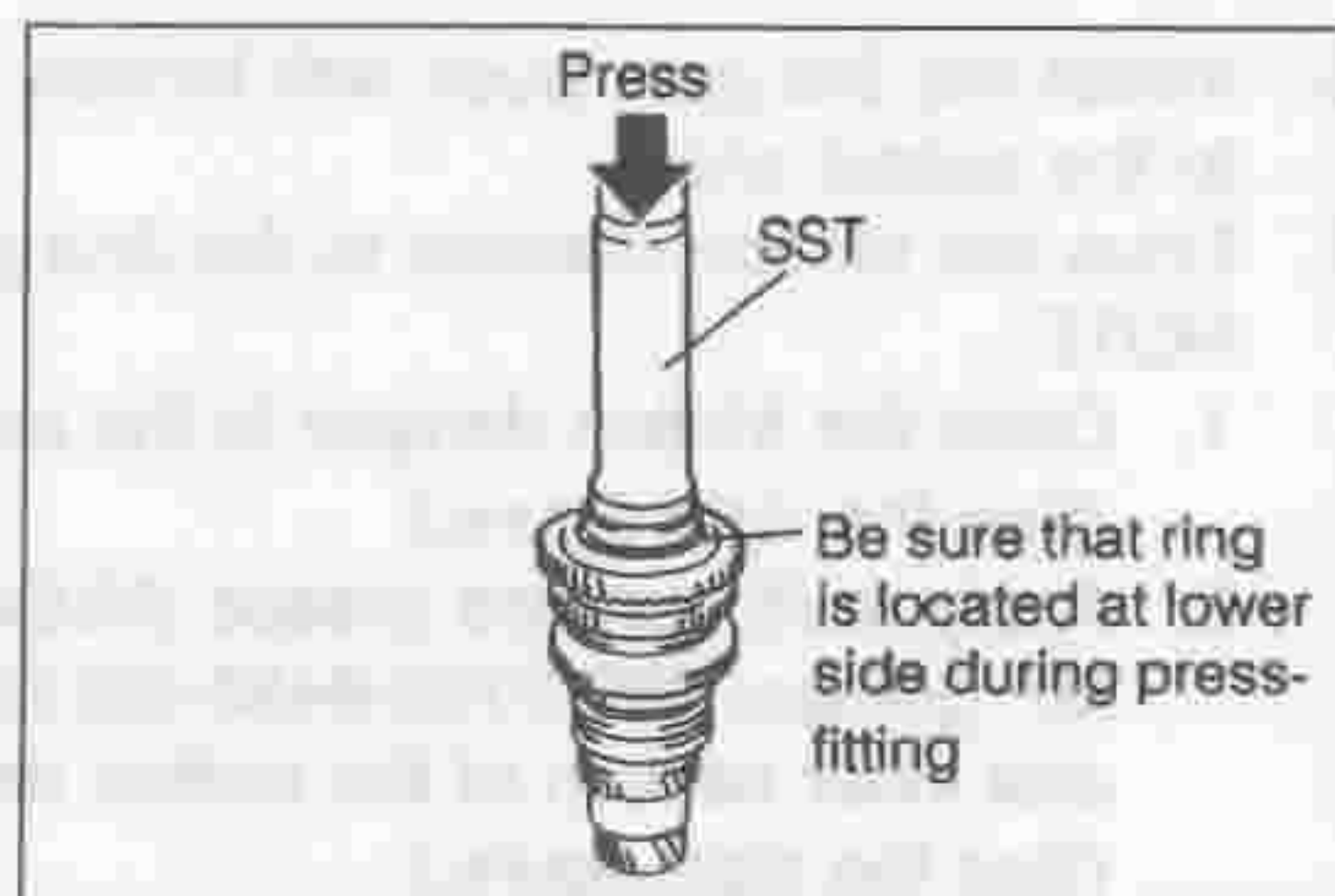
LMT00086-00000

13. Install a new radial ball bearing to the output shaft, using a press in combination with the following SST.

SST: 09309-87201-000

NOTE:

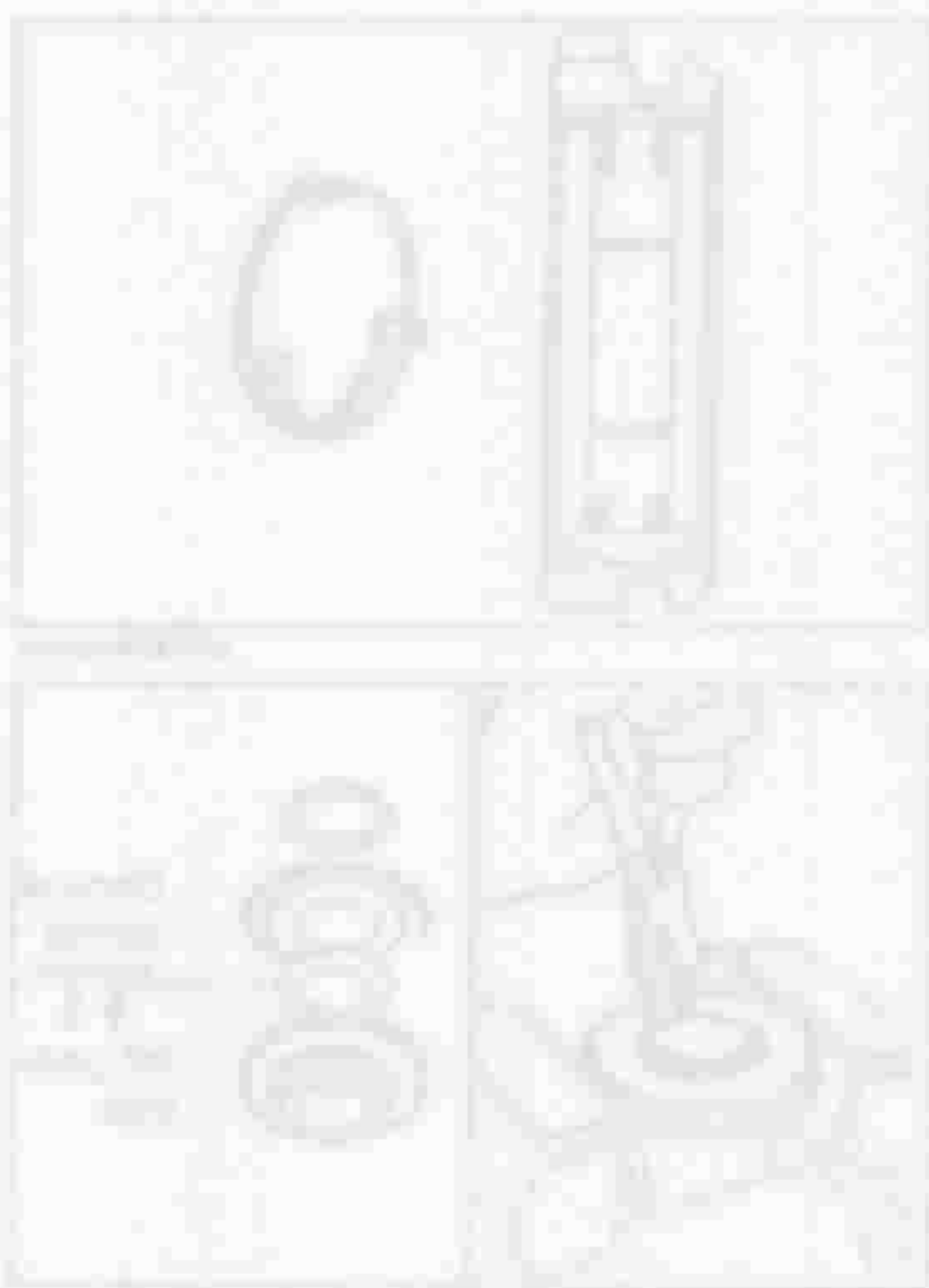
1. Install the bearing in the correct direction.
2. Support the load at the lower end of the output shaft during the press.



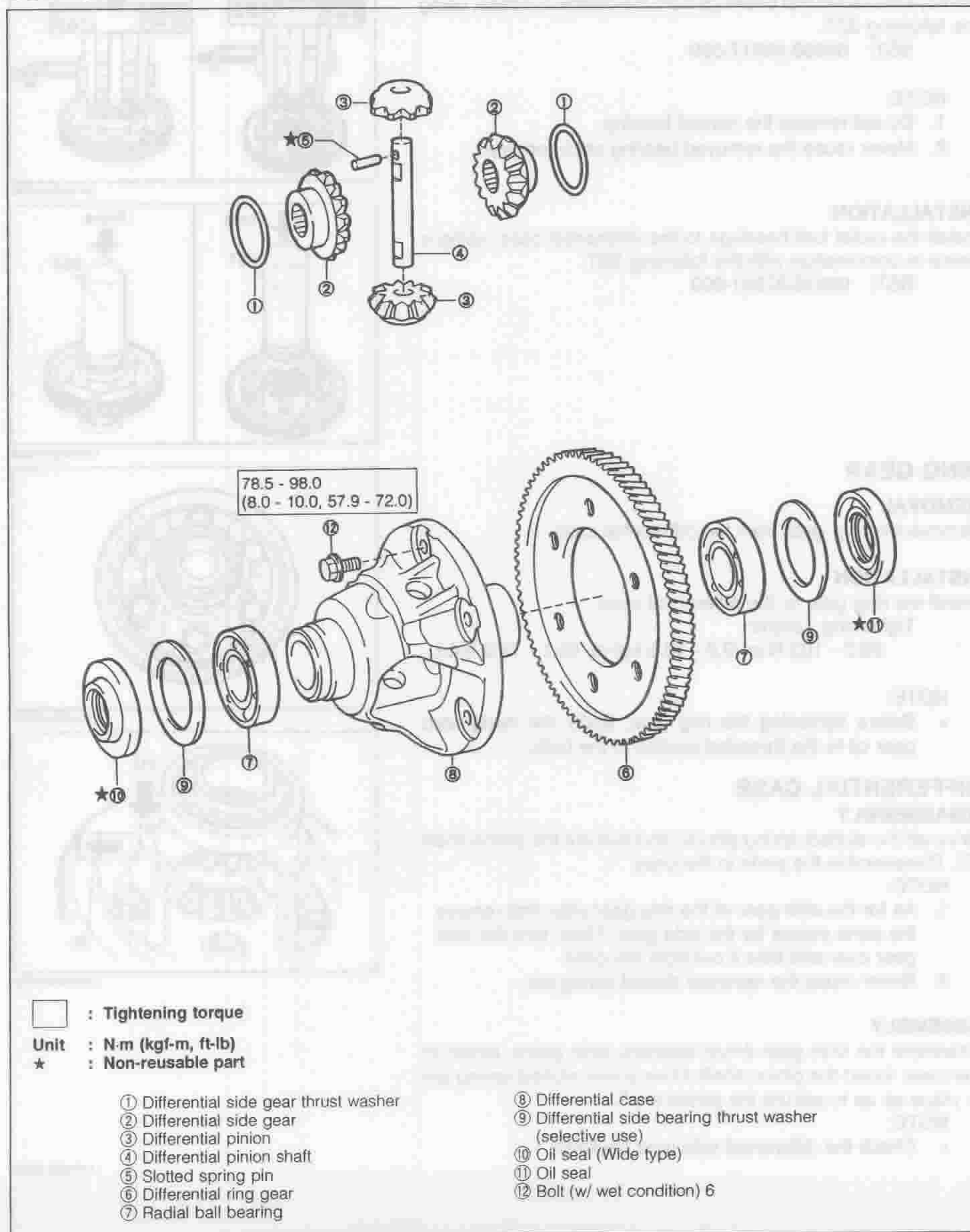
LMT00087-00083

14. Check each gear for its end play.

LMT00088-00000



DIFFERENTIAL COMPONENTS



BEARING

REMOVAL

Remove the radial ball bearings from the differential case, using the following SST.

SST: 09950-20017-000

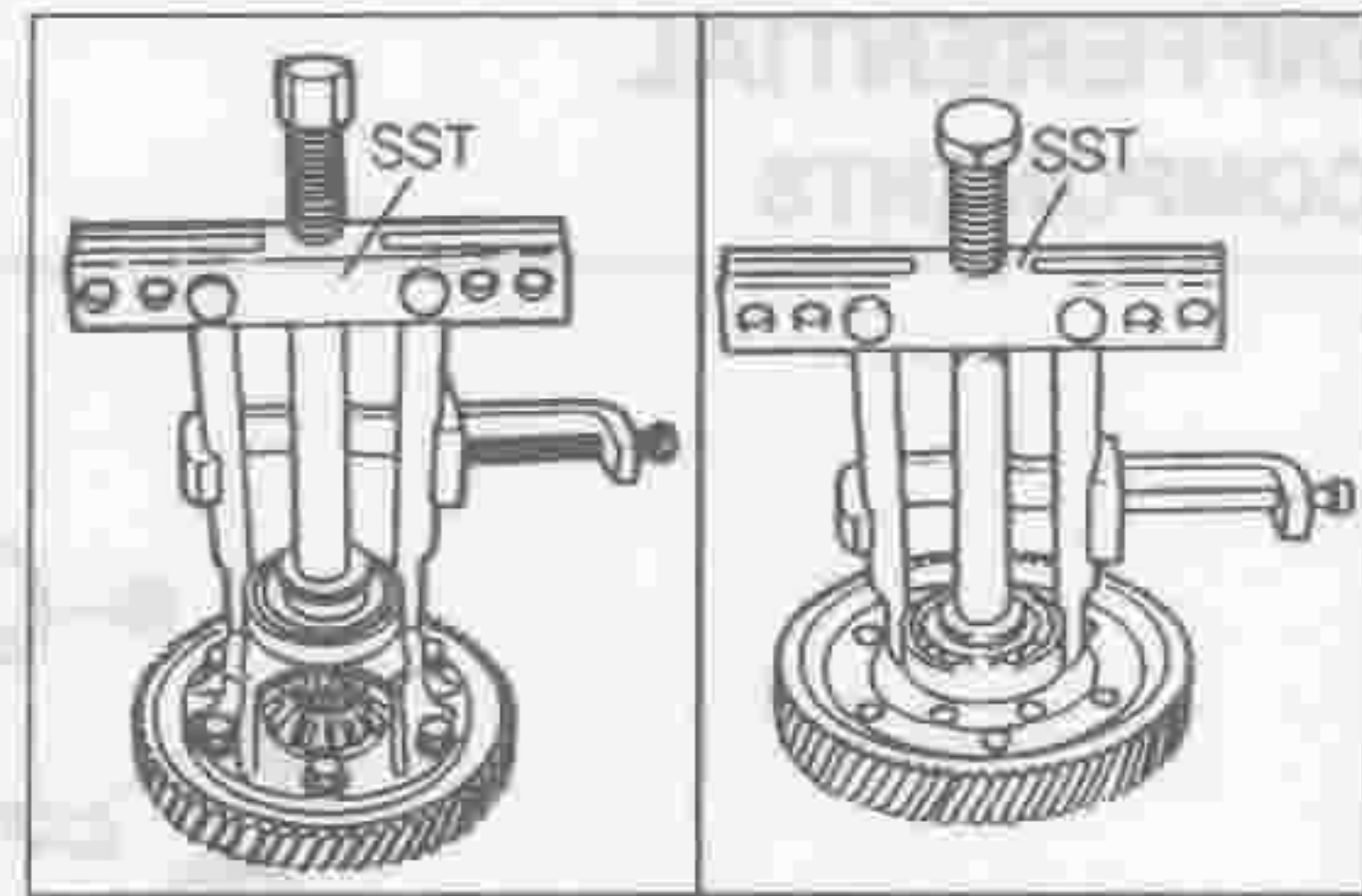
NOTE:

1. Do not remove the normal bearing.
2. Never reuse the removed bearing once removed.

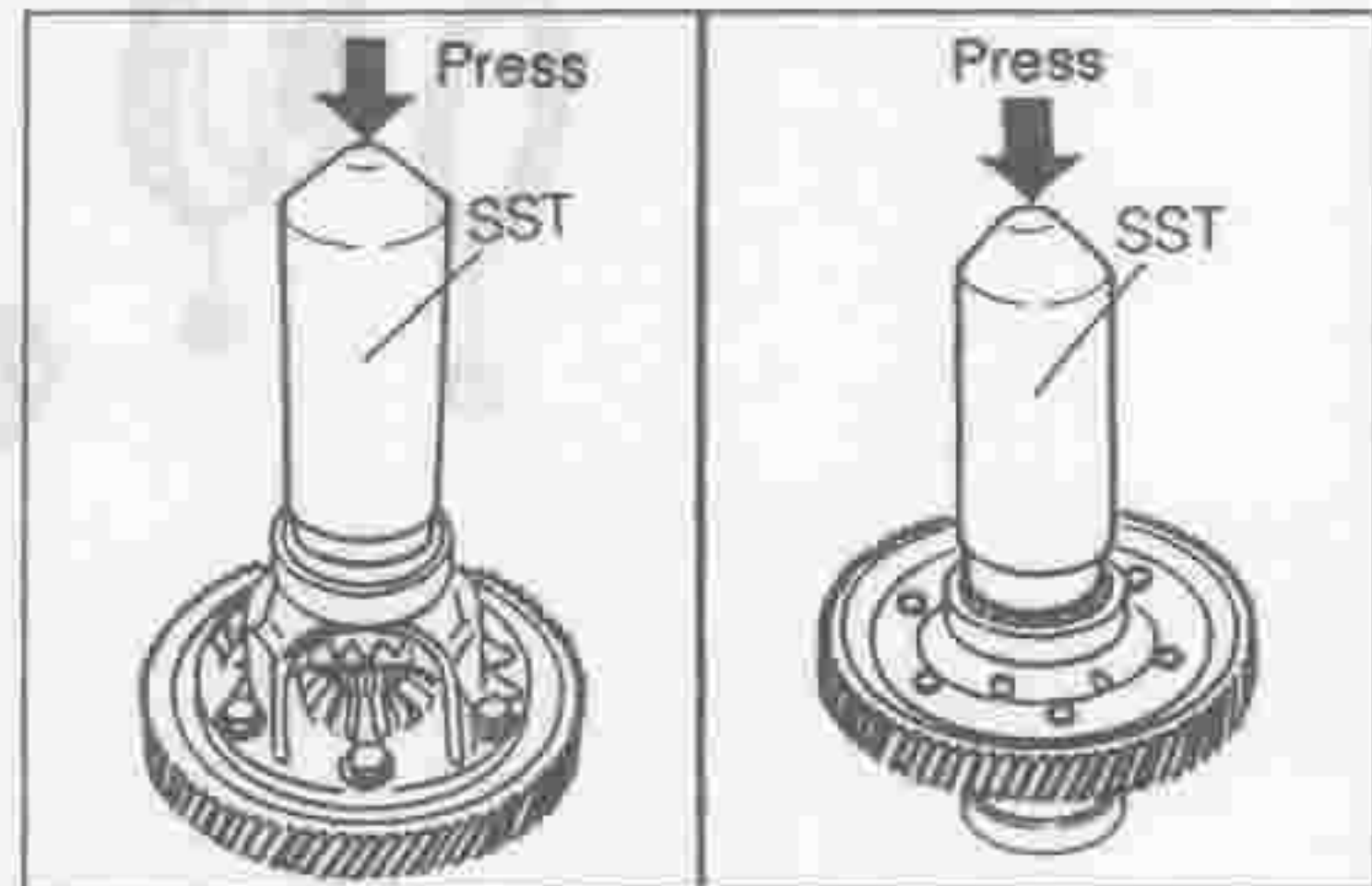
INSTALLATION

Install the radial ball bearings to the differential case, using a press in combination with the following SST.

SST: 09618-87301-000



LMT00090-00085



LMT00091-00085

RING GEAR

REMOVAL

Remove the ring gear from the differential case.

INSTALLATION

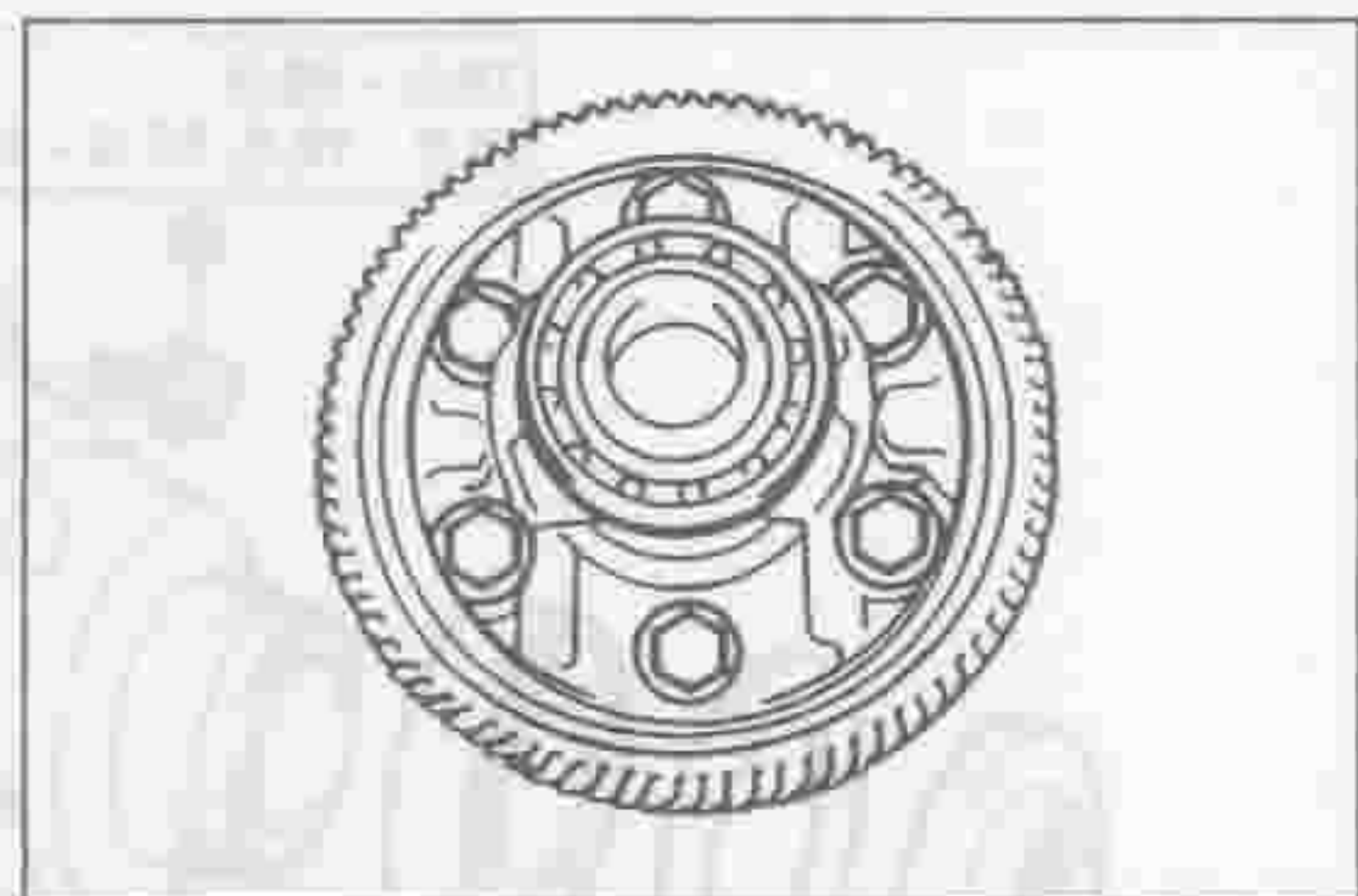
Install the ring gear to the differential case.

Tightening Torque:

88.2 - 103 N·m (9.0 - 10.5 kgf-m, 65.1 - 75.9 ft-lb)

NOTE:

- Before tightening the ring gear, apply the designated gear oil to the threaded section of the bolts.



LMT00092-00087

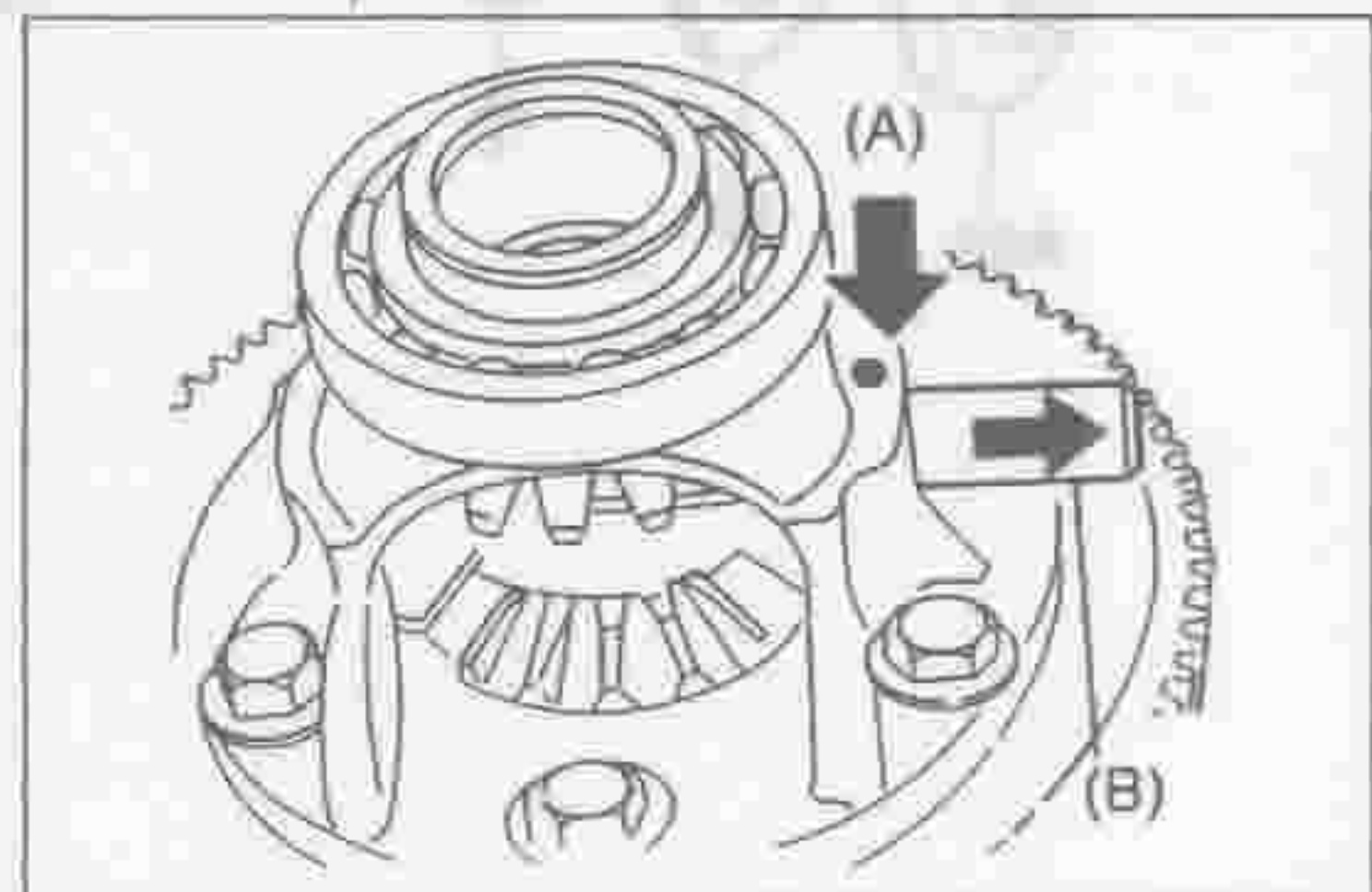
DIFFERENTIAL CASE

DISASSEMBLY

Drive off the slotted spring pin (A) and pull out the pinion shaft (B). Disassemble the parts in the case.

NOTE:

1. As for the side gear at the ring gear side, first remove the parts except for the side gear. Then, turn the side gear over and take it out from the case.
2. Never reuse the removed slotted spring pin.



LMT00093-00088

ASSEMBLY

Assemble the side gear thrust washers, side gears, pinion in the case. Insert the pinion shaft. Drive a new slotted spring pin in place so as to secure the pinion shaft.

NOTE:

- Check the differential side gear backlash.

LMT00094-00000

INSPECTION OF MANUAL TRANSMISSION

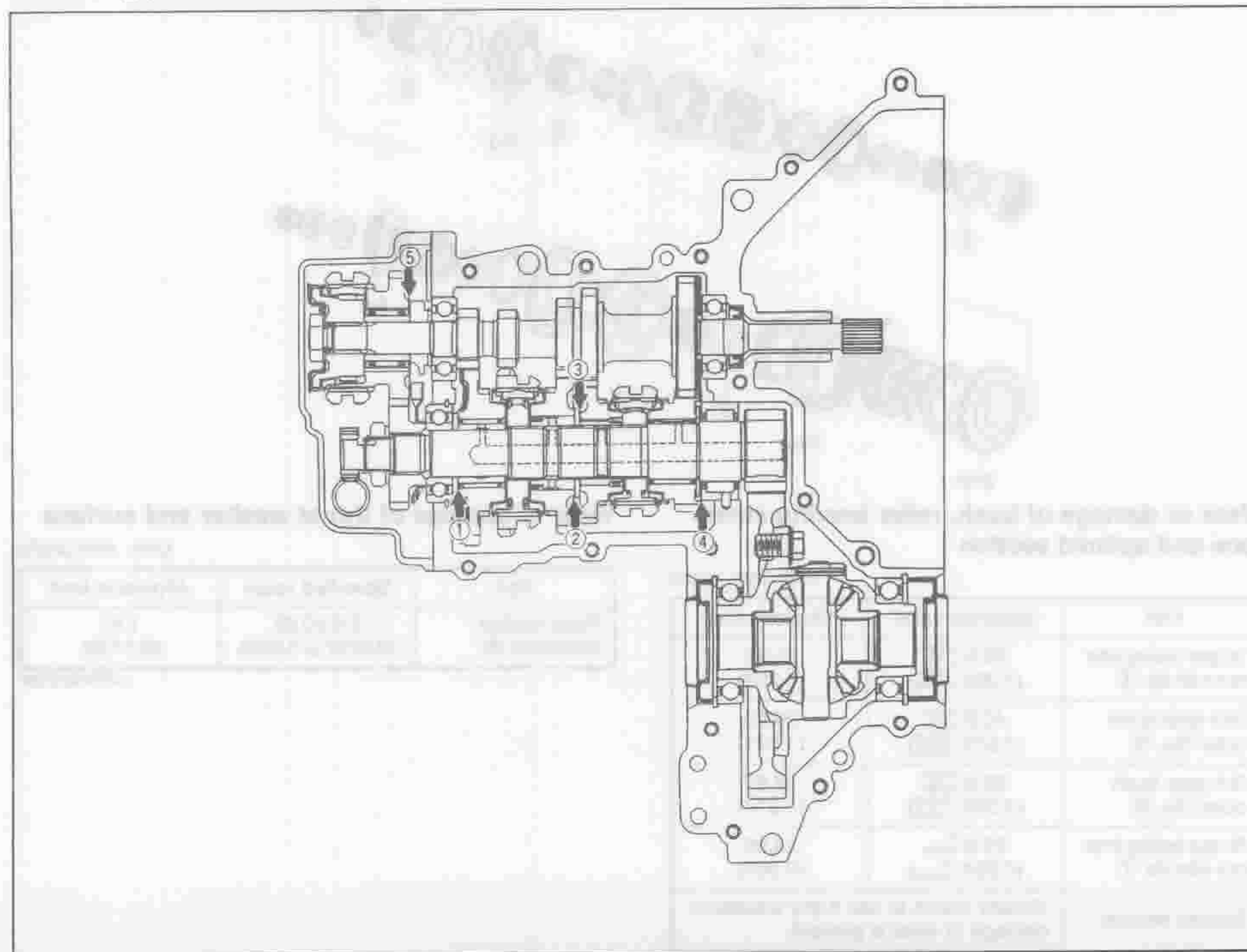
Backlash and end play of each gear

Unit: mm (inch)

Backlash	1st & 2nd gear	0.06 - 0.195 (0.0024 - 0.0077)	0.25 (0.0098)
	3rd & 4th gear	0.06 - 0.190 (0.0024 - 0.0075)	0.25 (0.0098)
	Reverse gear	0.06 - 0.20 (0.0024 - 0.0079)	0.25 (0.0098)
	5th gear	0.06 - 0.20 (0.0024 - 0.0079)	0.25 (0.0098)
	Final gear	0.06 - 0.20 (0.0024 - 0.0079)	0.25 (0.0098)
	Differential side gear	0.02 - 0.20 (0.0008 - 0.0079)	0.25 (0.0098)
End play	1st ①, 2nd ②, 3rd ③ & 5th ⑤ gear	0.1 - 0.23 (0.0039 - 0.0091)	0.4 (0.0157)
	4th ④ gear	0.1 - 0.46 (0.0039 - 0.0181)	0.6 (0.0236)

LMT00095-00000

Measuring points for end play



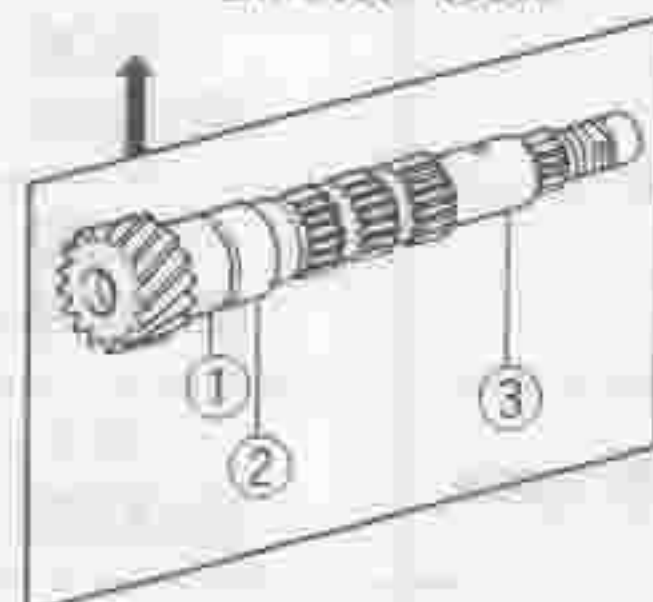
LMT00096-00089

Wear or damage of output shaft

Unit: mm (inch)

Part		Specified value	Allowable limit
Outer diameter of output shaft section contacting needle roller bearing	①	32.5 $\begin{smallmatrix} -0.009 \\ -0.025 \\ -0.0004 \\ -0.0010 \end{smallmatrix}$ (1.280)	32.46 (1.278)
	②	30.0 $\begin{smallmatrix} -0.009 \\ -0.025 \\ -0.0004 \\ -0.0010 \end{smallmatrix}$ (1.181)	29.96 (1.180)
	③	25.0 $\begin{smallmatrix} +0.017 \\ +0.002 \\ -0.0007 \\ -0.0001 \end{smallmatrix}$ (0.984)	24.98 (0.983)
Tooth surface of gear and spline		Visually check to see if any excessive damage or wear is present.	

LMT00097-00090

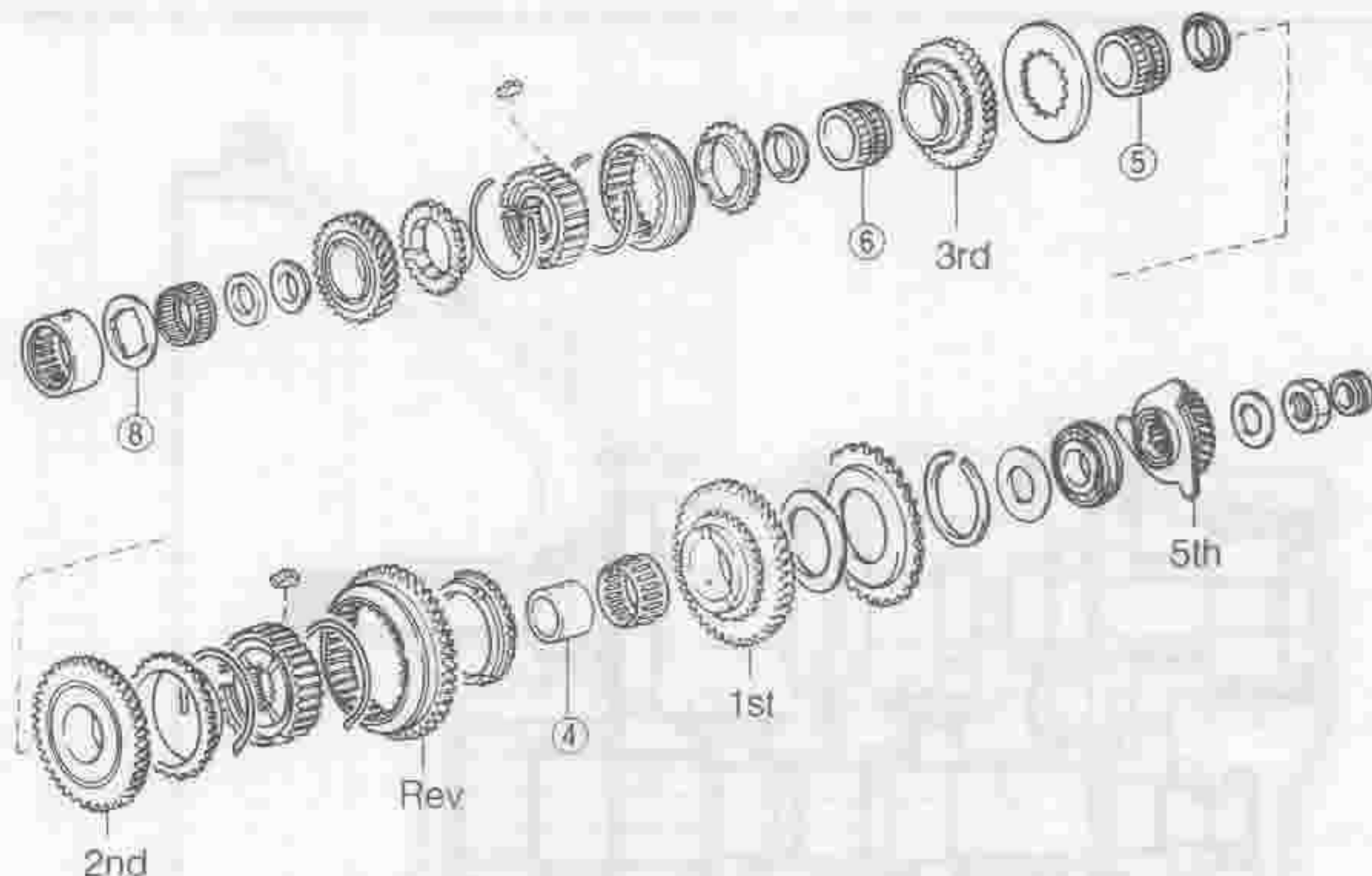
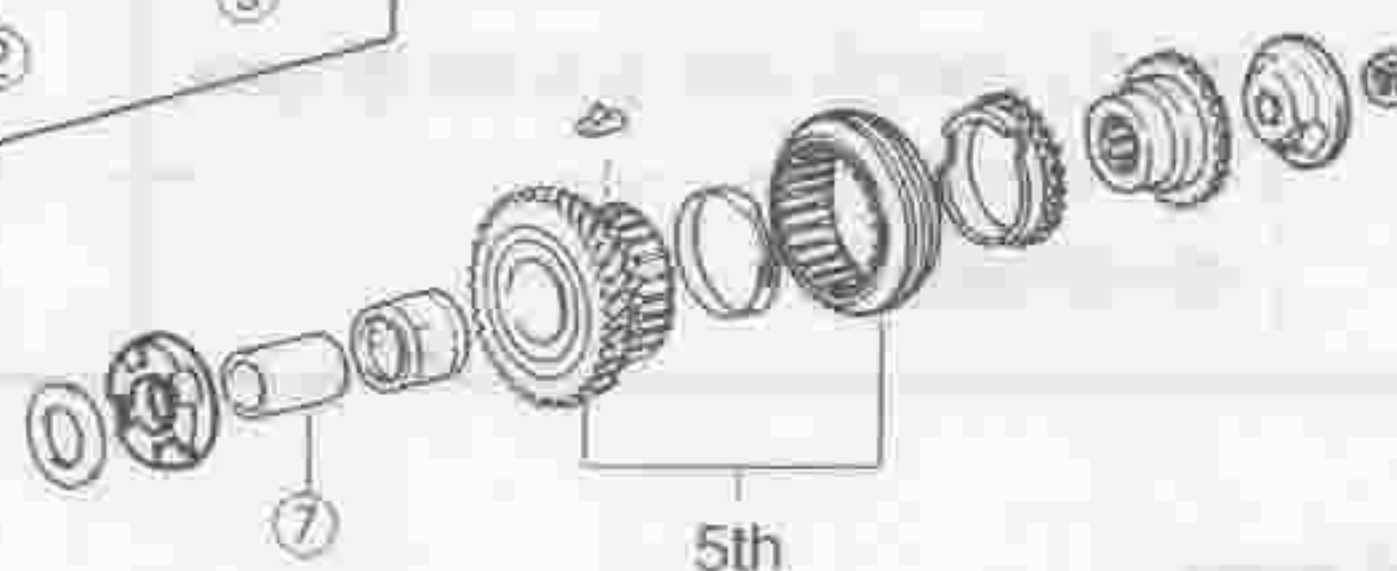
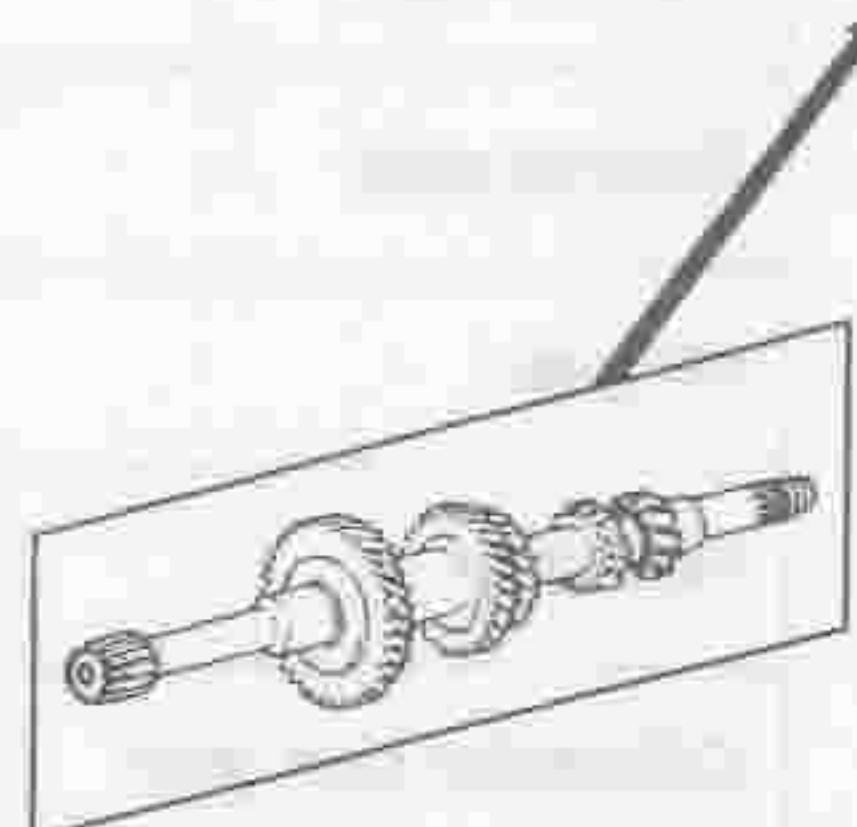


Wear or damage of input shaft

Unit: mm (inch)

Part	Specified value	Allowable limit
Tooth surface of gear and spline	Visually check to see if any excessive damage or wear is present.	

LMT00098-00090



Wear or damage of bush, roller bearing inner race and splined section

Unit: mm (inch)

Part	Specified value	Allowable limit
1st gear bearing inner race outer dia. ④	32.0 $\begin{smallmatrix} -0.009 \\ -0.025 \\ -0.0004 \\ -0.0010 \end{smallmatrix}$ (1.260)	31.96 (1.258)
2nd gear bush outer dia. ⑤	40.0 $\begin{smallmatrix} -0.040 \\ -0.070 \\ -0.0018 \\ -0.0028 \end{smallmatrix}$ (1.575)	39.89 (1.571)
3rd gear bush outer dia. ⑥	35.0 $\begin{smallmatrix} -0.040 \\ -0.080 \\ -0.0018 \\ -0.0031 \end{smallmatrix}$ (1.378)	34.89 (1.374)
5th gear bearing inner race outer dia. ⑦	25.0 $\begin{smallmatrix} -0 \\ -0.013 \\ -0 \\ -0.0005 \end{smallmatrix}$ (0.984)	24.98 (0.984)
Splined section	Visually check to see if any excessive damage or wear is present.	

LMT00099-00090

Wear or damage of thrust washer end surface

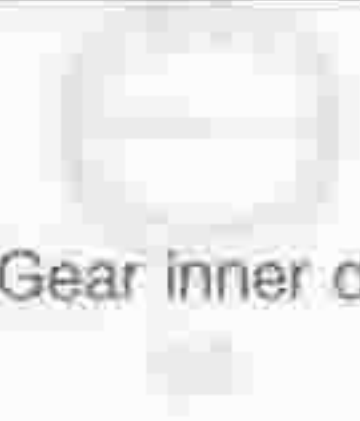
Unit: mm (inch)

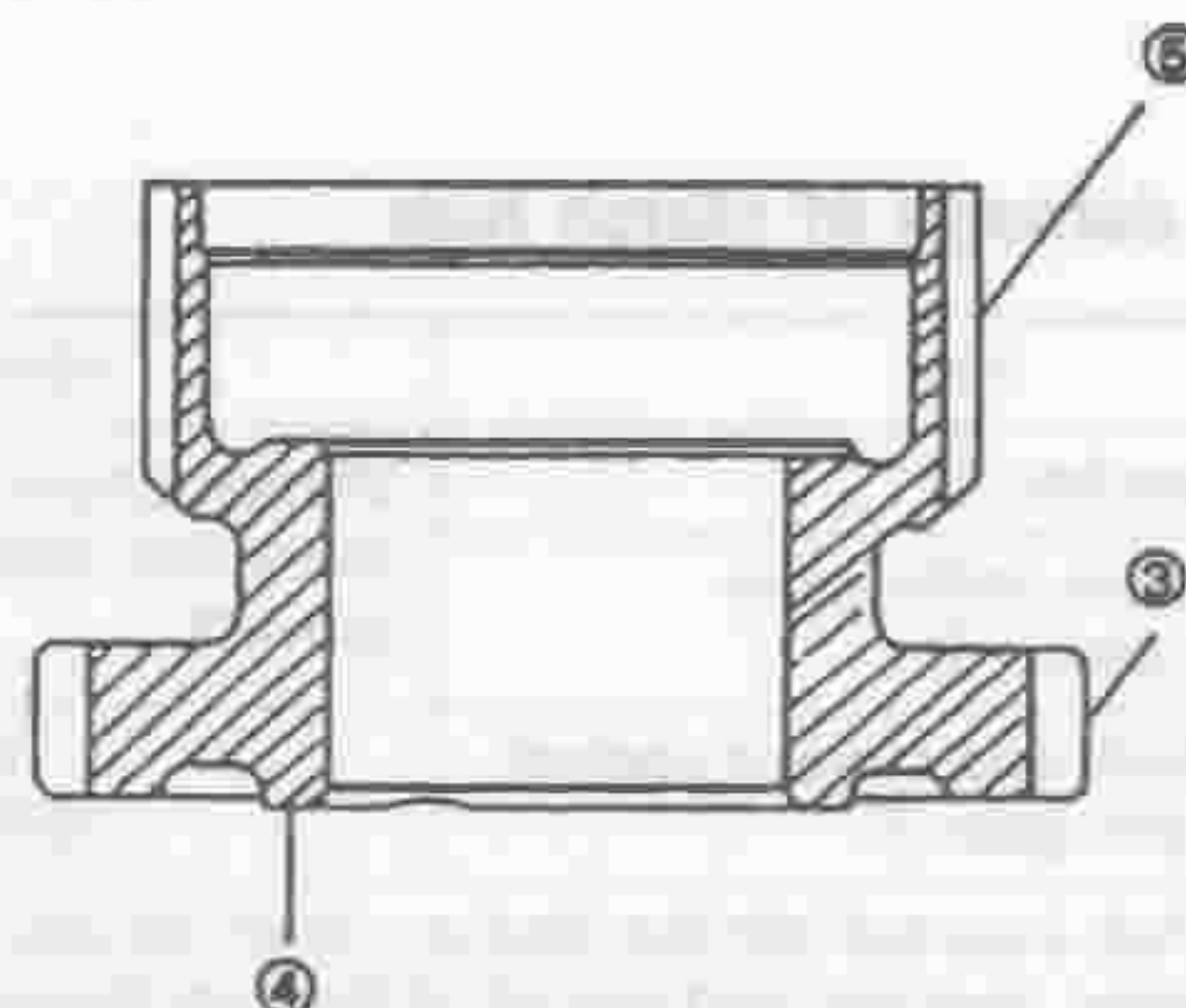
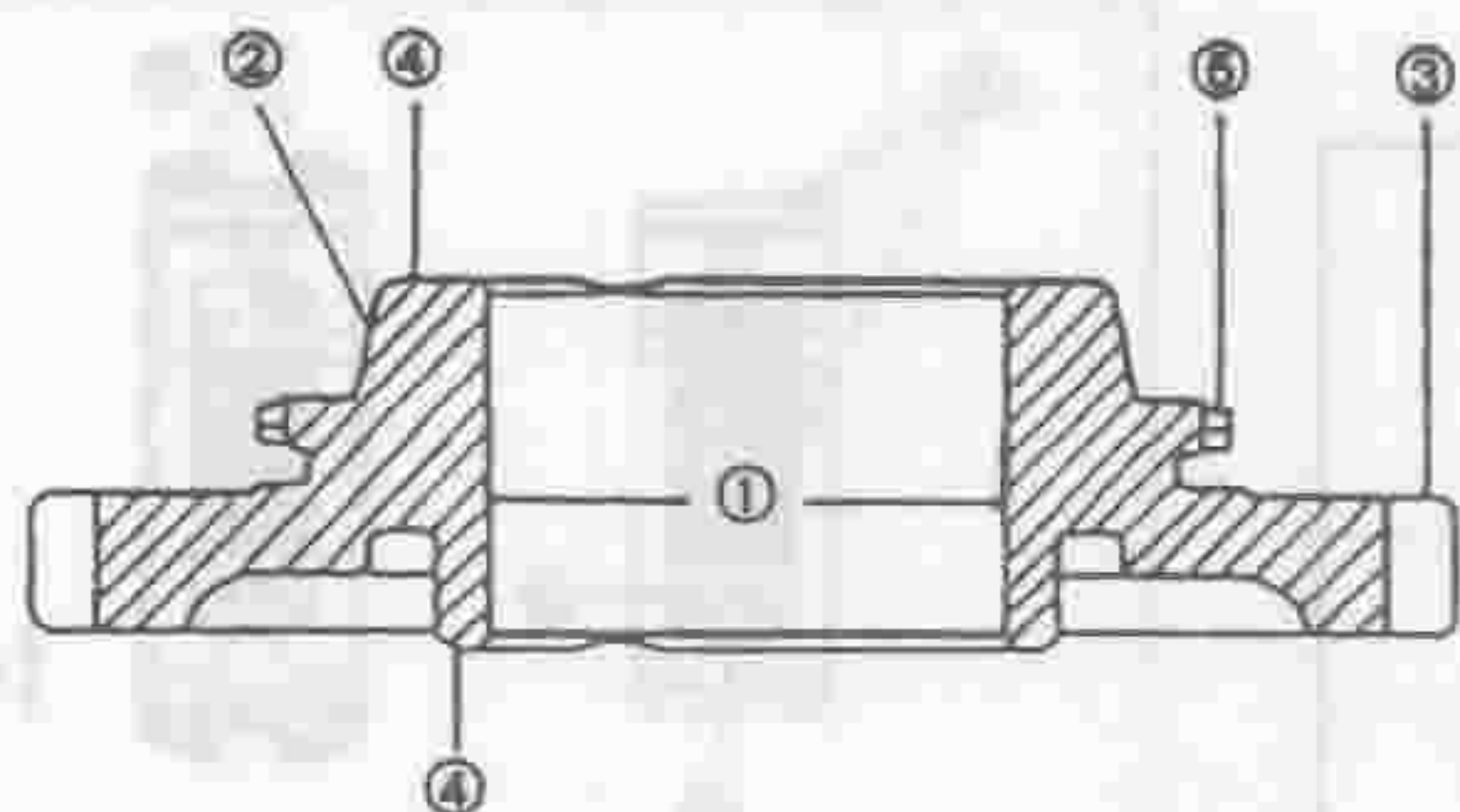
Part	Specified value	Allowable limit
Plate washer thickness ⑧	2.0 ± 0.05 (0.0787 ± 0.0020)	1.85 (0.0728)

LMT00100-00090

Wear or damage of each gear

Unit: mm (inch)

Part		Specified value		Allowable limit	
		Inner dia.	Oil clearance	Inner dia.	Oil clearance
 Gear inner dia. ①	1st	$37.0^{+0.025}_{-0} (1.457^{+0.0010}_{-0})$	—	37.04 (1.458)	—
	2nd	$40.0^{+0.025}_{-0} (1.575^{+0.0010}_{-0})$	0.04 - 0.10 (0.0016 - 0.0039)	40.04 (1.576)	0.15 (0.0059)
	3rd	$35.0^{+0.025}_{-0} (1.378^{+0.0010}_{-0})$	0.04 - 0.10 (0.0016 - 0.0039)	40.04 (1.576)	0.15 (0.0059)
	4th	$35.0^{+0.025}_{-0} (1.378^{+0.0010}_{-0})$	—	35.04 (1.380)	—
Tapered Section ②		Visually check to see if any excessive damage or wear is present.			
Gear Section ③					
Both side surface of gear ④					
Hub-to-sleeve fitting section ⑤		Check to see if any excessive looseness, broken-off part or sagging is present.			
Fitting condition of output shaft 5th gear oil slinger		Check to see if any looseness of staking position			

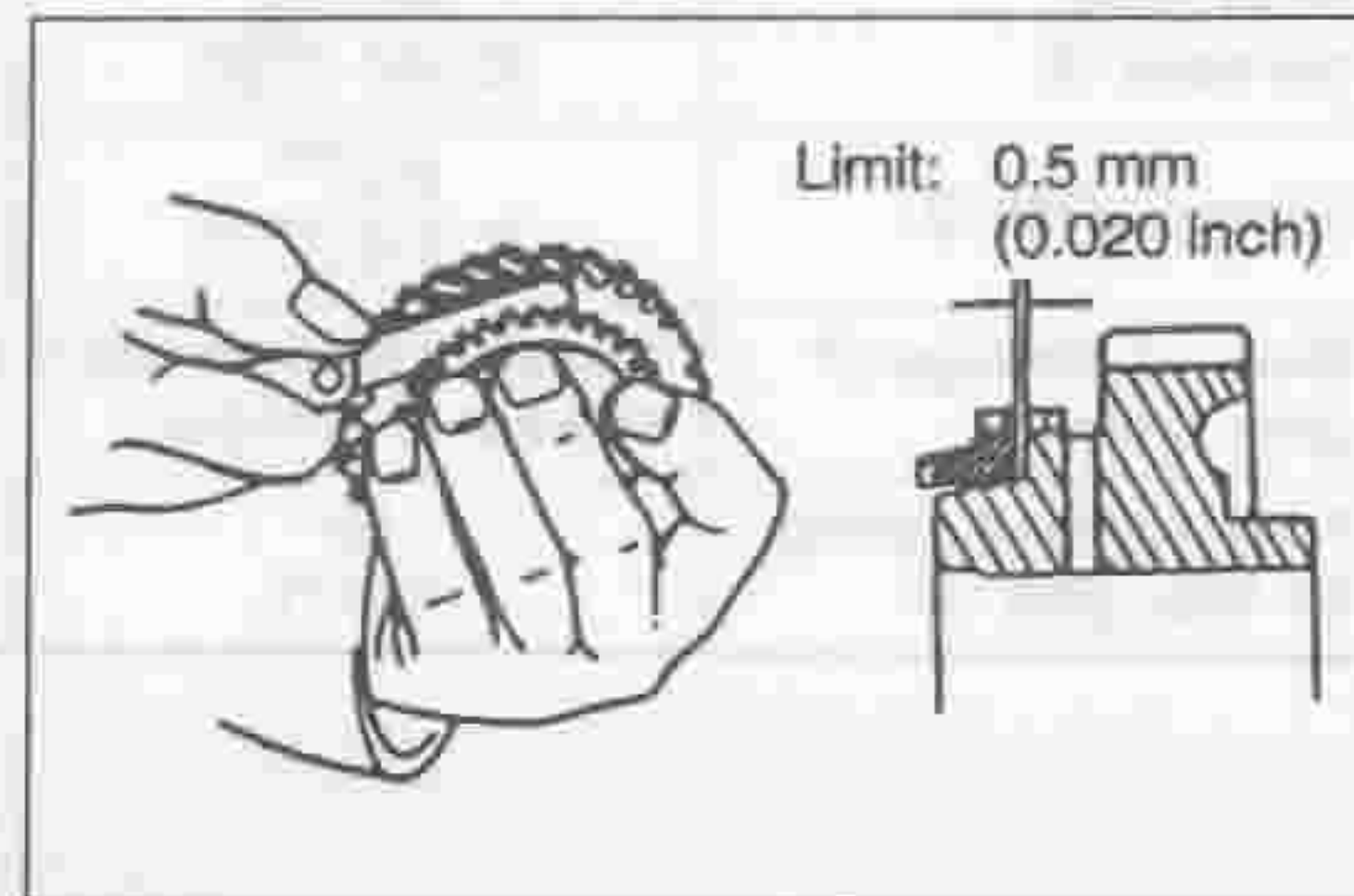


LMT00101-00091

Wear or damage of synchronizer ring

Unit: mm (inch)

Part	Specified value	Allowable limit
Synchronizer ring-to-gear clearance	0.85 - 1.45 (0.0335 - 0.0571)	0.5 (0.020)
Damage of inner tapered section	Visually check to see if any excessive damage is present.	
Damage of spline		

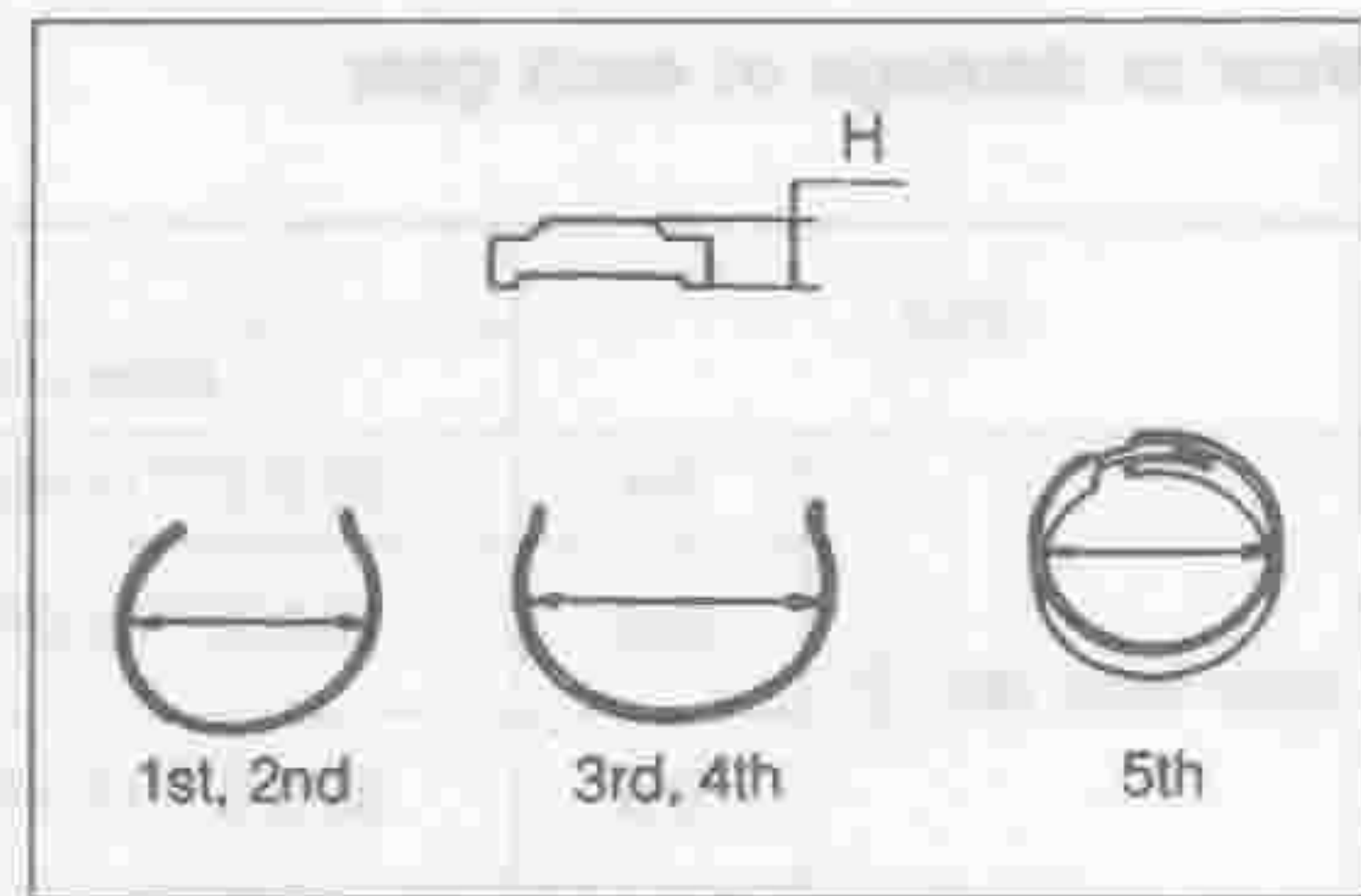


LMT00102-00092

Wear or damage of synchromesh shifting key and key spring

Unit: mm (inch)

Part		Specified value	Allowable limit
Key (Dimension H)	1st, 2nd	5.1 ± 0.1 (0.201 ± 0.0039)	4.7 (0.185)
	3rd, 4th, 5th	$5.0^{+0.2}_{-0.4}$ ($0.197^{+0.0079}_{-0.0158}$)	4.3 (0.169)
Spring outer dia.	1st, 2nd	69.0 ± 1 (2.717 ± 0.039)	67 (2.638)
	3rd, 4th	59.0 ± 1 (2.323 ± 0.039)	57 (2.244)
	5th	51.0 ± 1 (2.0079 ± 0.039)	49 (1.929)

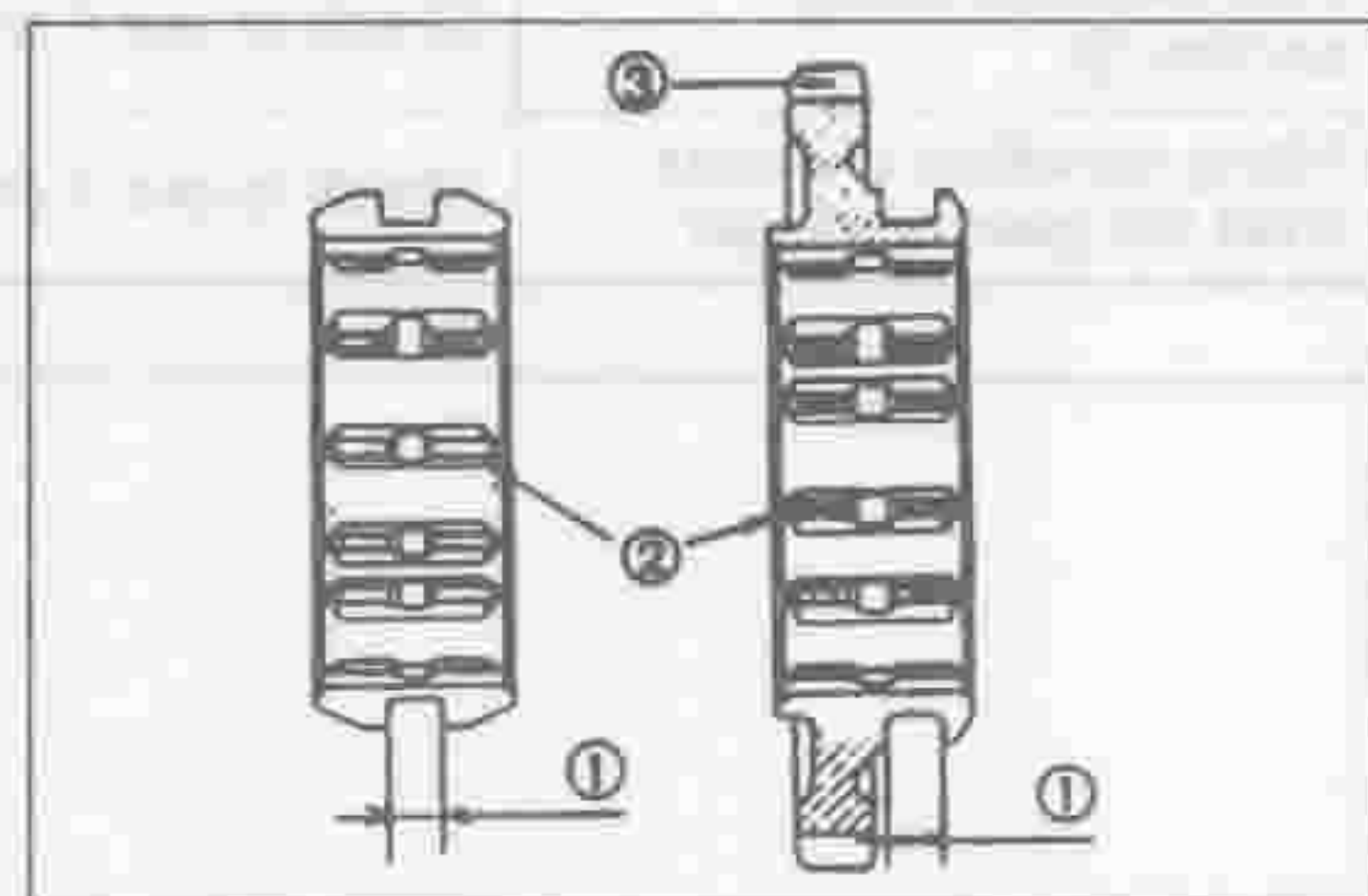


LMT00103-00093

Wear or damage of hub sleeve and reverse gear

Unit: mm (inch)

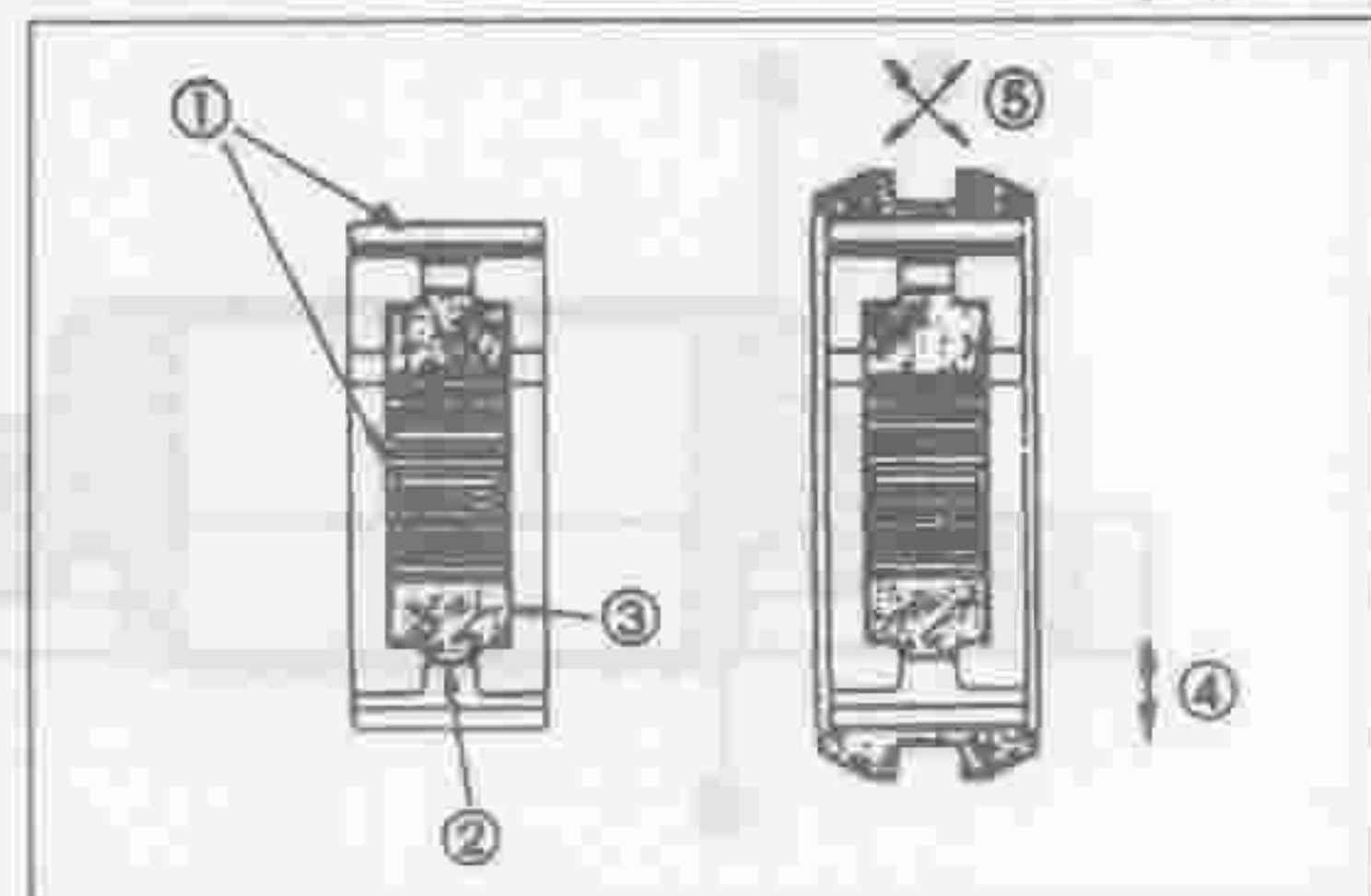
Part	Specified value	Allowable limit
Shift fork groove width ①	$7.0^{+0.12}_{-0.05}$ ($0.276^{+0.0047}_{-0.0020}$)	7.3 (0.287)
Gear-fitting section ②	Visually check to see if any excessive damage, wear, or broken-off part or sagging is present.	
Reverse gear tooth surface ③		



LMT00104-00094

Wear or damage of clutch hub

Part	Allowable limit
Splined section ①	Visually check to see if any excessive damage or wear is present.
Synchromesh shifting key inserting sleeve ②	
Wear of both end surface contact position with gear ③	0.2 mm (0.0079 inch)
With the hub inserted into the sleeve, check for any looseness in the up-and-down direction and any tilt of the hub sleeve. ④, ⑤	

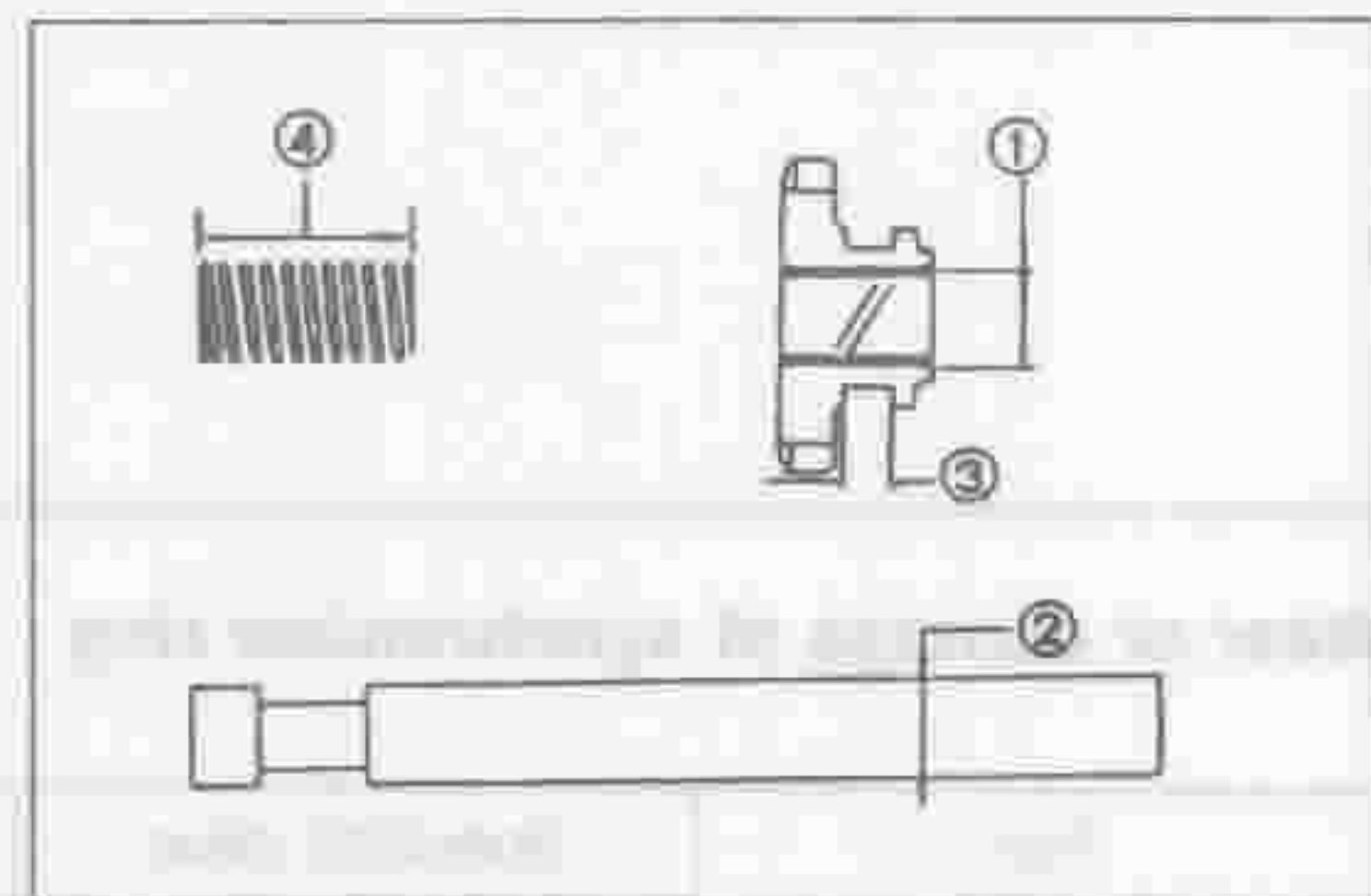


LMT00105-00095

Wear or damage of reverse idler gear and shaft

Unit: mm (inch)

Part	Specified value	Allowable limit
Bush inner diameter ①	$15^{+0.027}_{-0}$ ($0.591^{+0.0011}_{-0}$)	15.05 (0.592)
Shaft outer diameter ②	$15^{+0.032}_{-0.059}$ ($0.591^{+0.0013}_{-0.0023}$)	14.90 (0.587)
Groove width ③	$8^{+0.058}_{-0}$ ($0.315^{+0.0023}_{-0}$)	8.2 (0.322)
Wear or damage of gear tooth	Visually check to see if any excessive damage or wear is present.	
Free length of spring for idler gear ④	55 (2.17)	53 (2.09)



LMT00106-00096

Damage or wear of shift fork shaft

Part	Inspection criteria
Ball locking section of fork shaft and interlock section ①	Visually check to see if any excessive damage or wear is present.

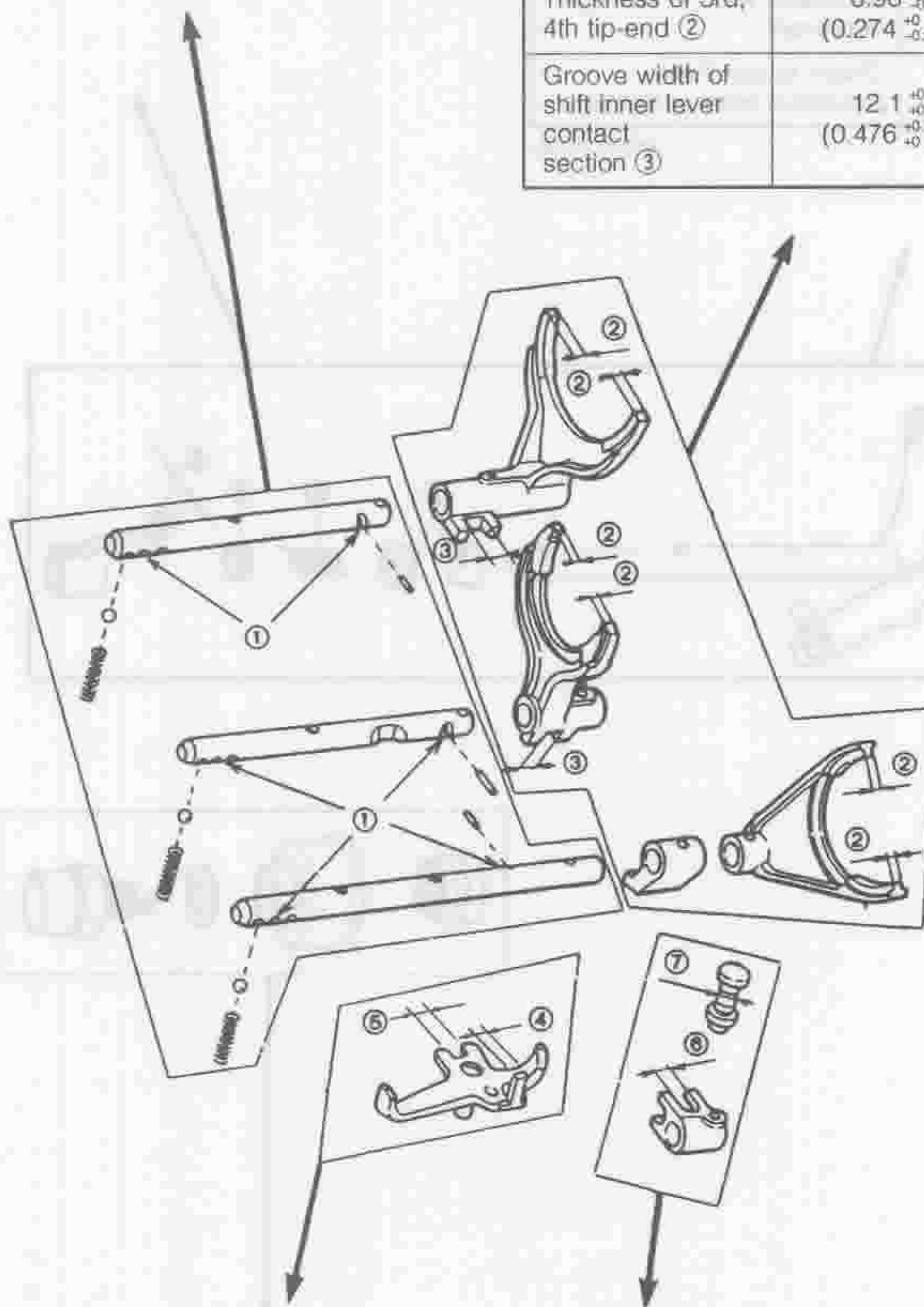
LMT00107-00097

Damage or wear of shift fork & reverse shift heads

Unit: mm (inch)

Part	Specified value	Allowable limit
Thickness of fork tip-end ②	$7.0^{+0}_{-0.4}$ (0.276 ⁺⁰ _{-0.0157})	6.3 (0.248)
Thickness of 3rd, 4th tip-end ②	$6.96^{+0}_{-0.4}$ (0.274 ⁺⁰ _{-0.0157})	6.3 (0.248)
Groove width of shift inner lever contact section ③	$12.1^{+0.1}_{+0}$ (0.476 ^{+0.0079} ₊₀)	12.7 (0.500)

LMT00108-00097



Damage or wear of reverse shift arm

Unit: mm (inch)

Part	Specified value	Allowable limit
Contact surface with reverse idler gear ④	$8.0^{+0.08}_{-0.118}$ (0.315 ^{+0.0031} _{-0.0046})	7.7 (0.303)
Groove width of reverse shift arm pin ⑤	$9.0^{+0.043}_{+0}$ (0.354 ^{+0.0017} ₊₀)	9.2 (0.362)

LMT00109-00097

Damage or wear of reverse shift arm head & reverse shift arm pin

Unit: mm (inch)

Part	Specified value	Allowable limit
Groove width of reverse shift arm pin contact section ⑥	$9.0^{+0.1}_{+0}$ (0.354 ^{+0.0039} ₊₀)	9.1 (0.358)
Pin diameter of reverse shift arm contact section ⑦	6.5 ± 0.1 (0.256 ± 0.0039)	6.7 (0.264)

LMT00110-00097

Damage or wear of reverse restricting cam and pin holder

Part	Inspection criteria
Cam & Pin holder section ③	Check to see if any damage or wear is present.
Spring ④	Check to see if any excessive wear or damage is present.
Spring stopper ⑤	Check to see if any excessive wear or damage.

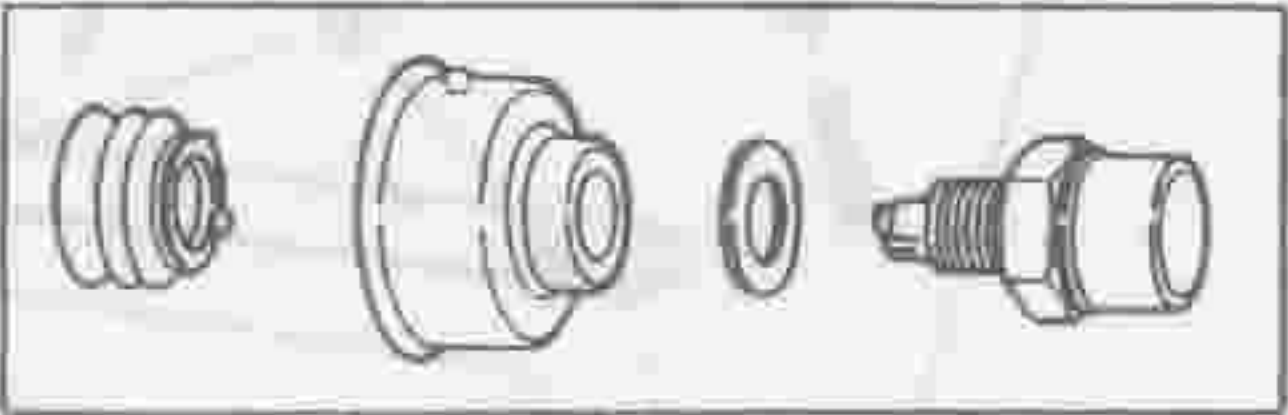
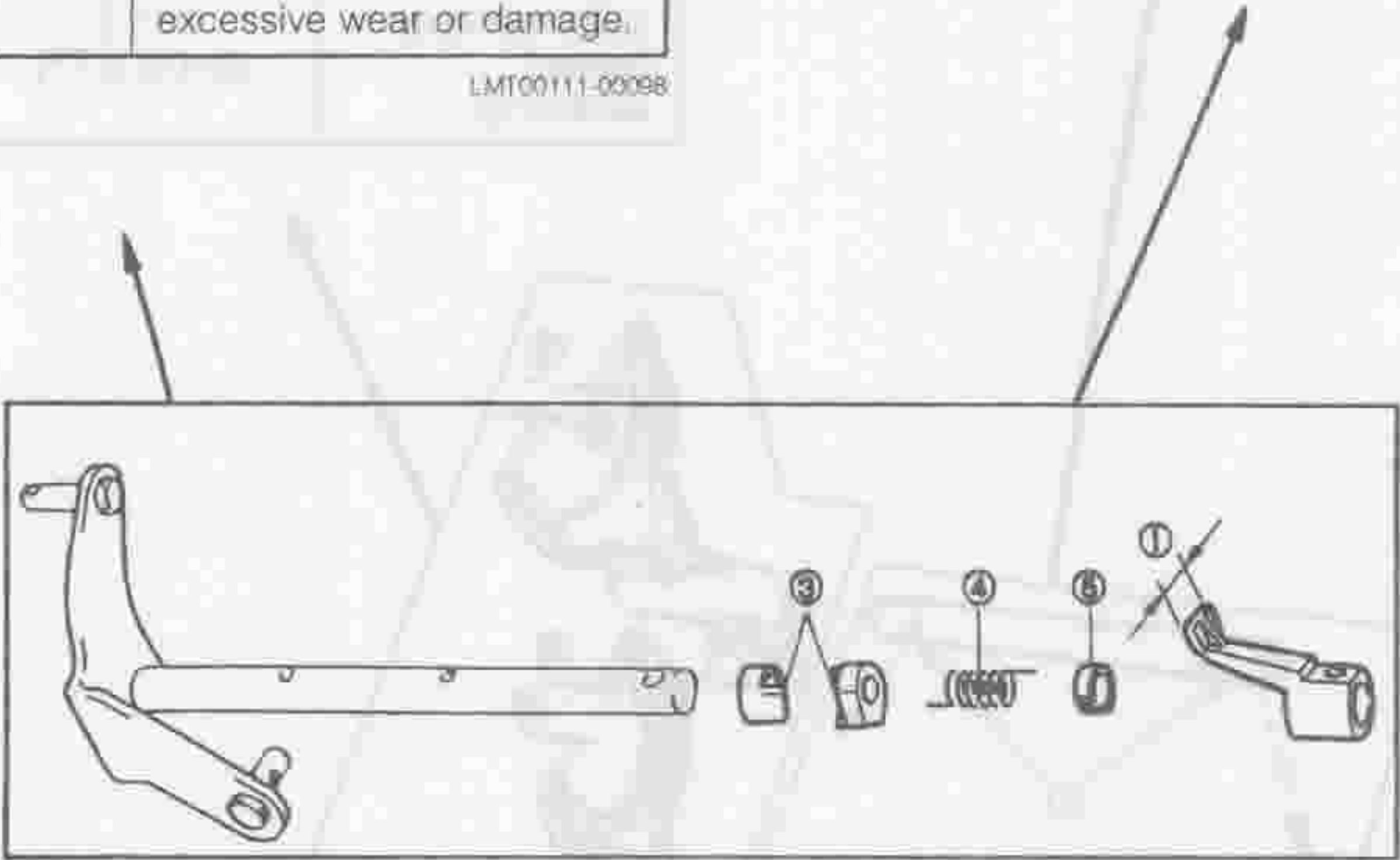
LMT00111-00098

Damage or wear of shift inner lever

Unit: mm (inch)

Part	Specified value	Allowable limit
Contact section width with shift fork ①	12.0 ⁺⁰ _{-0.1} (0.472 ⁺⁰ _{-0.0039})	11.8 (0.465)

LMT00112-00098



Oil leakage or wear of reverse restricting pin, boot

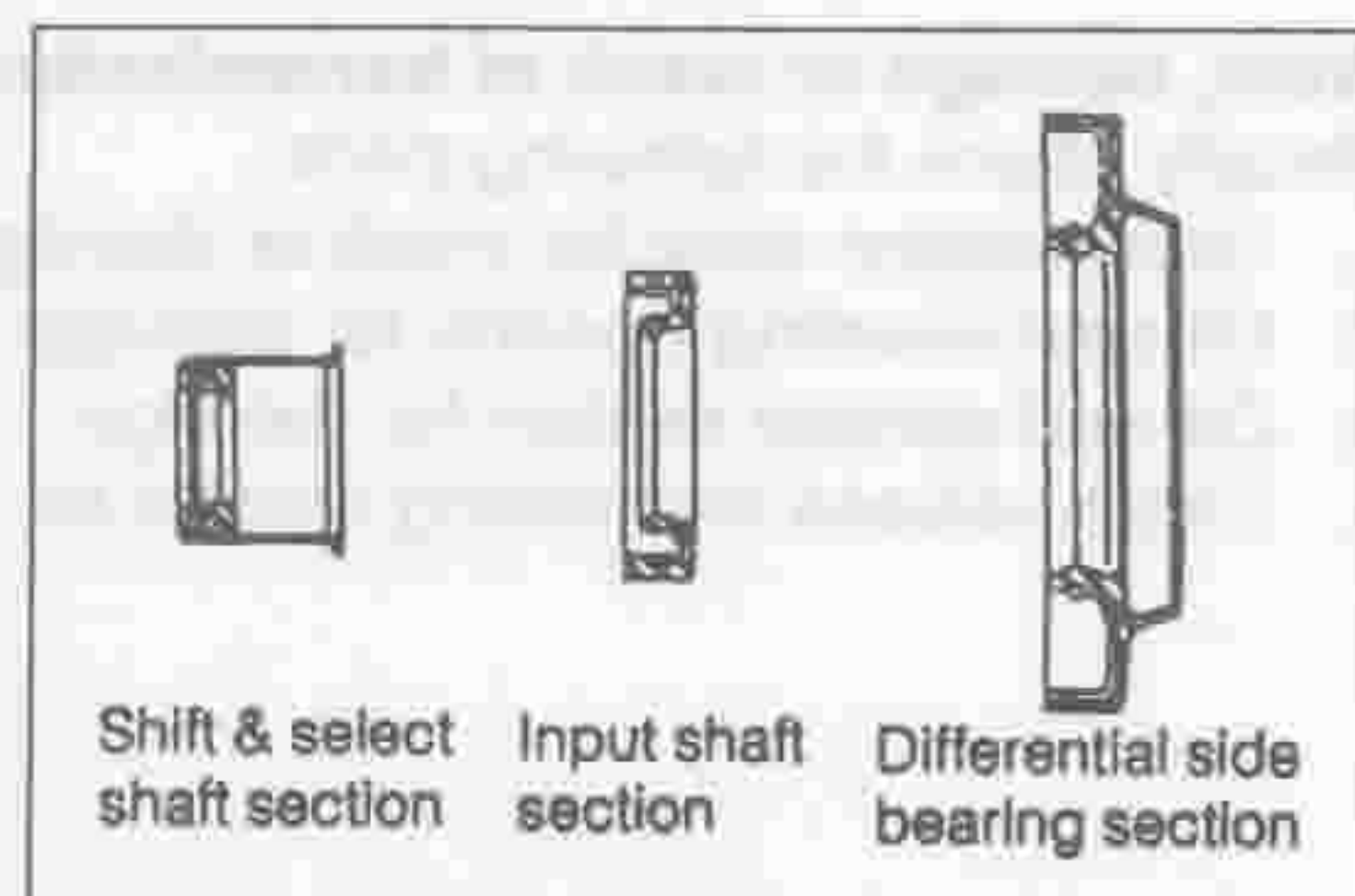
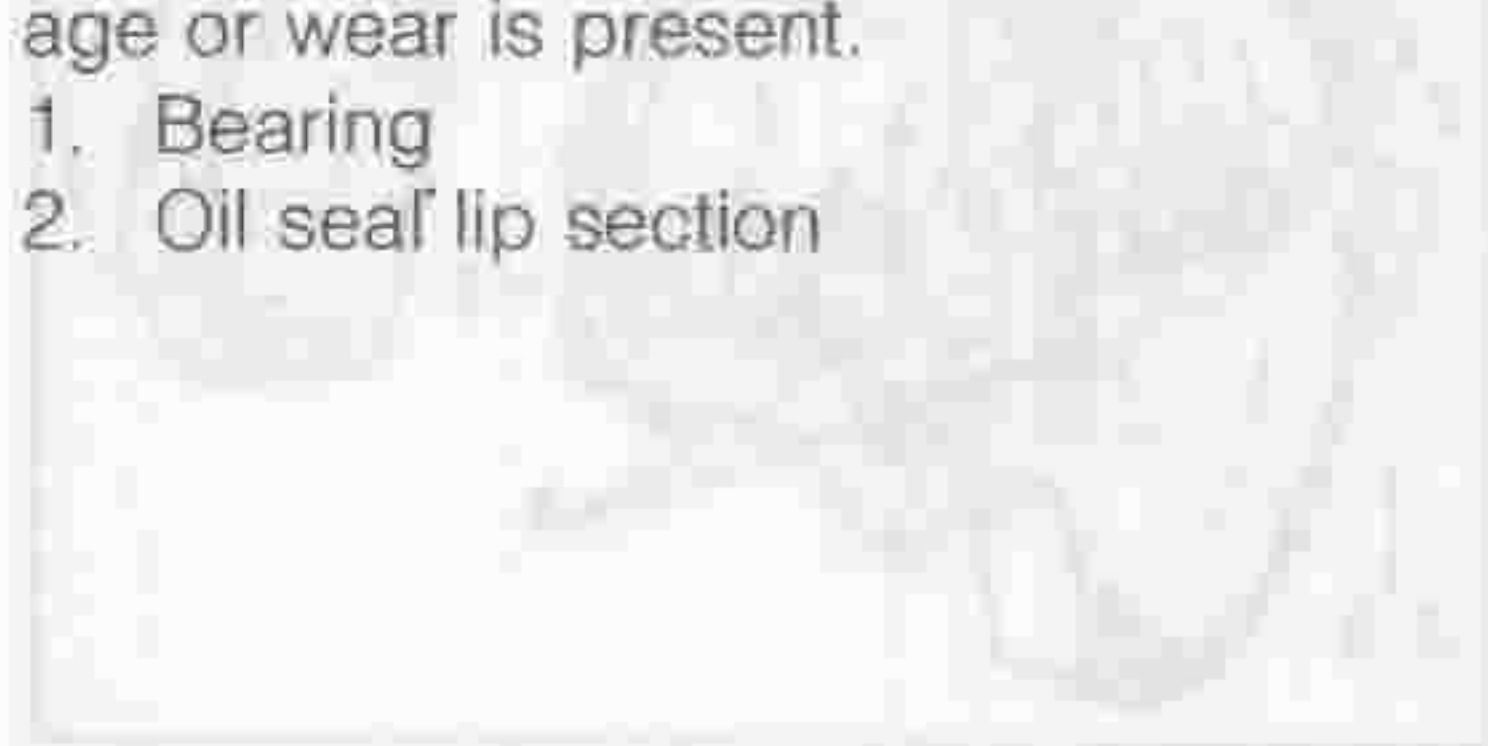
1. Check to see if oil leakage is present from the reverse restrict pin case section.
2. Check reverse restrict pin for spring effect while pin tip section is depressed.
3. Check boot for damage or wear.
4. Check boot band for wear or damage.

LMT00113-00098

Wear or damage of each bearing and oil seal

Visually check the following parts to see if any excessive damage or wear is present.

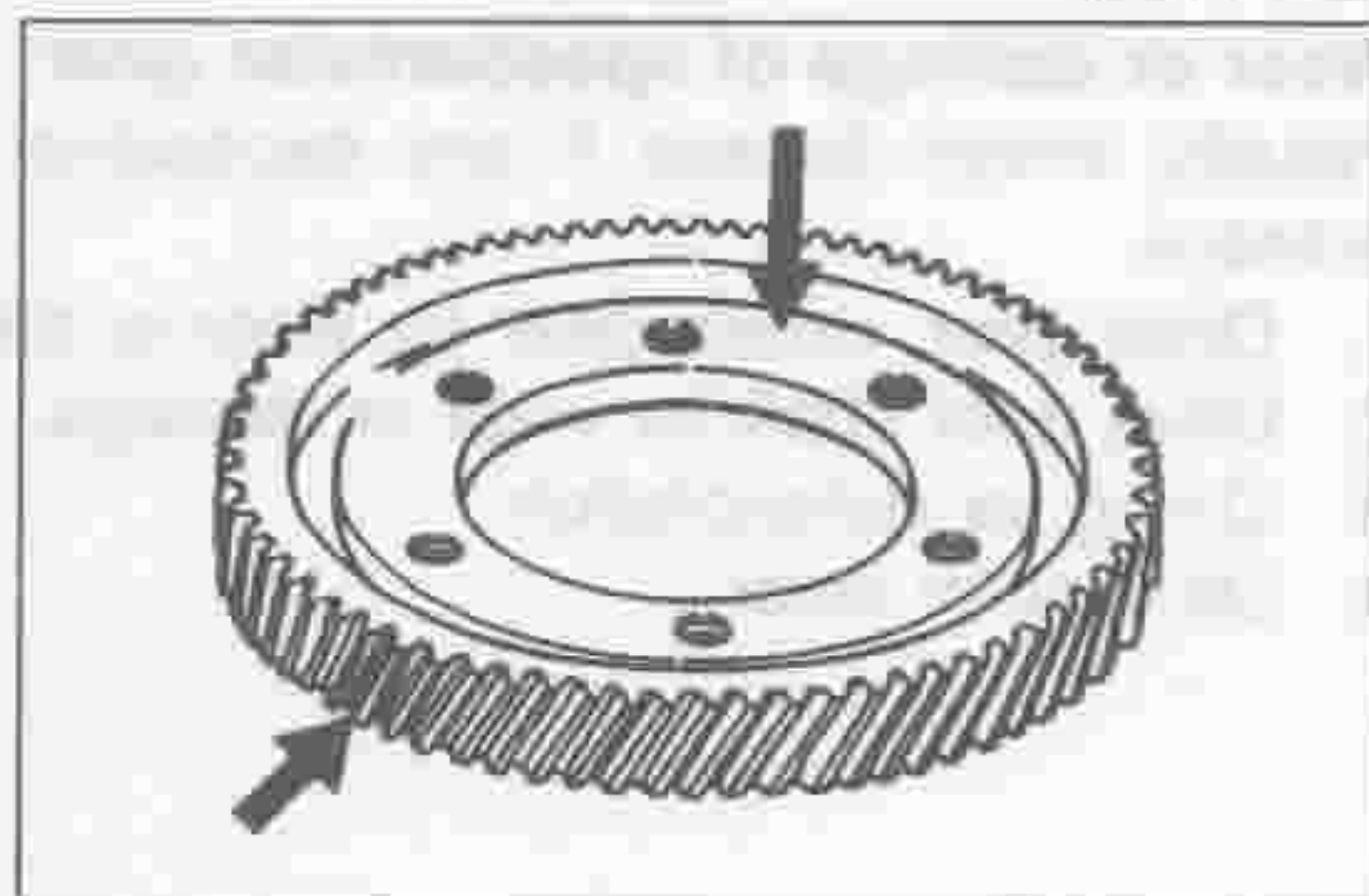
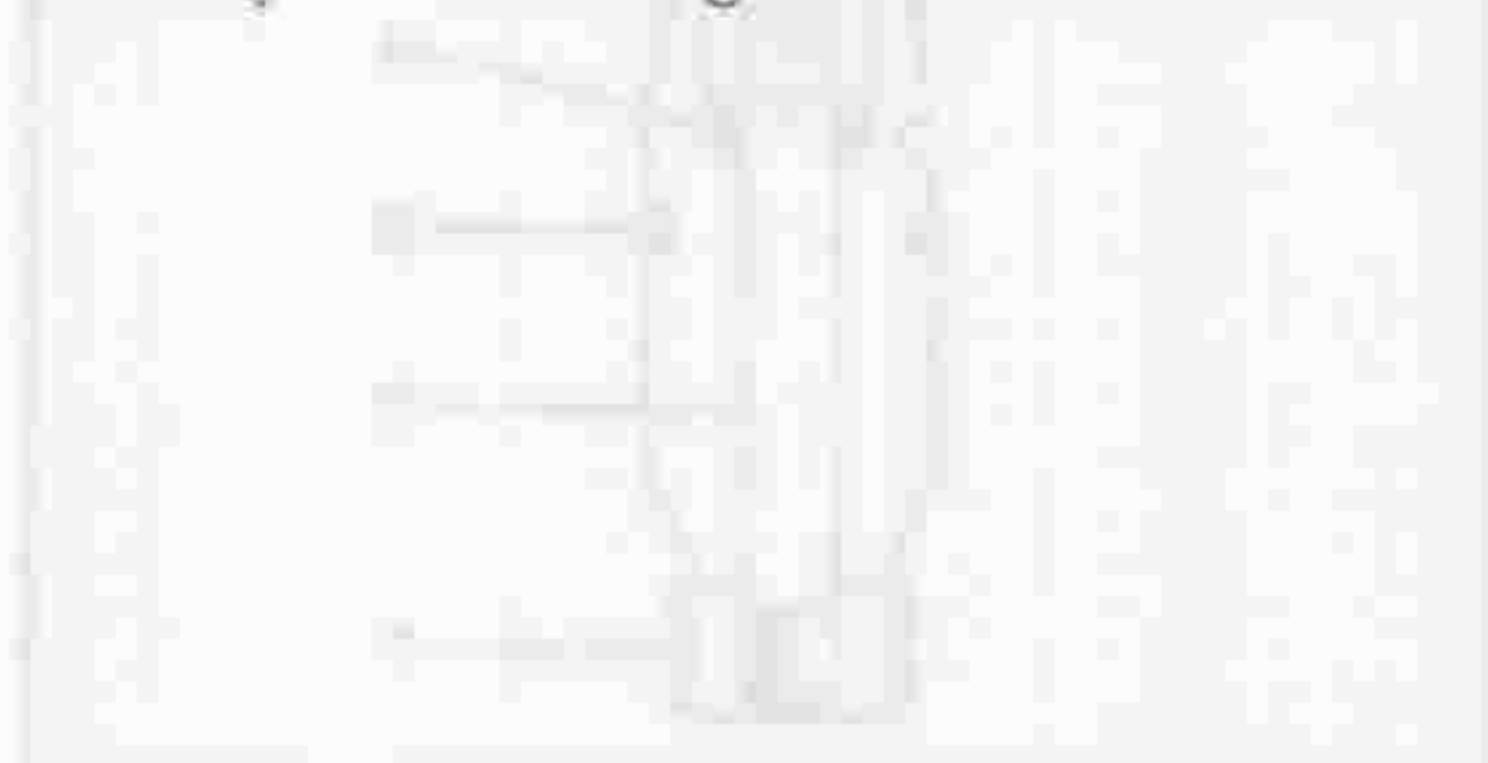
1. Bearing
2. Oil seal lip section



LMT00114-00099

Wear or damage of differential ring gear

Visually check the gear tooth surface for wear or damage.

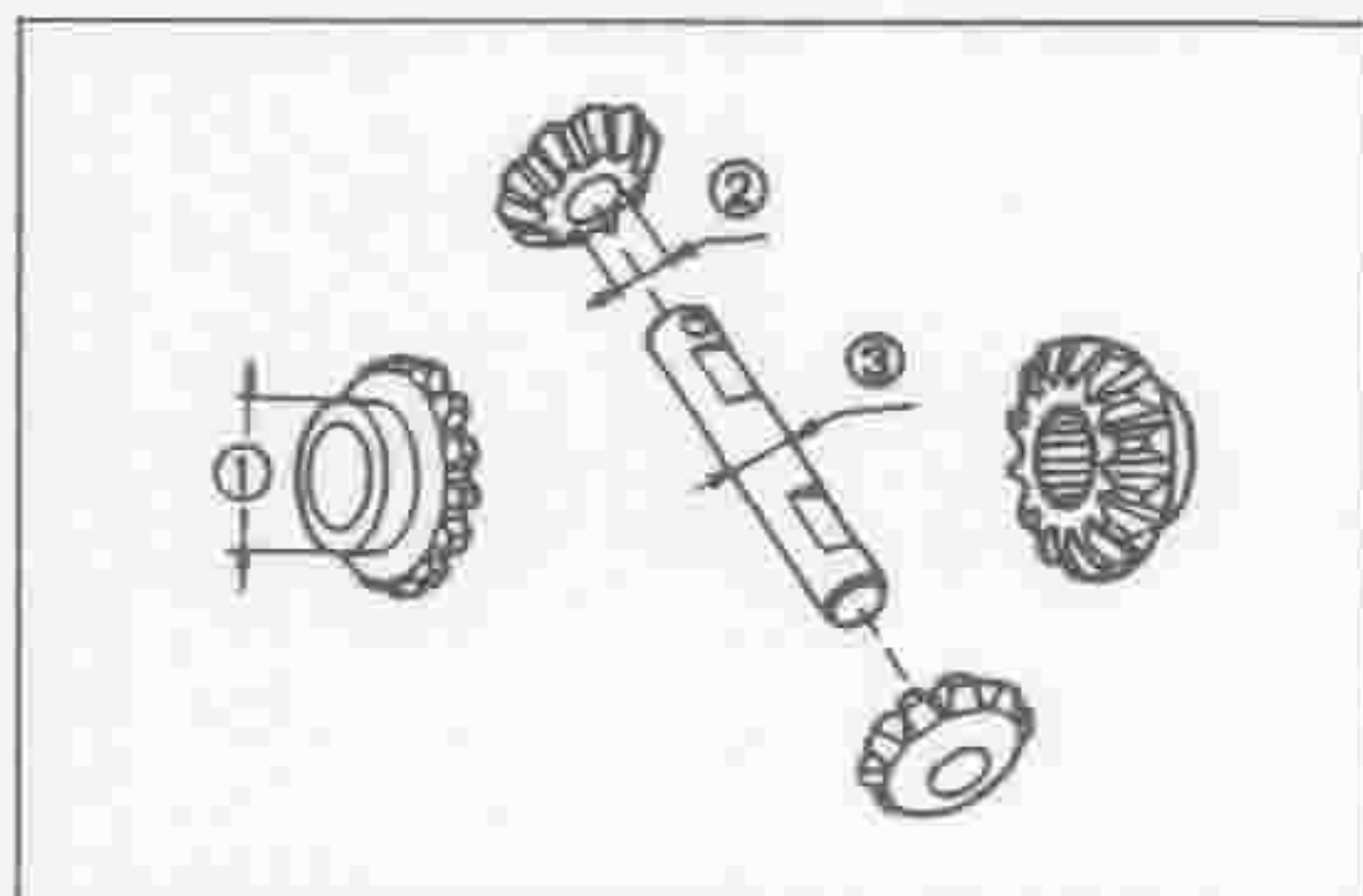


LMT00115-00100

Wear or Damage of Side Gear, Pinion Gear and Pinion Shaft

Unit: mm (inch)

Part	Specified value	Allowable limit
Outer diameter of side gear boss section ①	32.0 ^{+0.025} _{-0.050} (1.260 ^{+0.0010} _{-0.0020})	31.90 (1.256)
Hole diameter of pinion ②	15.0 ^{+0.008} _{-0.003} (0.591 ^{+0.0003} _{-0.0001})	15.03 (0.591)
Outer diameter of pinion shaft ③	15.0 ^{+0.046} _{-0.056} (0.591 ^{+0.0018} _{-0.0022})	14.90 (0.587)
Wear or damage of gear tooth surfaces and splined section of side gear	Visually check to see if any excessive wear or damage is present.	

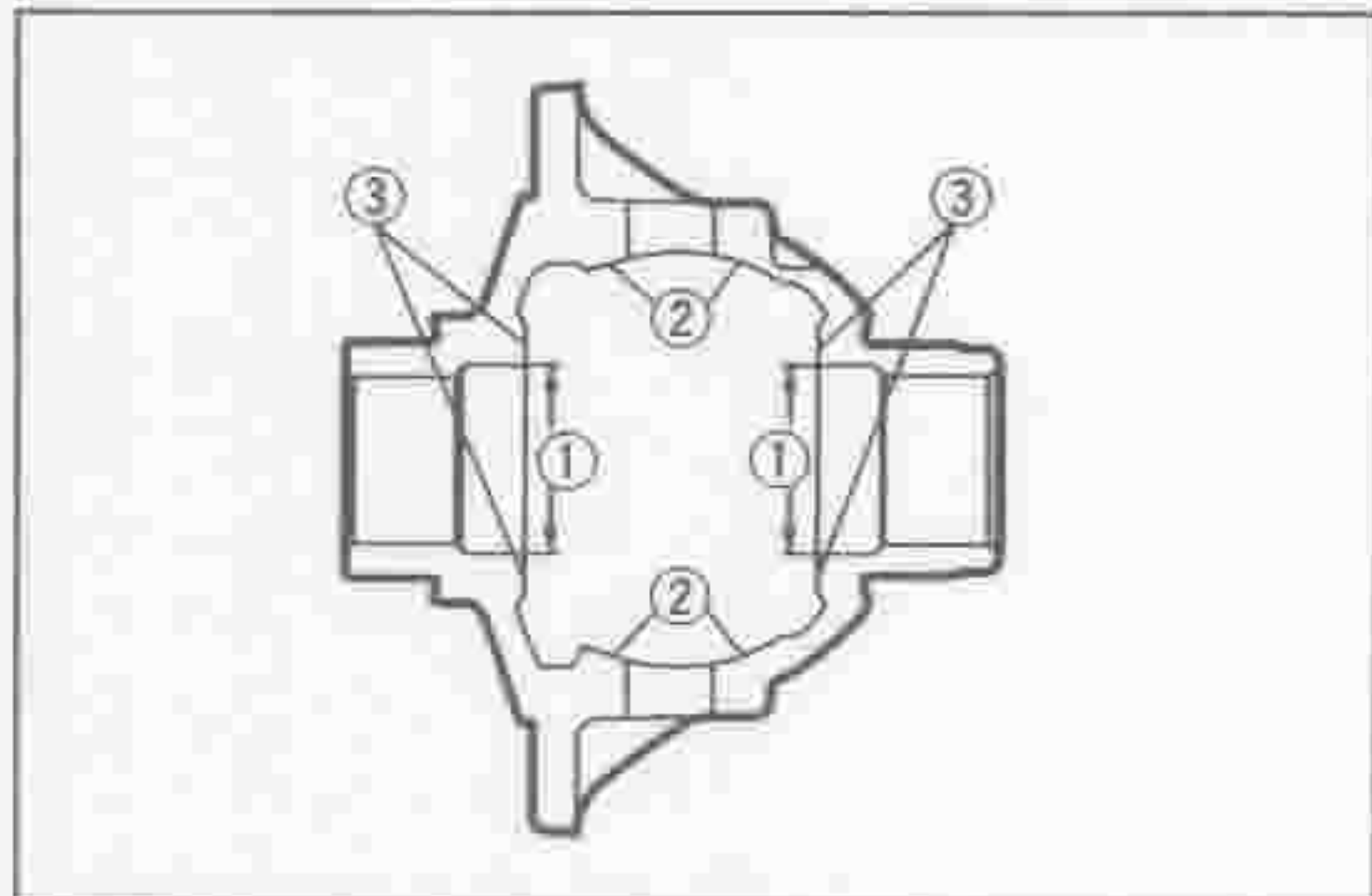


LMT00116-00101

Wear or damage of differential case and thrust washer

Unit: mm (inch)

Part	Specified value	Allowable limit
Thrust washer thickness	0.8 ± 0.05 (0.0315 ± 0.002)	0.7 (0.0276)
Side gear boss inserting hole diameter ①	32.5 ^{+0.4} _{-0.1} (1.280 ^{+0.0157} _{+0.0039})	32.58 (1.283)
Pinion gear contact section ②	Visually check to see if any excessive damage or wear is present.	
Side gear thrust washer contact section ③		

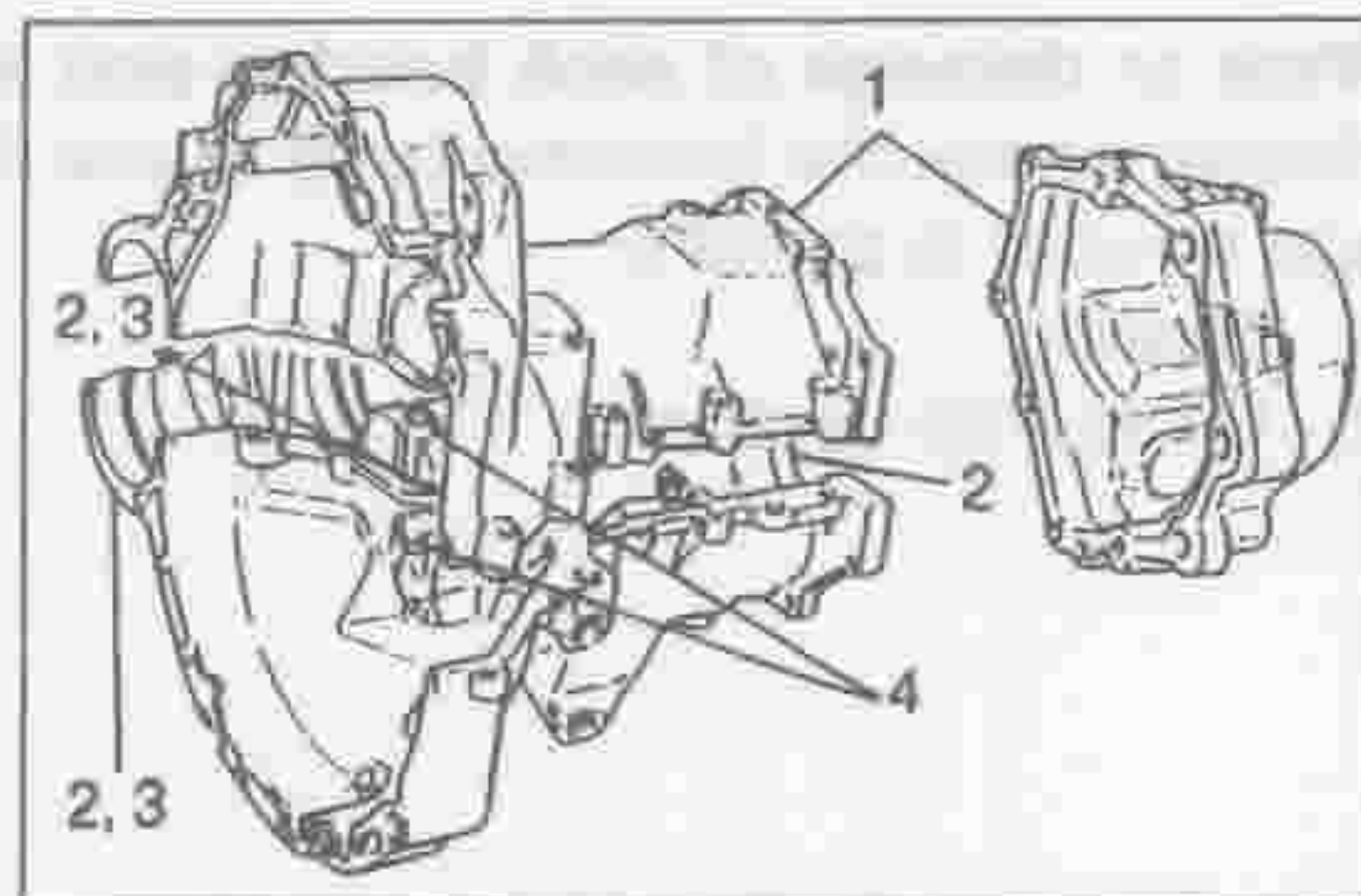


LMT00117-00102

Wear, damage or crack of transmission case

Visually check the following parts.

1. Transmission case for crack or damage.
2. Oil seal inserting position for damage or wear.
3. Oil seal contact section for damage.
4. Clutch release hub sliding section for damage or wear.

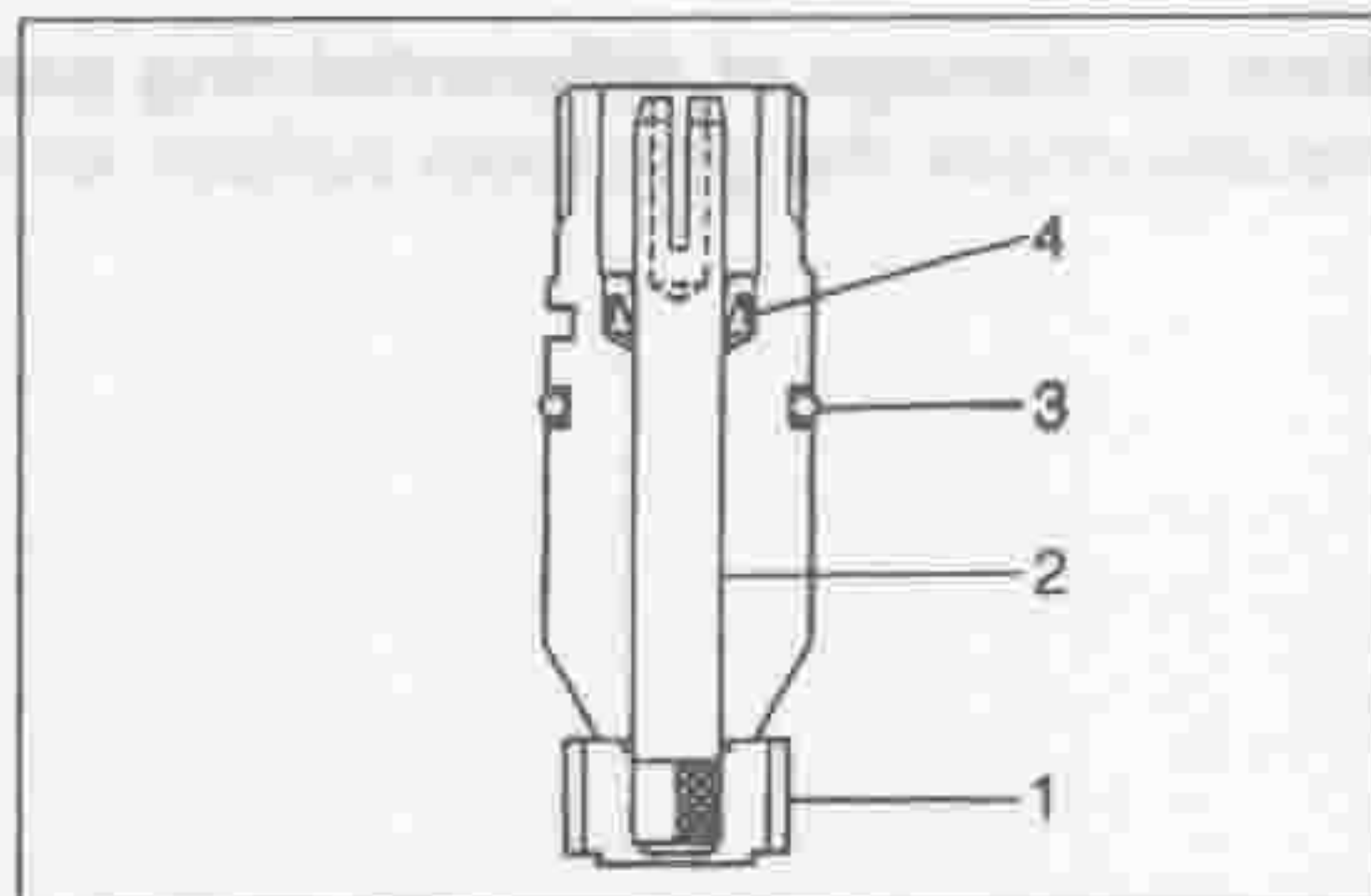


LMT00118-00103

Wear or damage of speedometer gear

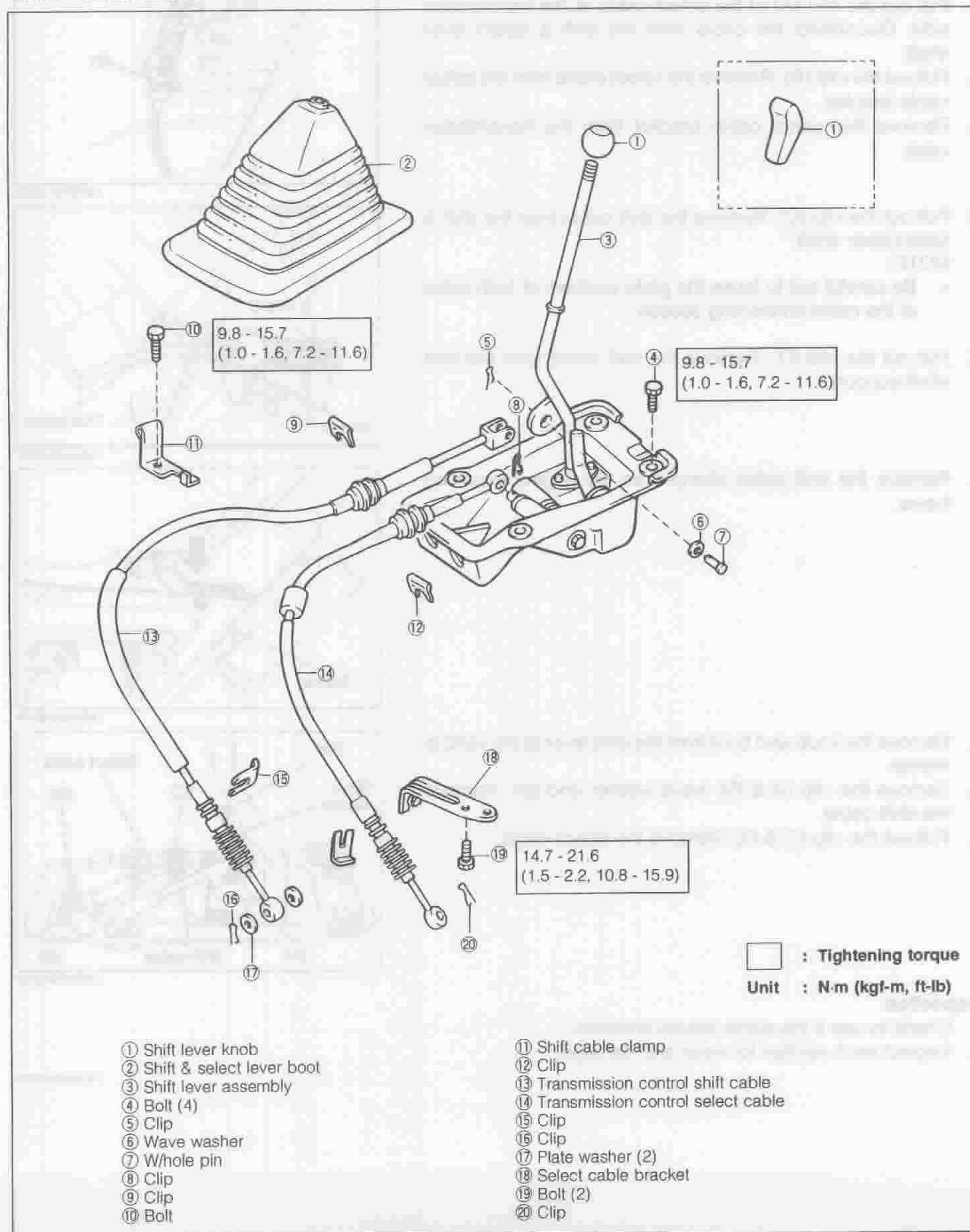
Visually check to see if any excessive wear or damage is present.

1. Drive gear, driven gear for wear or damage.
2. Drive gear shaft for wear or damage.
3. O-ring for deterioration.
4. Oil seal for wear.



LMT00119-00104

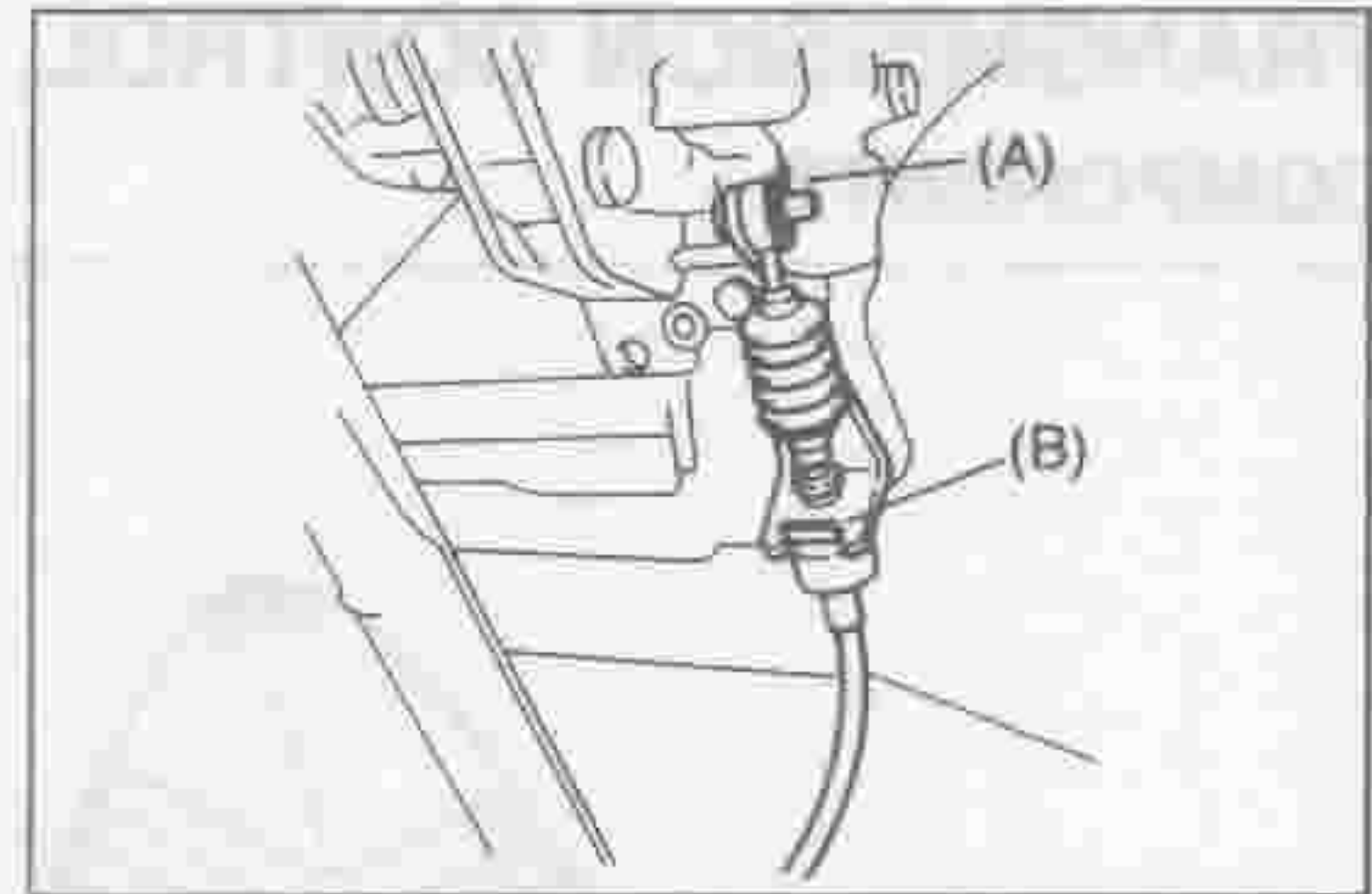
TRANSMISSION CONTROL MECHANISM COMPONENTS



SHIFT & SELECT CABLE

Removal

1. Pull out the clip (A) of the select cable at the transmission side. Disconnect the cable from the shift & select lever shaft.
2. Pull out the clip (B). Remove the select cable from the select cable bracket.
3. Remove the select cable bracket from the transmission case.



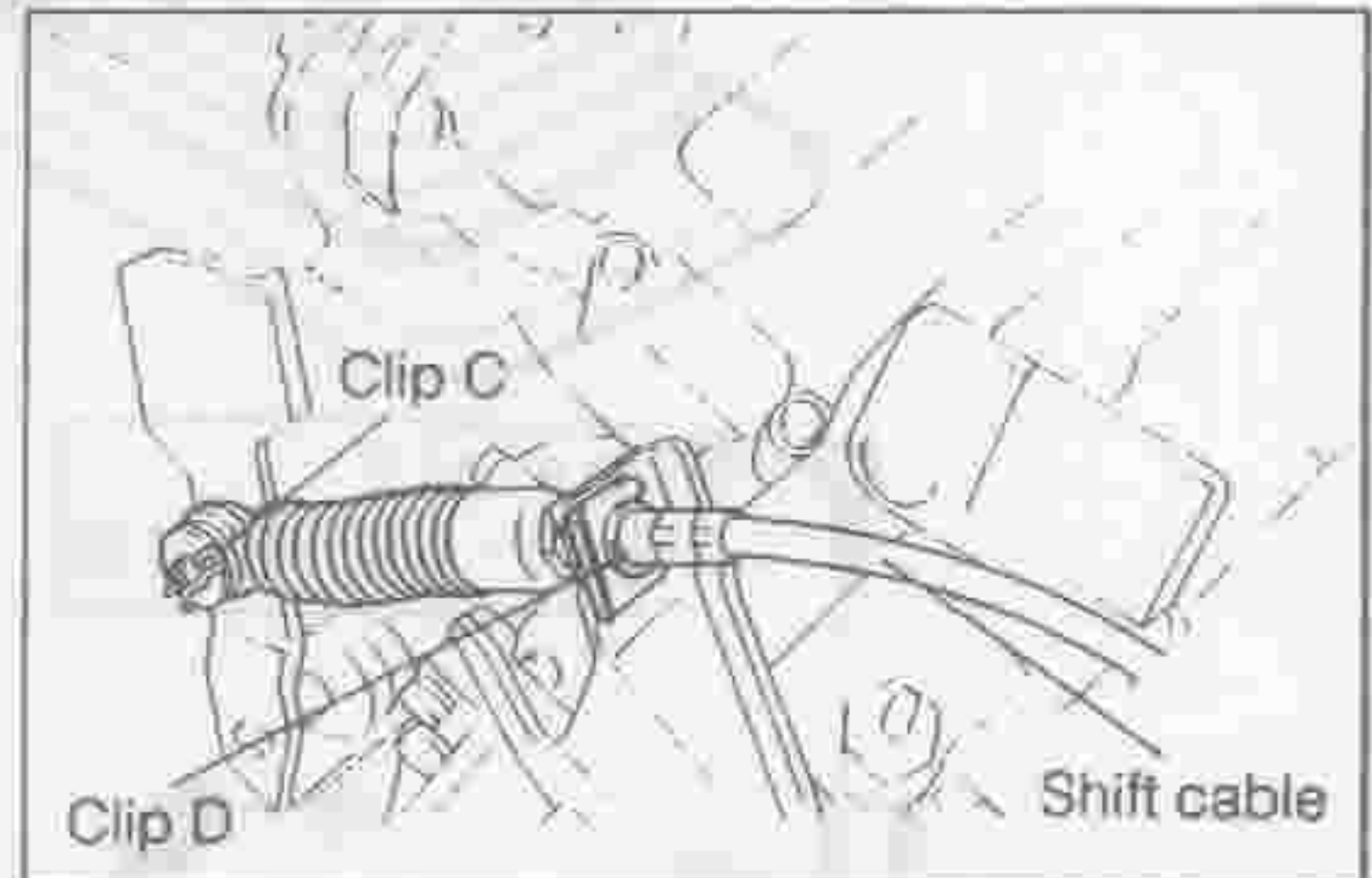
LMT00121-00106

4. Pull out the clip (C). Remove the shift cable from the shift & select lever shaft.

NOTE:

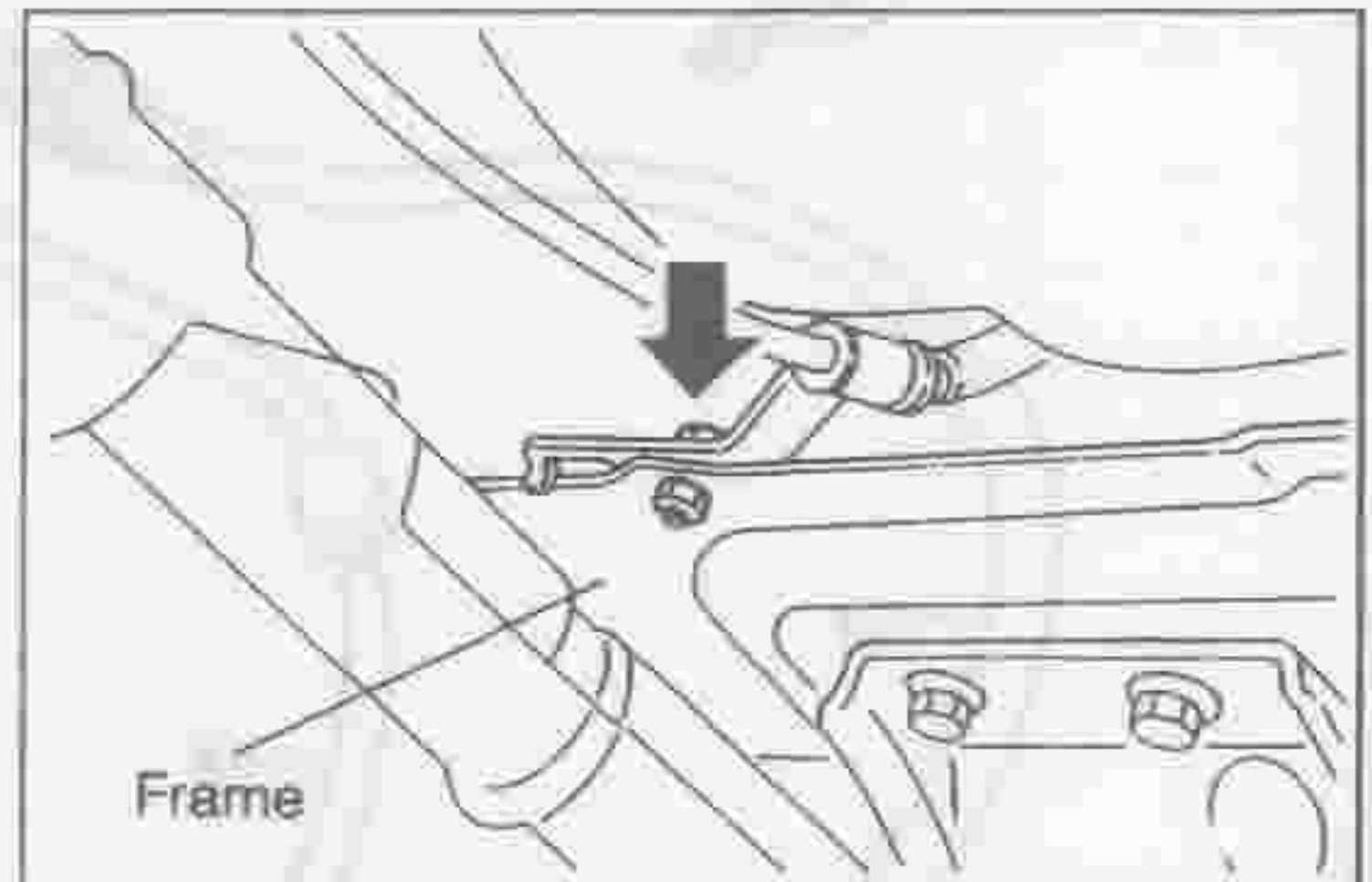
- Be careful not to loose the plate washers at both sides of the cable connecting section.

5. Pull out the clip (D). Remove the shift cable from the shift shaft support.



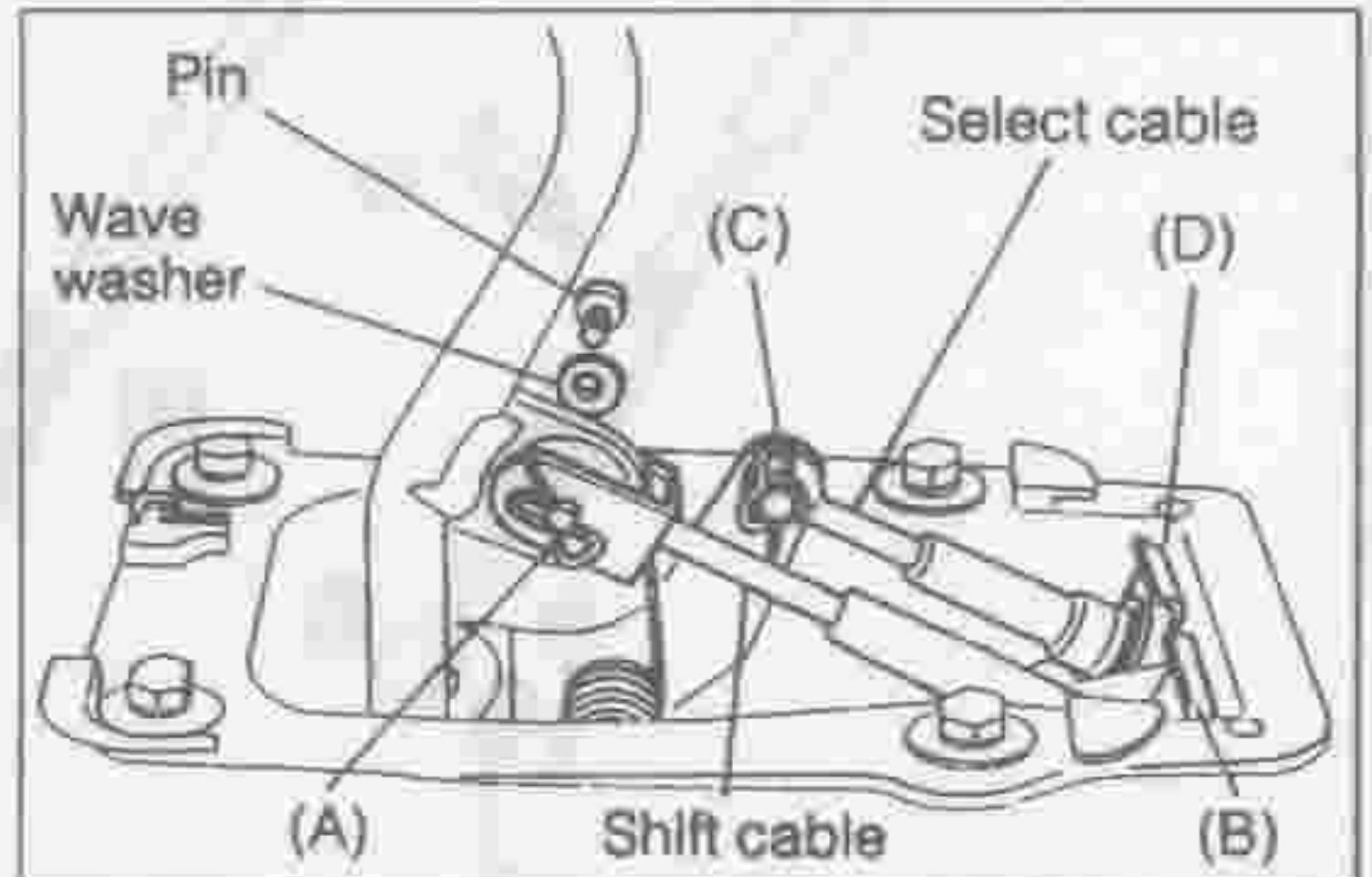
LMT00122-00107

6. Remove the shift cable clamp from the engine mounting frame.



LMT00123-00108

7. Remove the knob and boot from the shift lever at the vehicle interior.
8. Remove the clip (A & B), wave washer and pin. Remove the shift cable.
9. Pull out the clip (C & D). Remove the select cable.



LMT00124-00109

Inspection

1. Check to see if the cable moves smoothly.
2. Inspect each section for wear and damage.

LMT00125-00000

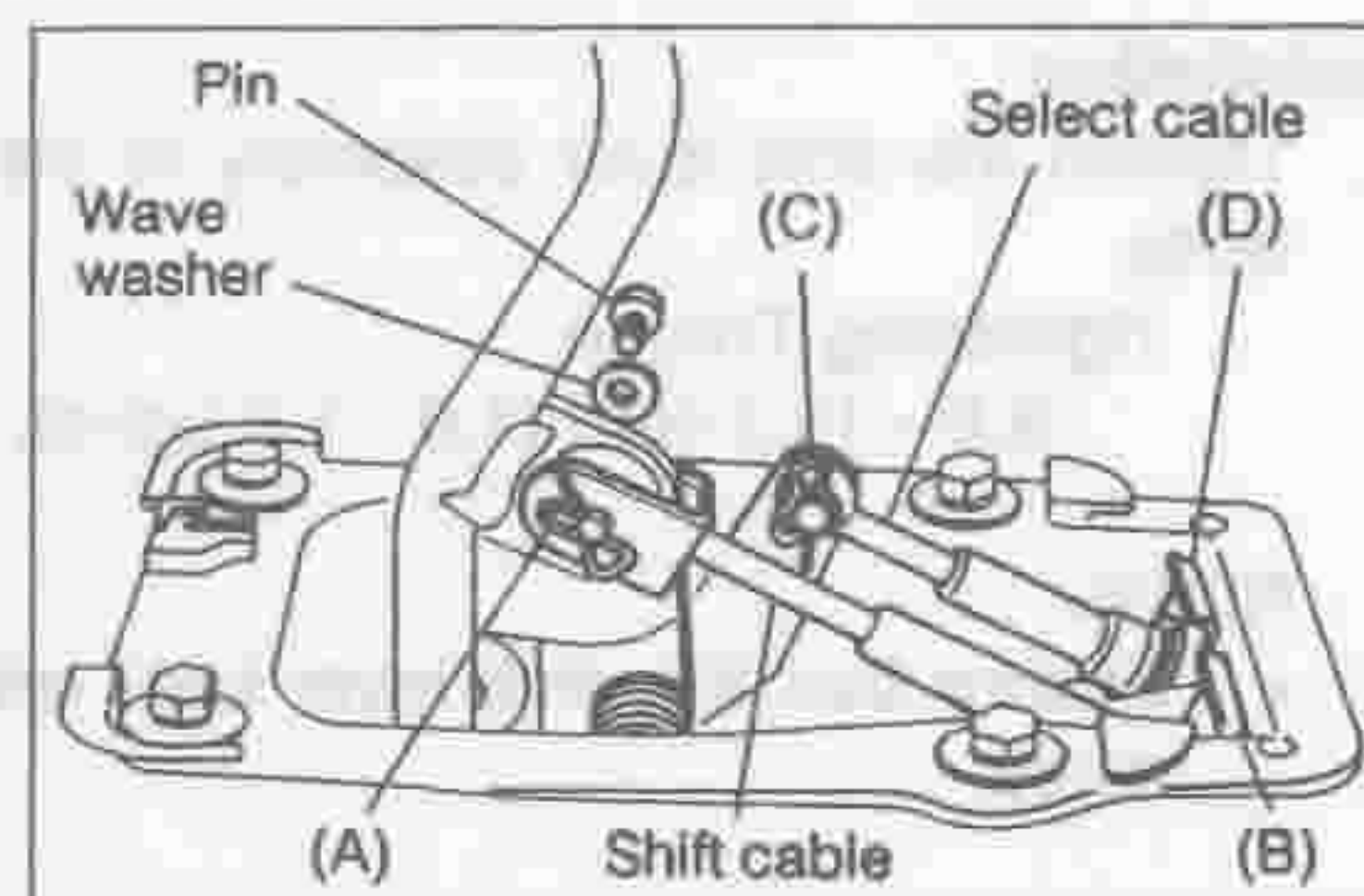
Installation

CAUTION:

1. Do not bend the cable unnecessarily.
2. During the clip assembling, be sure to tap the clip itself. Never tap the cable. If the cable should be tapped, never use that cable.
3. Be sure to apply multi-purpose grease (NLGI No. 2) or equivalent of DAIHATSU MP grease (999-2102-8483-00) to the shift lever connecting section of each cable.

LMT00126-00000

1. Insert the select cable to the shift lever housing. Secure the cable with the clip (D).
2. Connect the select cable to the shift lever. Secure the cable with the clip (C).
3. Insert the shift cable into the shift lever housing. Secure the cable with the clip (B).
4. Align the shift cable with the shift lever connecting section. Insert the pin through which a wave washer is passed in place. Secure the shift cable with the clip (A).

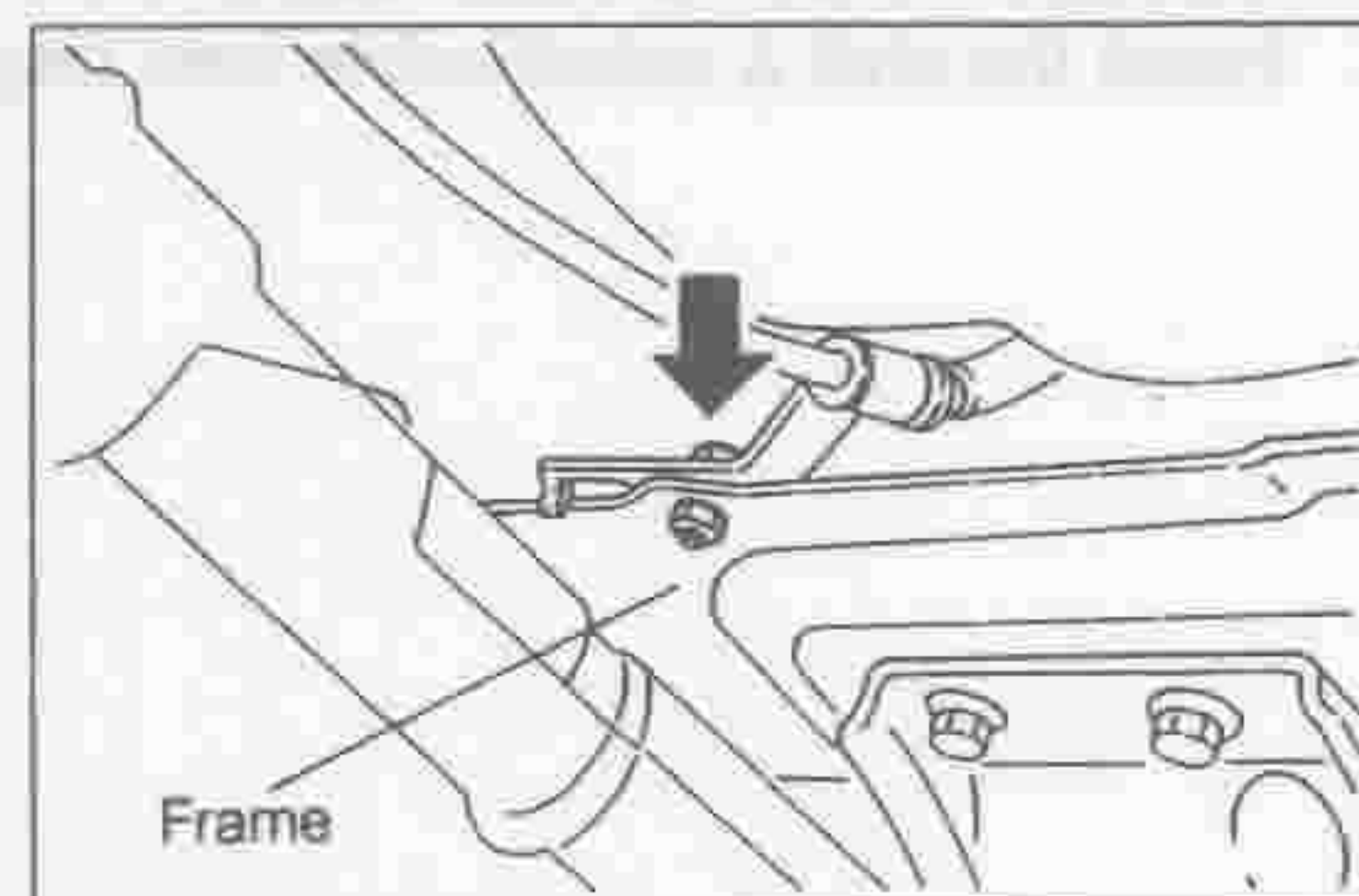


LMT00127-00110

5. Install the boot and knob to the shift lever.
6. Tighten the shift cable clamp with a bolt to the engine mounting frame.

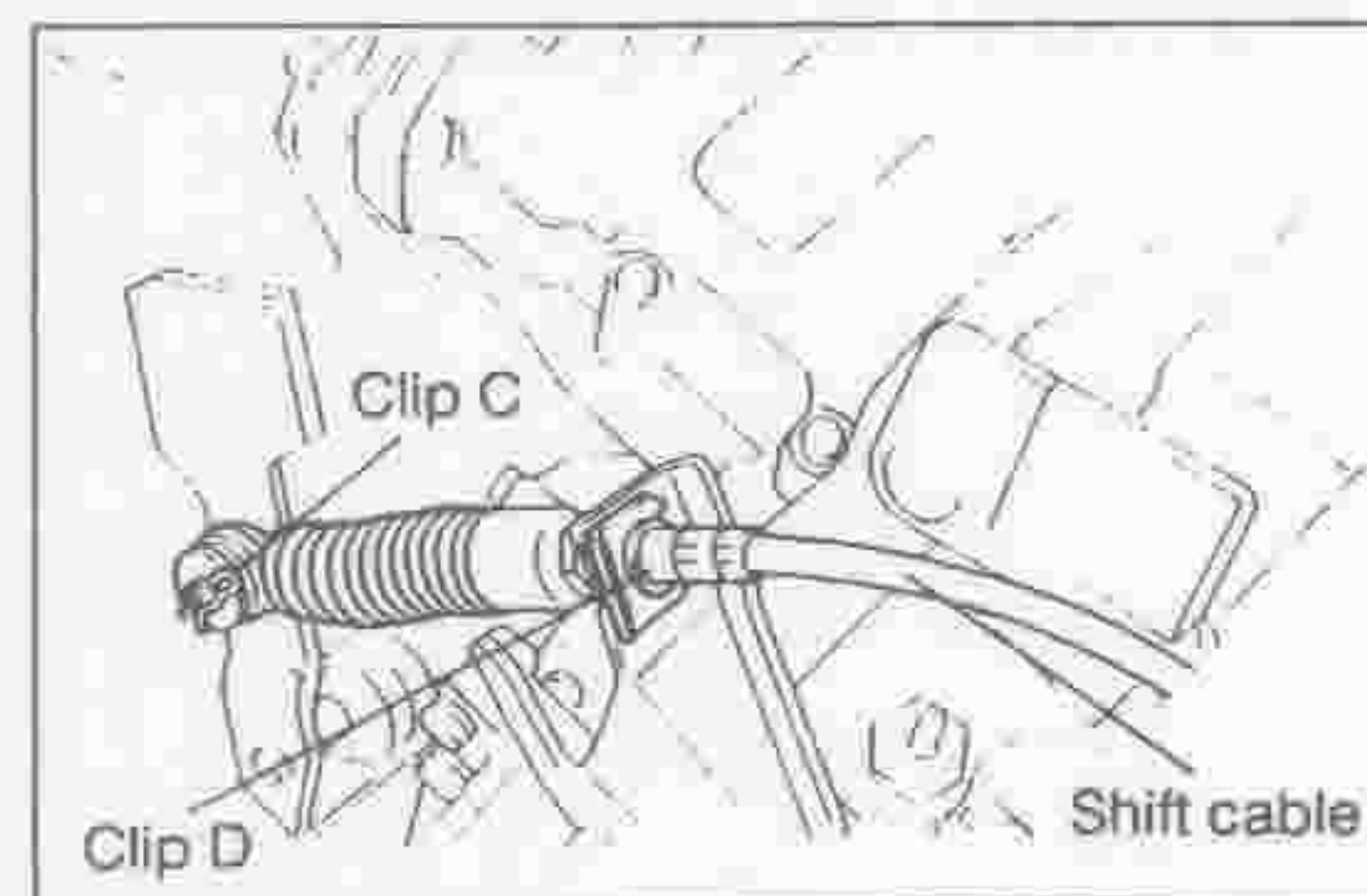
Tightening Torque:

9.8 - 15.7 N·m (1.0 - 1.6 kgf-m, 7.2 - 11.6 ft-lb)



LMT00128-00111

7. Route the shift cable through the transmission shift shaft support. Secure the shift cable with the clip (D).
8. Pass the plate washer, shift cable and plate washer in this order through the shift & select lever shaft. Secure them with the clip (C).



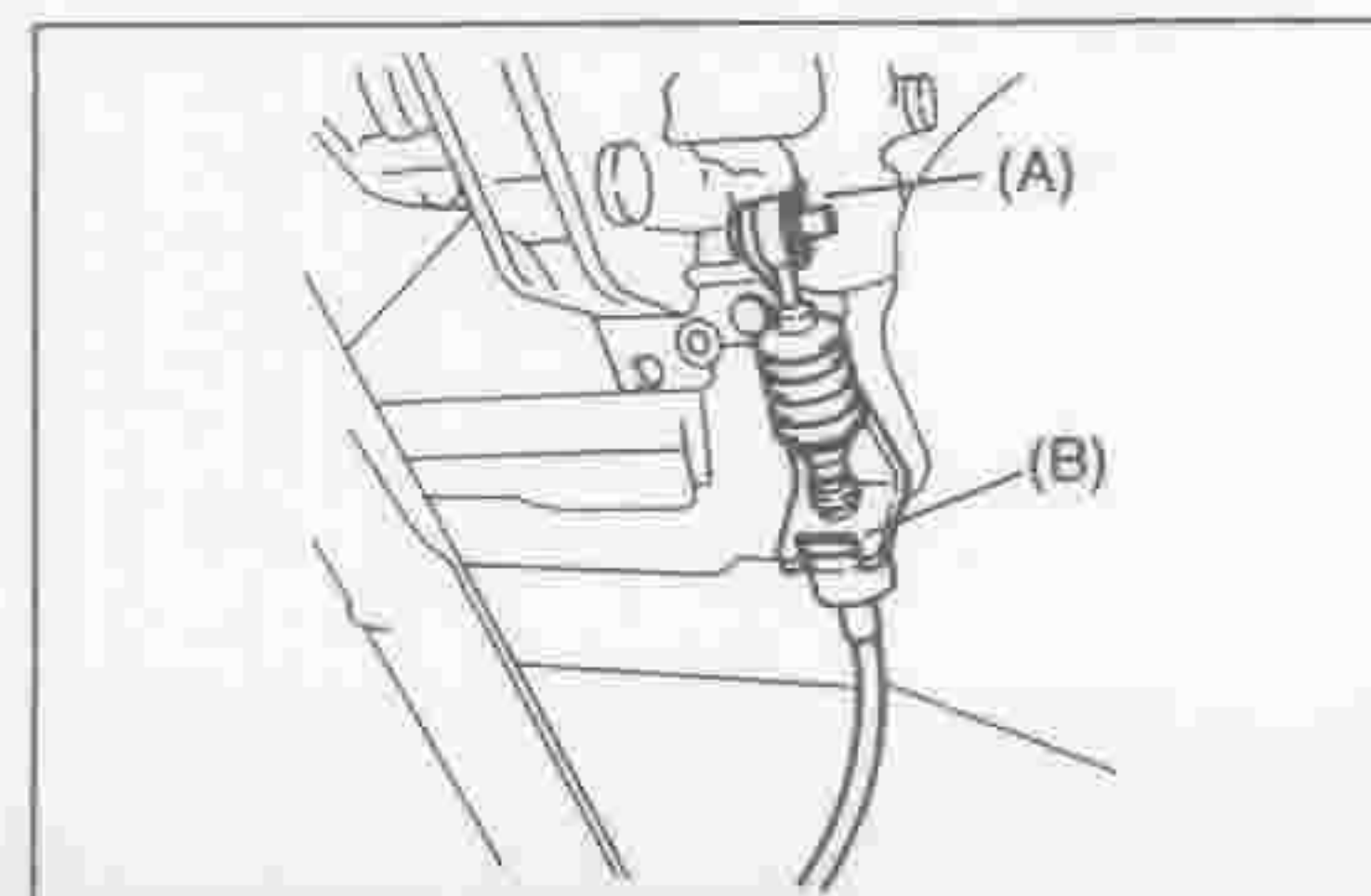
LMT00129-00112

9. Tighten the select cable bracket to the transmission case with the two bolts.

Tightening Torque:

14.7 - 21.6 N·m (1.5 - 2.2 kgf-m, 10.8 - 15.9 ft-lb)

10. Route the select cable through the select cable bracket. Secure the cable with the clip (B).
11. Route the select cable through the pin of the shift & select lever shaft. Secure the cable with the clip (A).

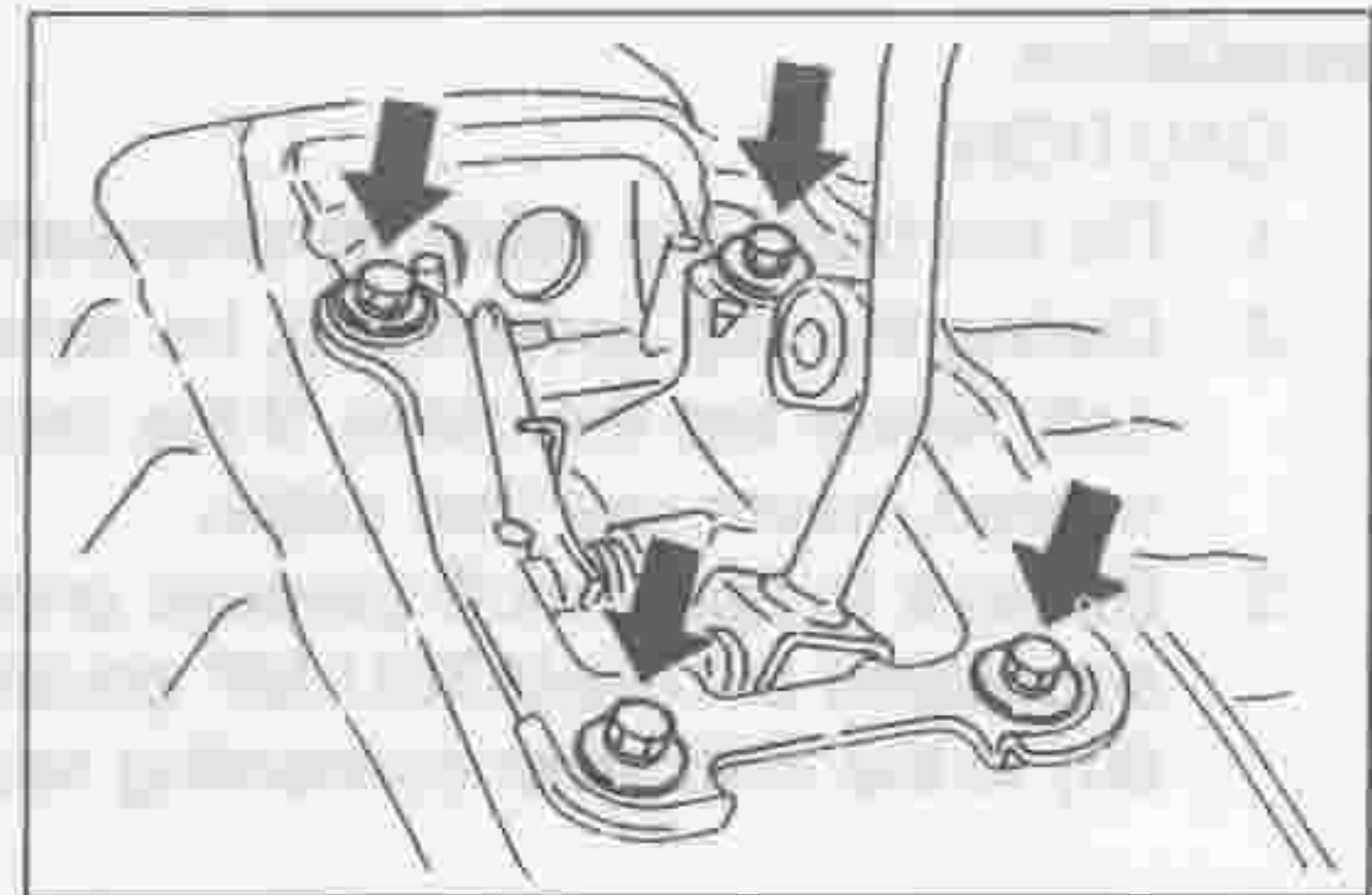


LMT00130-00113

SHIFT LEVER

Removal

1. Remove the shift & select cable (see page MT-41).
2. Disconnect the shift lever side of the shift & select cable.
3. Remove the bolts and pull the shift lever assembly upward.



LMT00131-00114

Installation

1. Tighten the shift lever assembly to the body with the four bolts.

Tightening Torque:

9.8 - 15.7 N·m (1.0 - 1.6 kgf-m, 7.2 - 11.6 ft-lb)

NOTE:

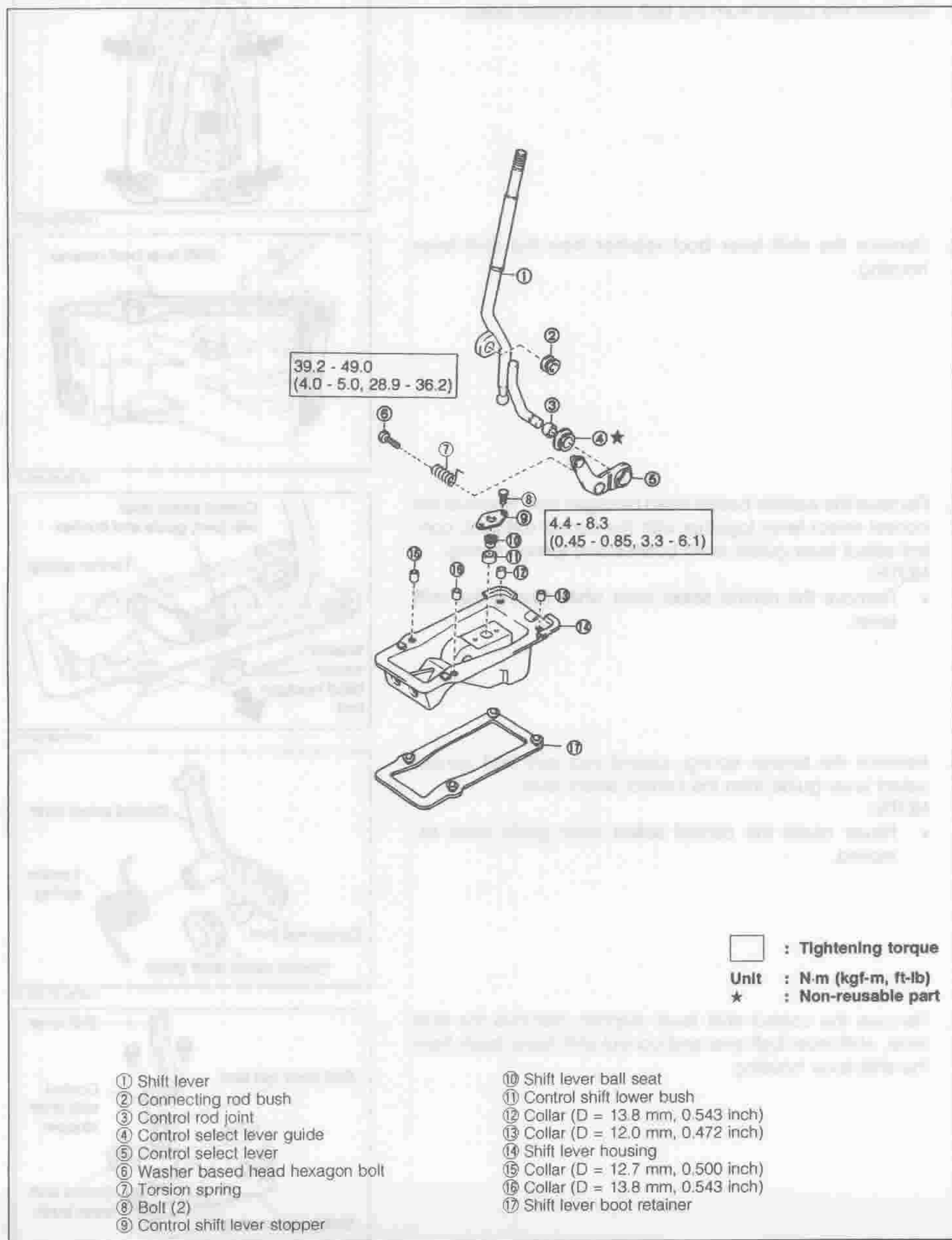
- Ensure that the shift lever boot retainer is placed correctly.

2. Connect the shift & select cable to the shift lever.
3. Install the shift & select cable (see page MT-42).

LMT00132-00000

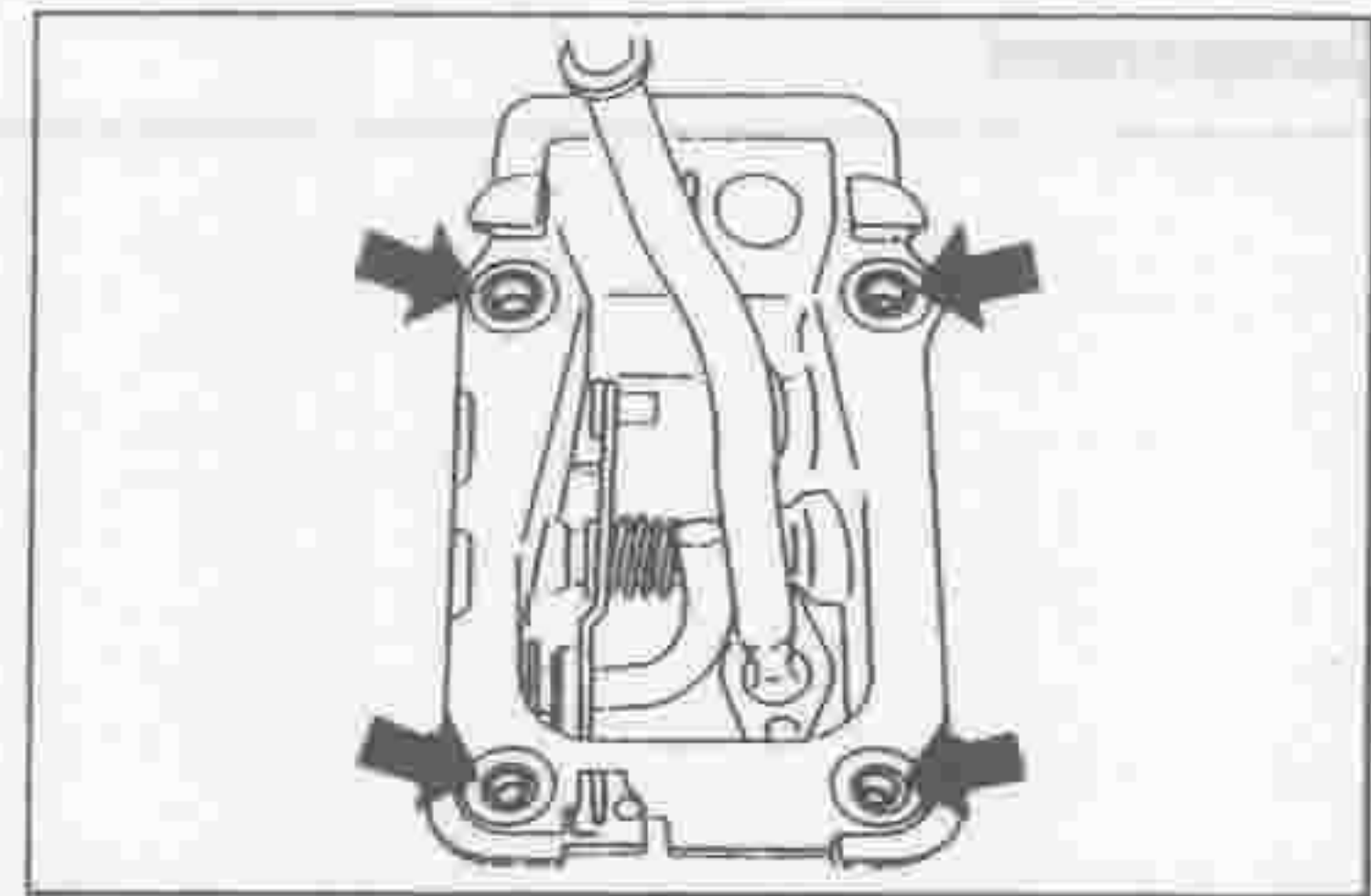


Component



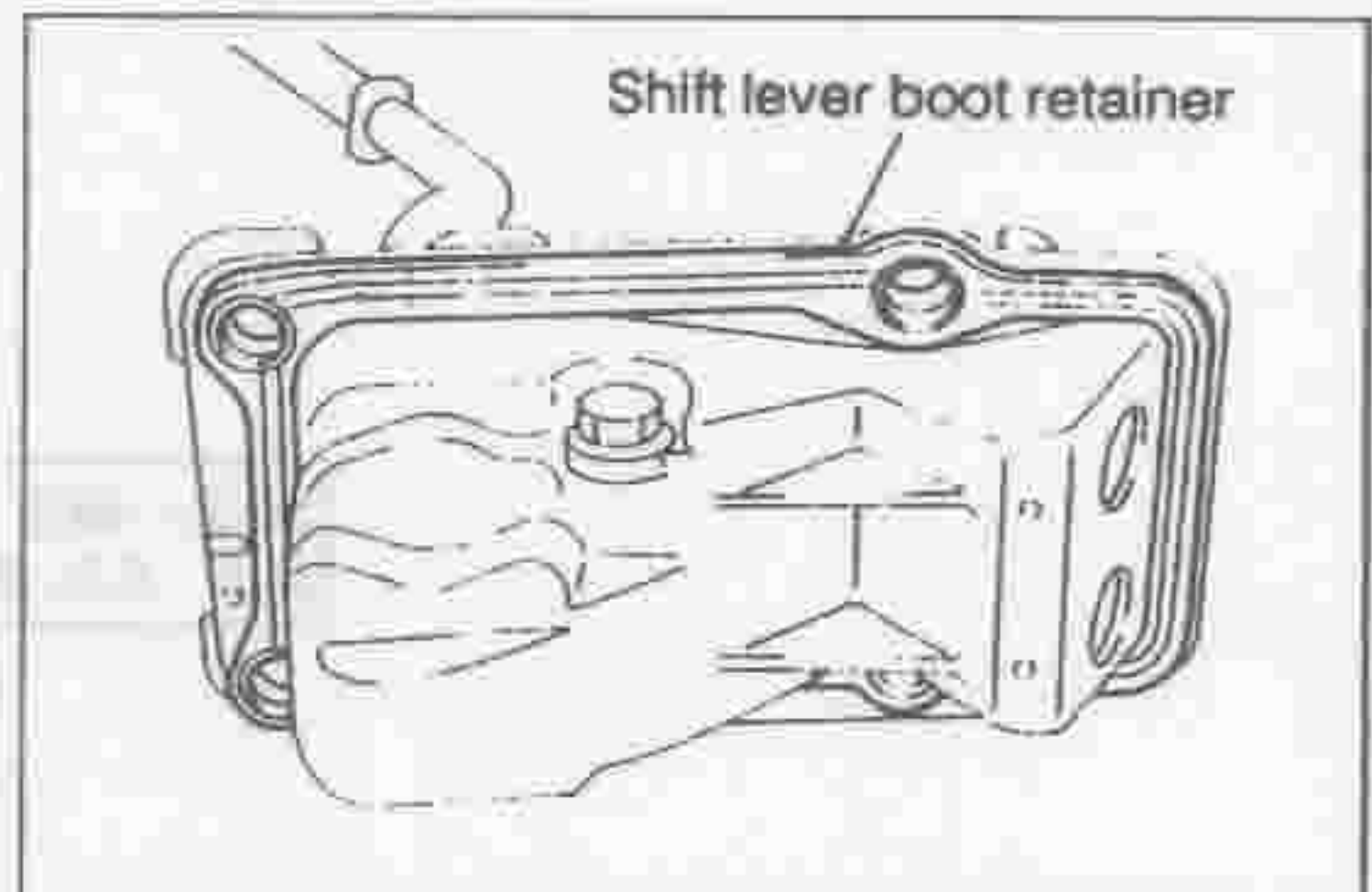
Disassembly

1. Remove the collars from the bolt pass-through holes.



LMT00134-00116

2. Remove the shift lever boot retainer from the shift lever housing.

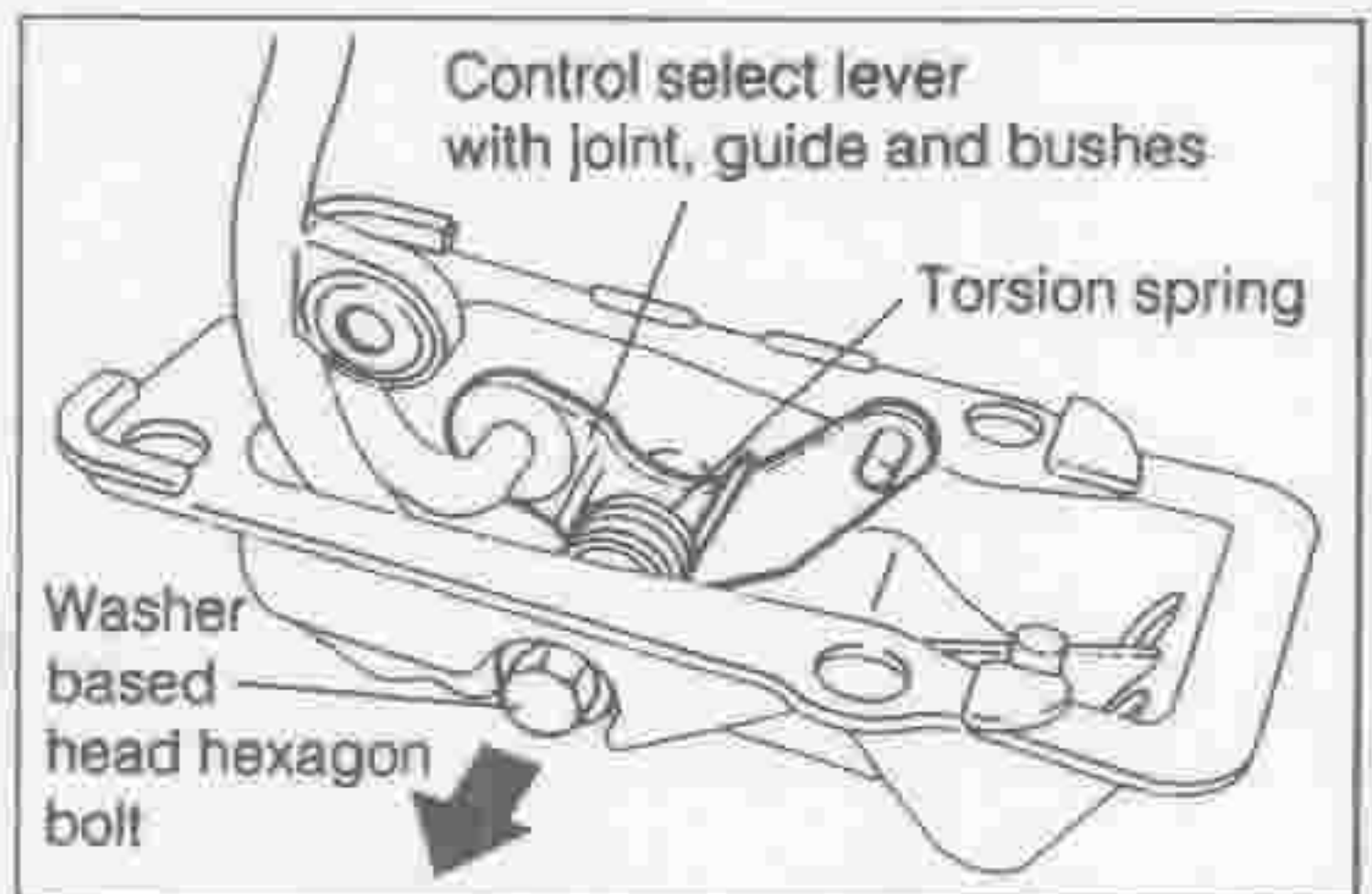


LMT00135-00117

3. Remove the washer based head hexagon bolt. Remove the control select lever together with the control rod joint, control select lever guide, solid bushes and torsion spring.

NOTE:

- Remove the control select lever while turning the shift lever.

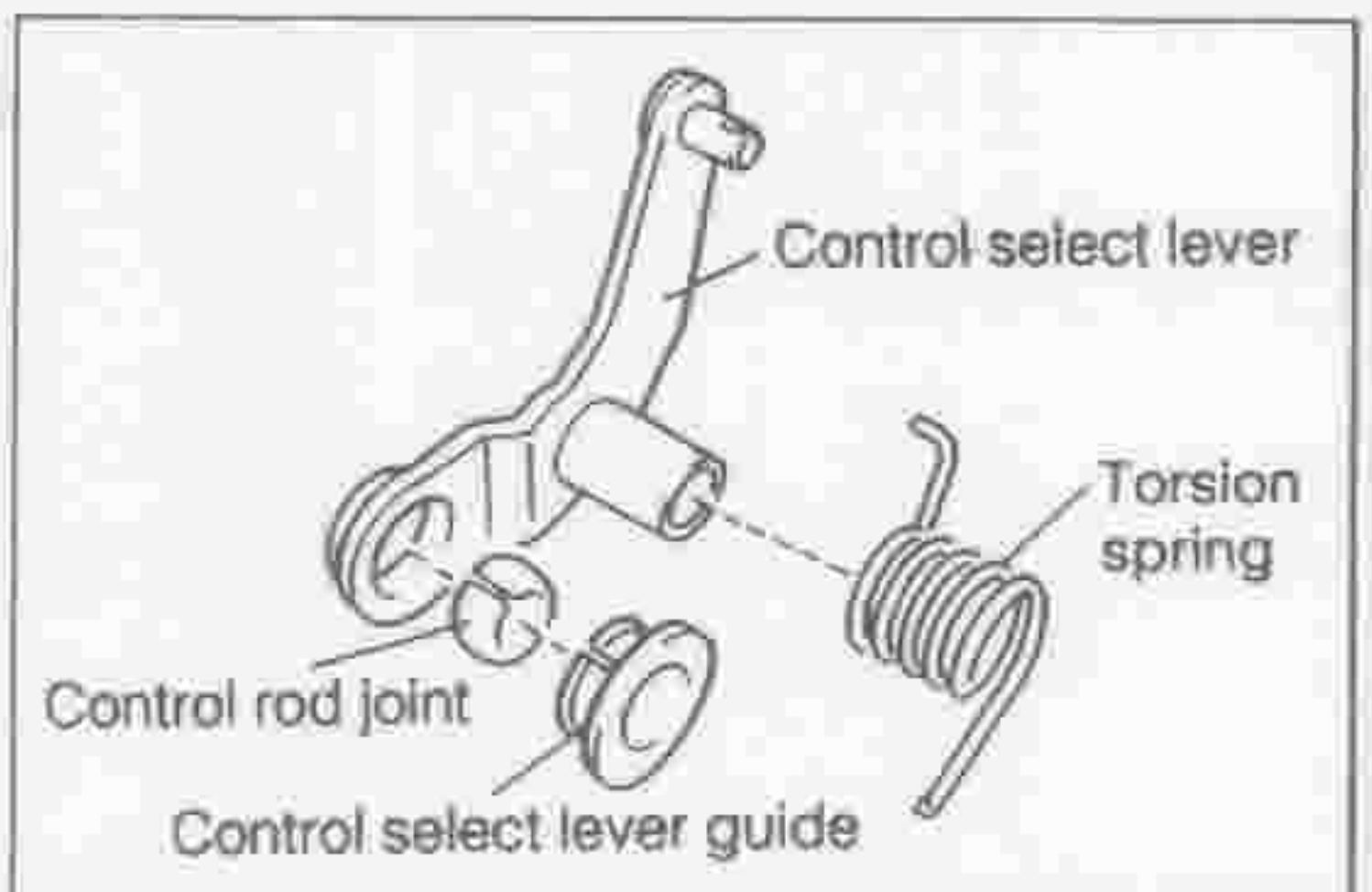


LMT00136-00118

4. Remove the torsion spring, control rod joint and control select lever guide from the control select lever.

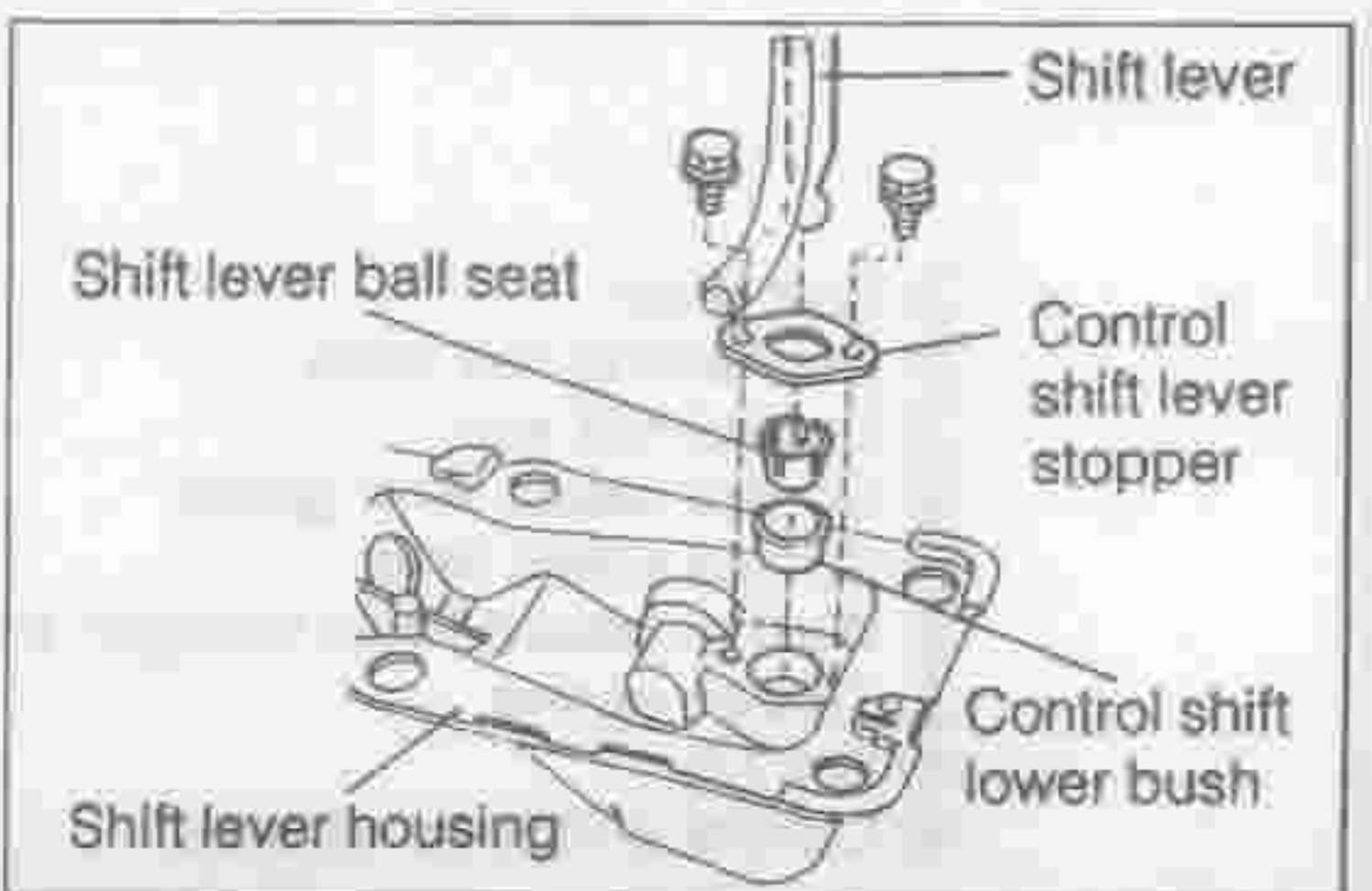
NOTE:

- Never reuse the control select lever guide once removed.



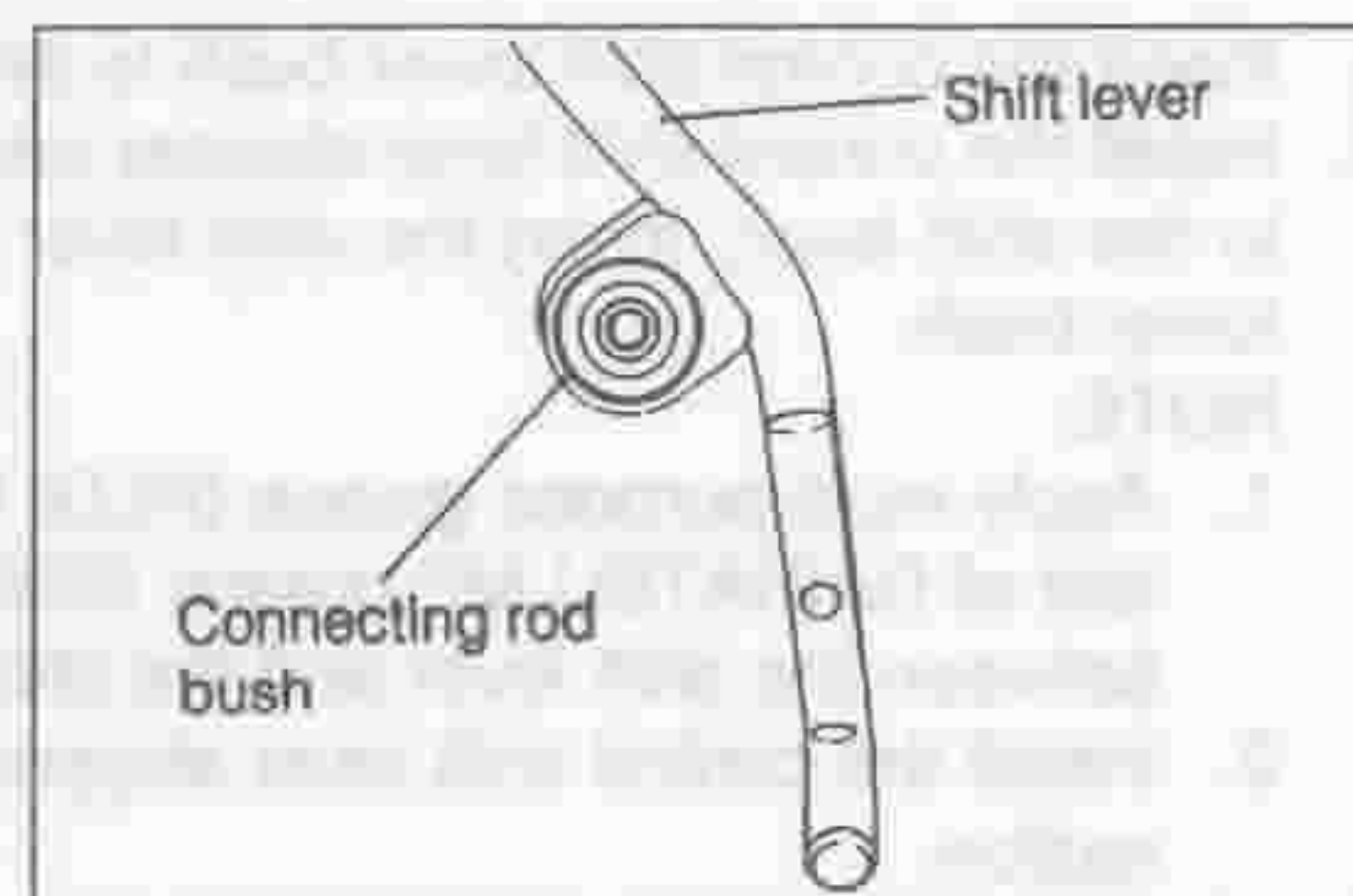
LMT00137-00119

5. Remove the control shift lever stopper. Remove the shift lever, shift lever ball seat and control shift lower bush from the shift lever housing.



LMT00138-00120

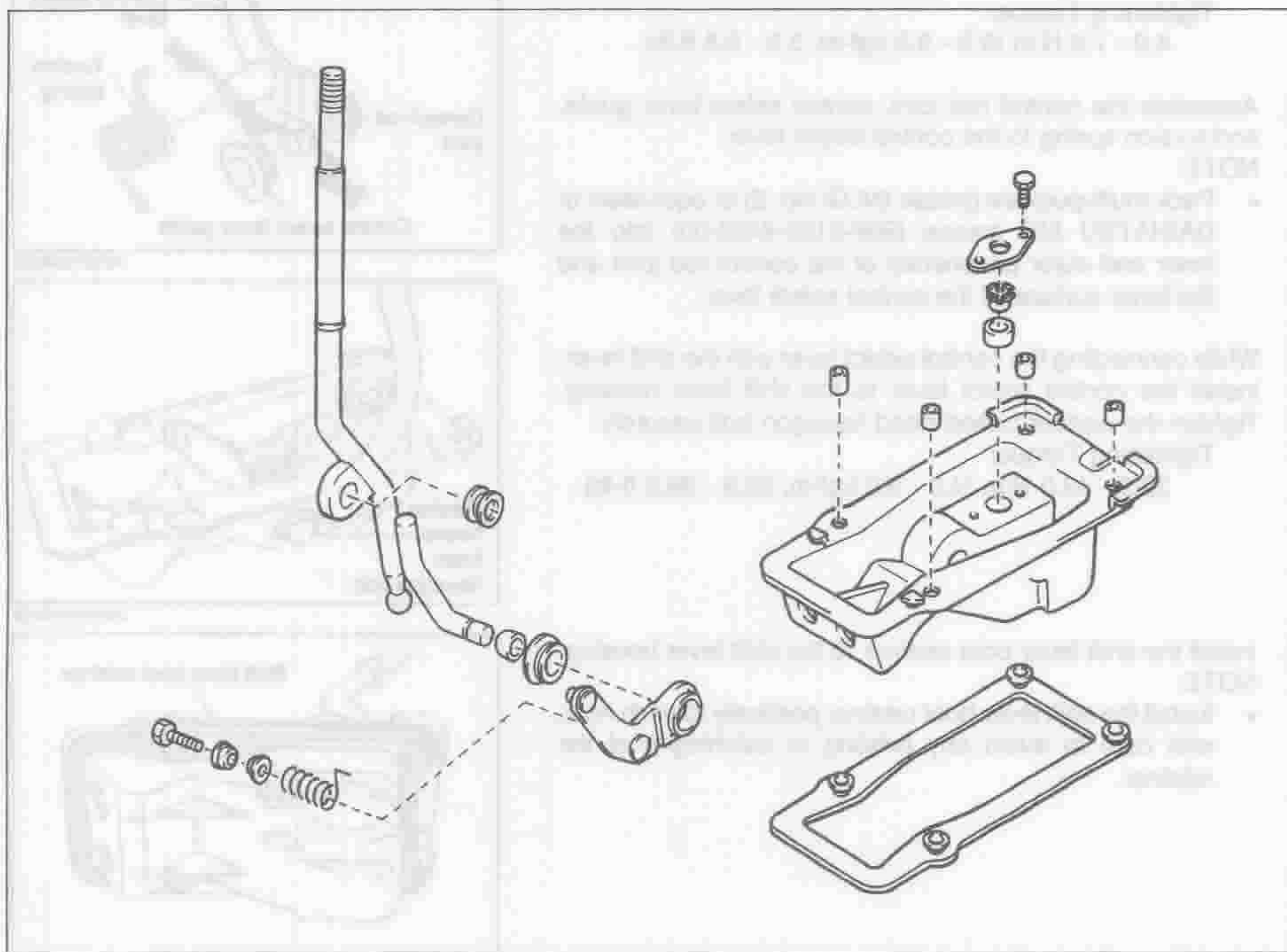
6. Remove the connecting rod bush from the shift lever.



LMT00139-00121

Inspection

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



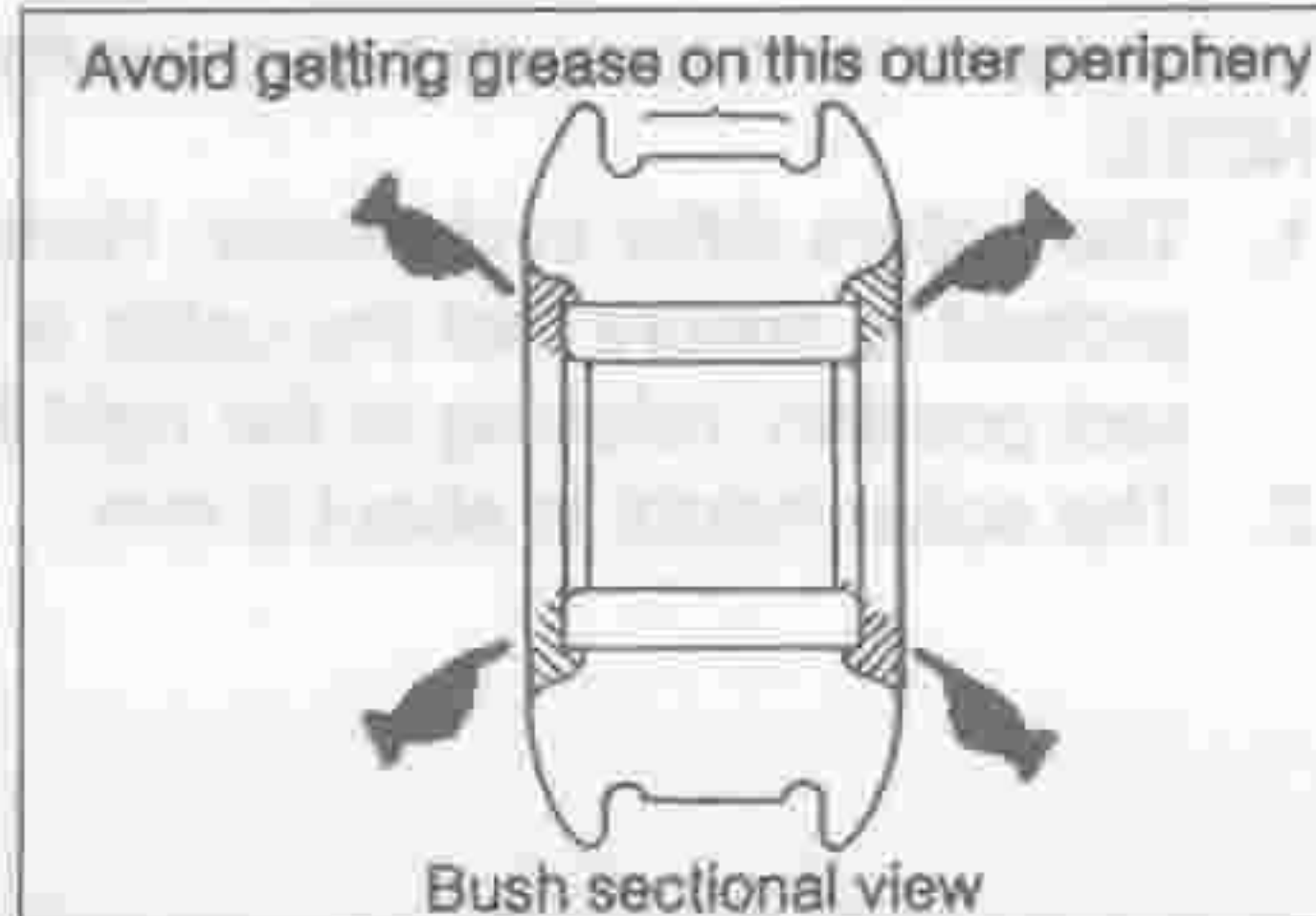
LM700140-00122

Assembly

1. Install the connecting rod bush to the shift lever.

NOTE:

1. Apply lithium soap base glycol grease [DAIHATSU rubber grease: 999-2504-8483-00] to the inside and end surface of the metal bush and to the rubber groove section.
2. Be careful to avoid getting grease on the outer periphery of the bush.

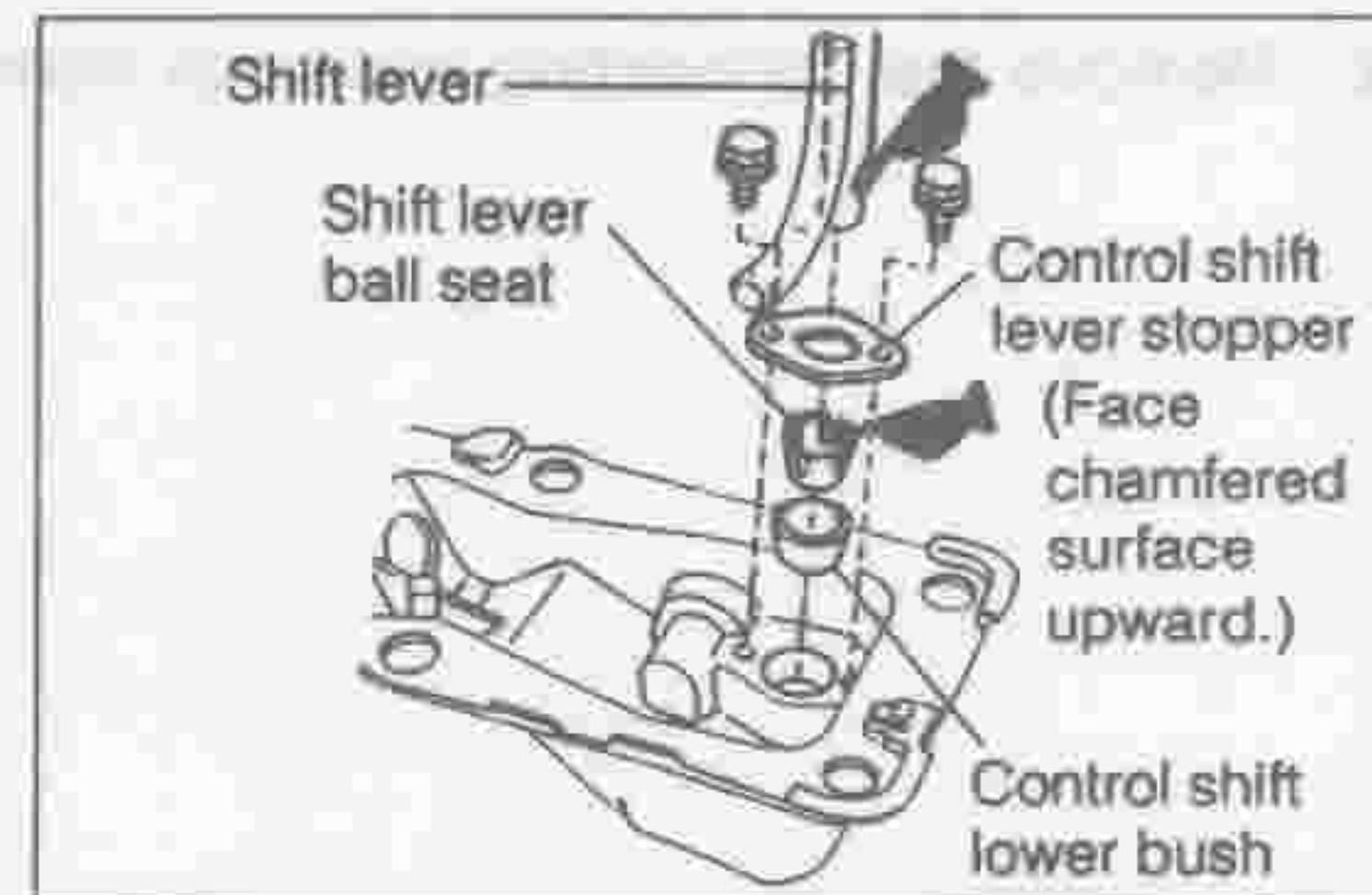


LMT00141-00123

2. Insert the control shift lower bush to the shift lever housing.
3. Install the control shift lever stopper and shift lever ball seat to the shift lever. Insert the shift lever into the control shift lower bush.

NOTE:

1. Apply multi-purpose grease (NLGI No. 2) or equivalent of DAIHATSU MP grease (999-2102-8483-00) to between the shift lever and the shift lever ball seat.
2. Install the control shift lever stopper in the correct direction.



LMT00142-00124

4. Tighten the control shift lever stopper with the bolts securely.

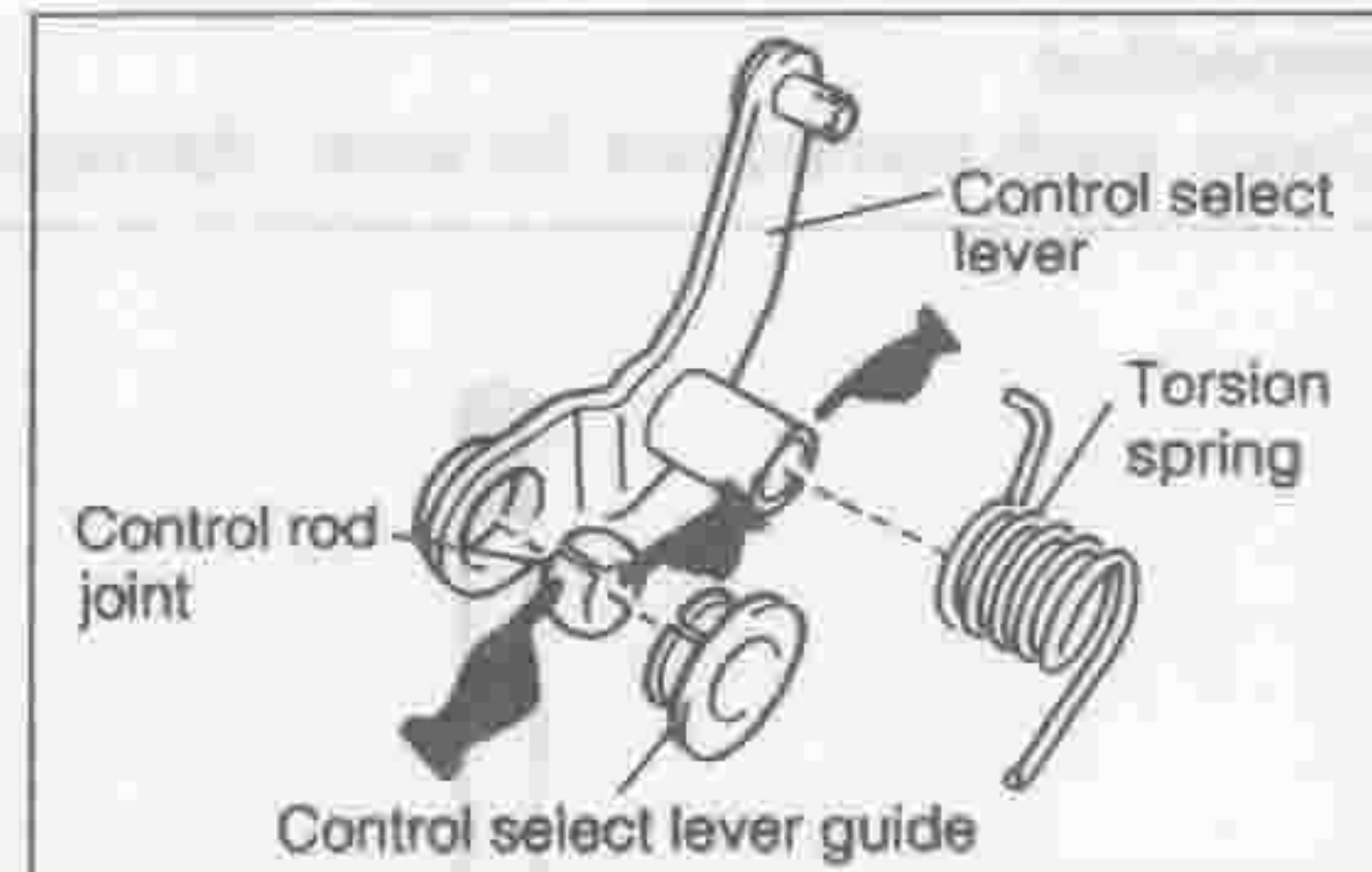
Tightening Torque:

4.9 - 7.8 N·m (0.5 - 0.8 kgf-m, 3.6 - 5.8 ft-lb)

5. Assemble the control rod joint, control select lever guide, and torsion spring to the control select lever.

NOTE:

- Pack multi-purpose grease (NLGI No. 2) or equivalent of DAIHATSU MP grease (999-2102-8483-00) into the inner and outer peripheries of the control rod joint and the inner surface of the control select lever.

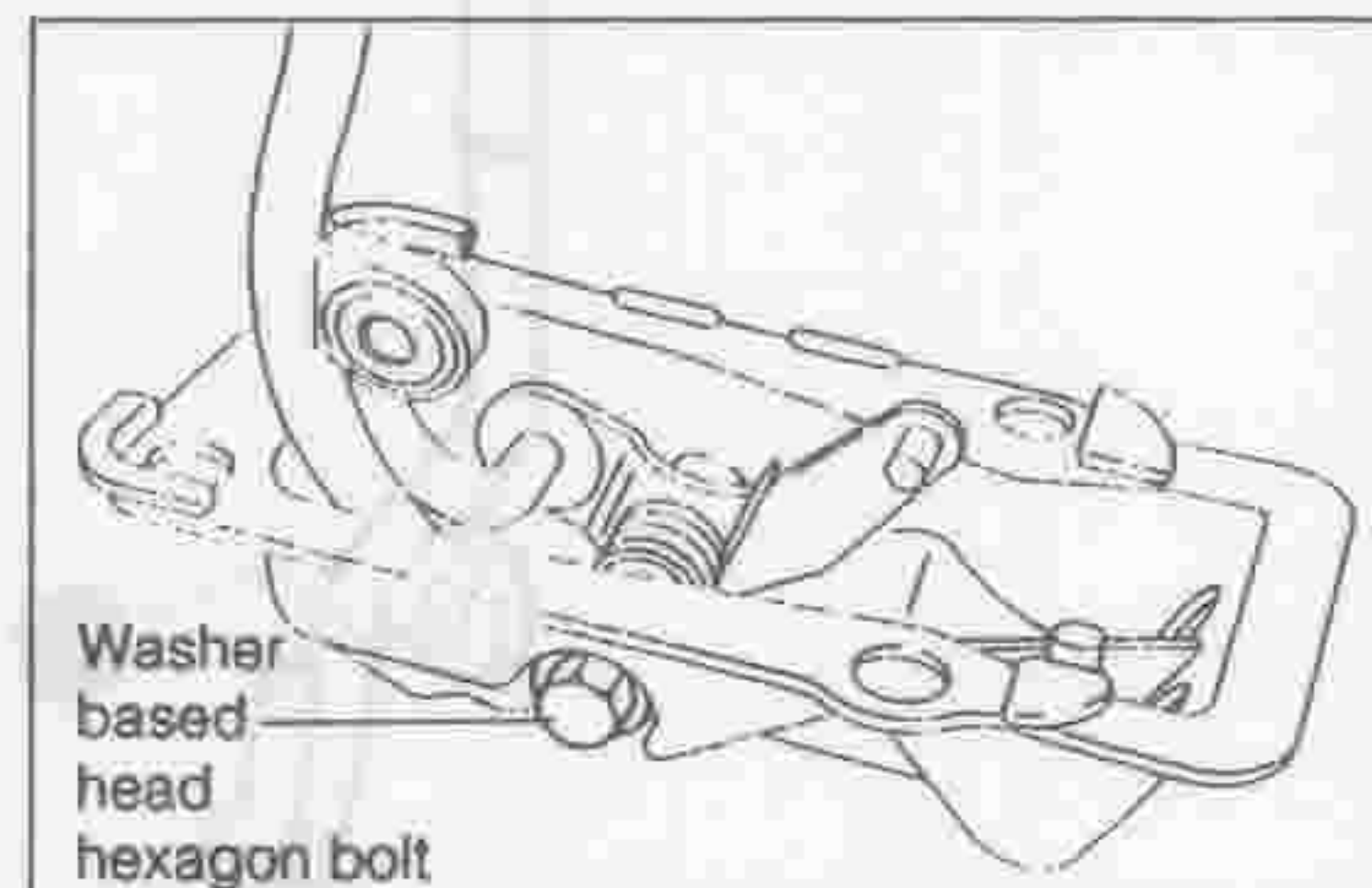


LMT00143-00125

6. While connecting the control select lever with the shift lever, install the control select lever to the shift lever housing. Tighten the washer based head hexagon bolt securely.

Tightening Torque:

39.2 - 49.0 N·m (4.0 - 5.0 kgf-m, 28.9 - 36.2 ft-lb)

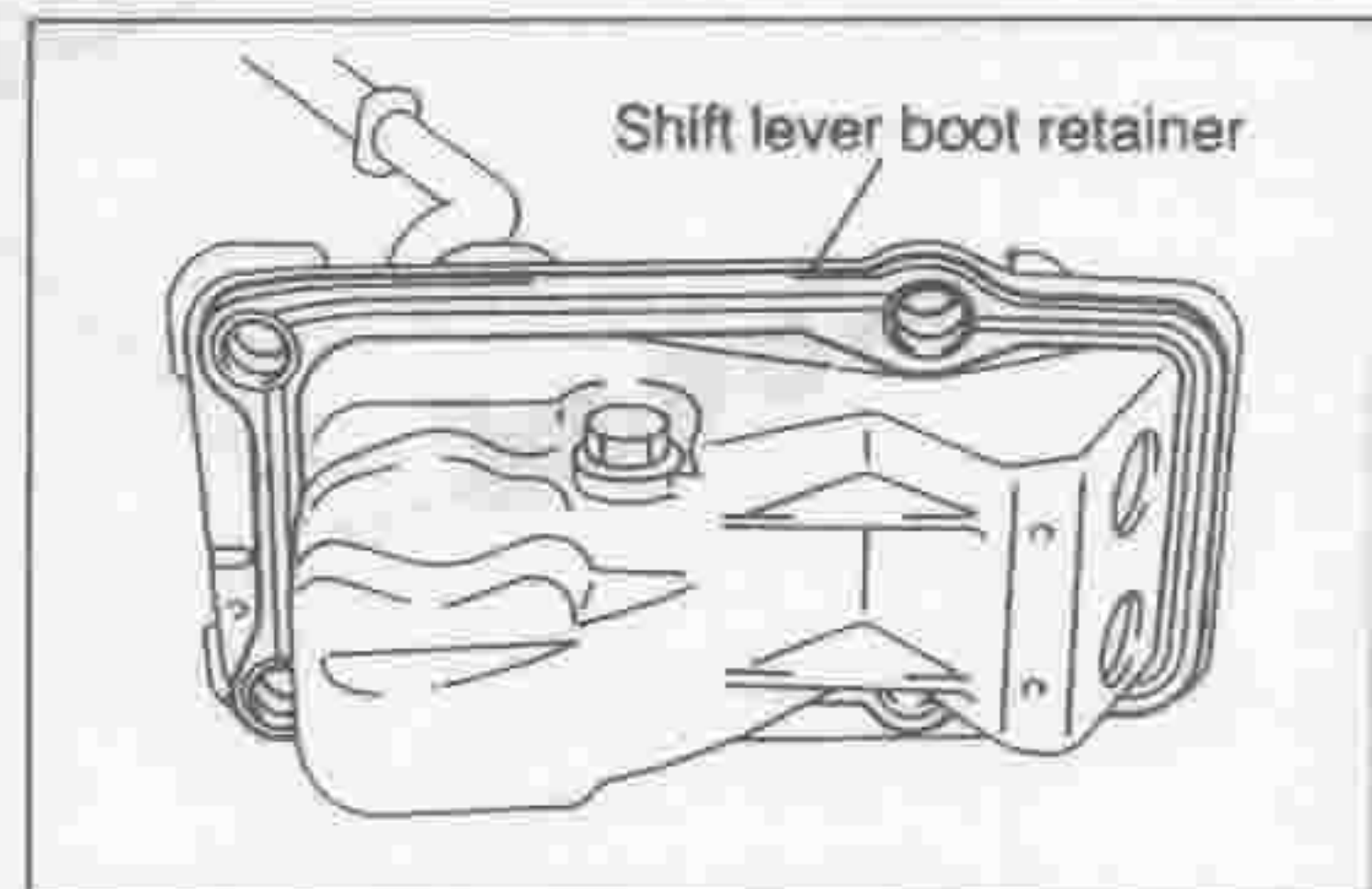


LMT00144-00126

7. Install the shift lever boot retainer to the shift lever housing.

NOTE:

- Install the shift lever boot retainer positively to each hole, with care to avoid any twisting or catching-in of the retainer.

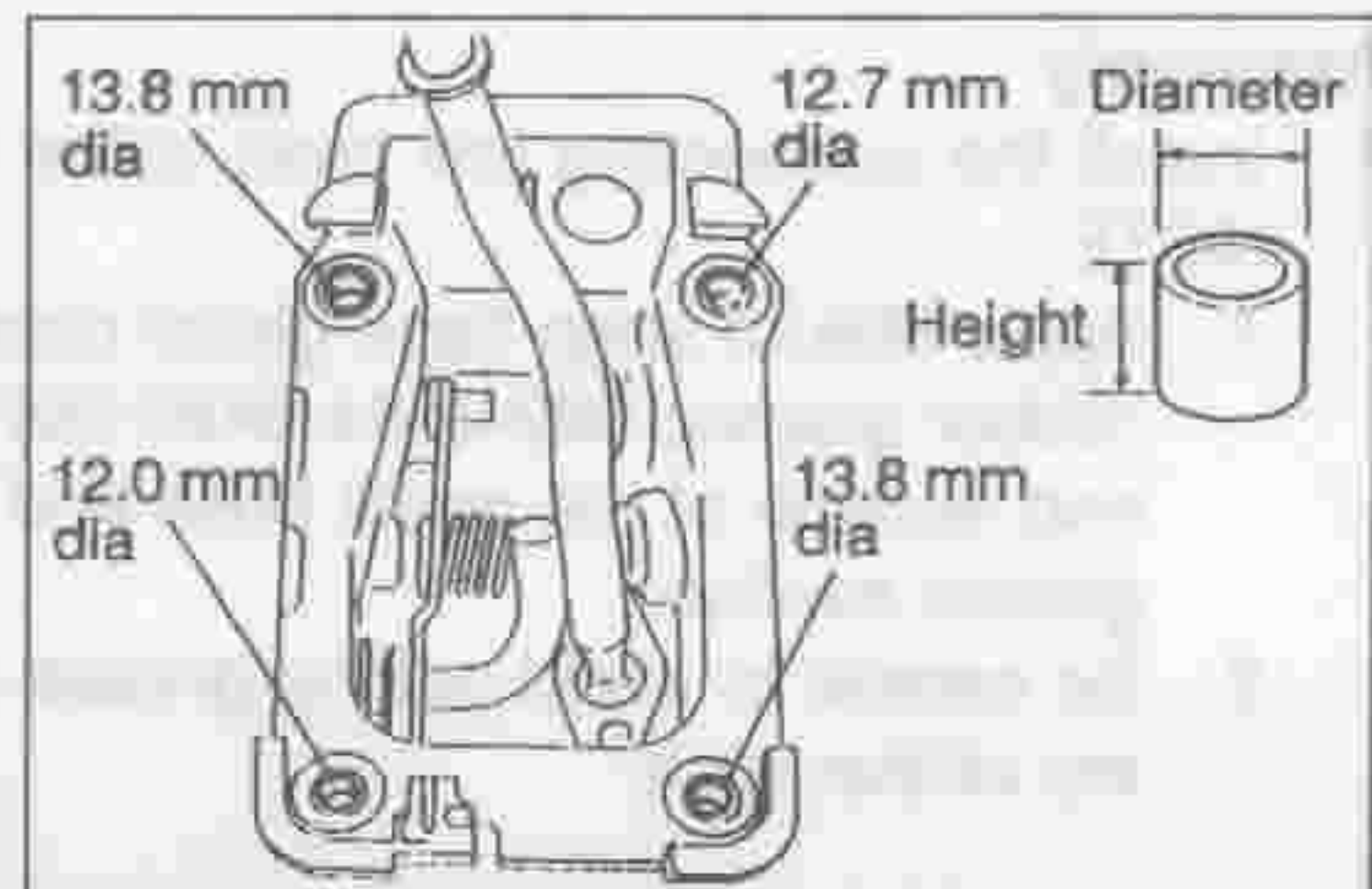


LMT00145-00127

8. Install the collars to each bolt pass-through hole.

NOTE:

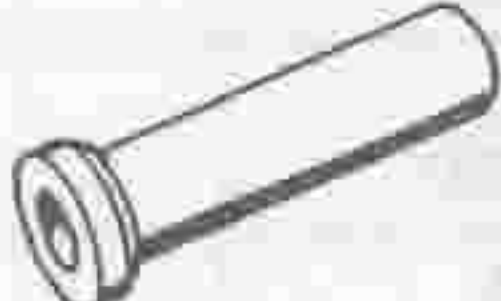
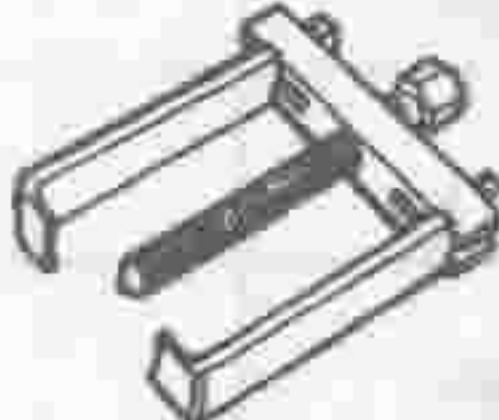
1. The collars differ in diameter. Hence, care must be exercised to ensure that the collar is installed in the correct position, referring to the right figure.
2. The collar height is about 9 mm.



LMT00146-00128

APPENDIX

SSTs

Figure	Part No.	Part name
	09309-87201-000	Transmission bearing replacer
	09309-87202-000	5MT friction damper replacer No. 1
	09334-87201-000	Transmission bearing puller
	09515-87201-000	Rear axle bearing outer replacer
	09618-87301-000	Transmission bearing replacer
	09950-20017-000	Universal puller
	09950-87701-000	Bearing remover

LMT00147-00129

SERVICE SPECIFICATIONS

APPENDIX

Unit: mm (inch)

Item		Specified value	Allowable limit	Remarks
Backlash	1st & 2nd gear	0.06 - 0.195 (0.0024 - 0.0077)	0.25 (0.0098)	
	3rd & 4th gear	0.06 - 0.190 (0.0024 - 0.0075)	0.25 (0.0098)	
	Reverse gear	0.06 - 0.20 (0.0024 - 0.0079)	0.25 (0.0098)	
	5th gear	0.06 - 0.20 (0.0024 - 0.0079)	0.25 (0.0098)	
	Final gear	0.06 - 0.20 (0.0024 - 0.0079)	0.25 (0.0098)	
	Differential side gear	0.02 - 0.20 (0.0008 - 0.0079)	0.25 (0.0098)	
End play	1st, 2nd, 3rd, & 5th gear	0.1 - 0.23 (0.0039 - 0.0091)	0.4 (0.0157)	
	4th gear	0.1 - 0.46 (0.0039 - 0.0181)	0.6 (0.0236)	
Outer diameter of output shaft section contacting needle roller bearing	Transmission case bearing section	32.5 $\begin{smallmatrix} +0.009 \\ -0.025 \\ -0.0004 \\ -0.0010 \end{smallmatrix}$ (1.280)	32.46 (1.278)	
	4th gear bearing section	30.0 $\begin{smallmatrix} +0.009 \\ -0.025 \\ -0.0004 \\ -0.0010 \end{smallmatrix}$ (1.181)	29.96 (1.180)	
	1st gear bearing section	25.0 $\begin{smallmatrix} +0.017 \\ +0.002 \\ -0.0007 \\ -0.0001 \end{smallmatrix}$ (0.984)	24.98 (0.9837)	
Outer diameter of bush or bearing inner race of each gear	1st gear bearing inner race	32.0 $\begin{smallmatrix} +0.009 \\ -0.025 \\ -0.0004 \\ -0.0010 \end{smallmatrix}$ (1.260)	31.96 (1.258)	
	2nd gear bush	40.0 $\begin{smallmatrix} +0.040 \\ -0.070 \\ -0.0016 \\ -0.0026 \end{smallmatrix}$ (1.575)	39.89 (1.571)	
	3rd gear bush	35.0 $\begin{smallmatrix} +0.040 \\ -0.080 \\ -0.0016 \\ -0.0031 \end{smallmatrix}$ (1.378)	34.89 (1.374)	
	5th gear bearing inner race	25.0 $\begin{smallmatrix} 0 \\ -0.013 \\ -0 \\ -0.0005 \end{smallmatrix}$ (0.984)	24.98 (0.984)	
Plate washer thickness of output shaft (differential unit side)		2.0 ± 0.05 (0.0787 ± 0.020)	1.85 (0.0728)	
Gear inner diameter	1st gear	37.0 $\begin{smallmatrix} +0.025 \\ 0 \\ -0.0010 \\ -0 \end{smallmatrix}$ (1.457)	37.04 (1.458)	
	2nd gear	40.0 $\begin{smallmatrix} +0.025 \\ 0 \\ -0.0010 \\ -0 \end{smallmatrix}$ (1.575)	40.04 (1.576)	
	3rd gear	35.0 $\begin{smallmatrix} +0.025 \\ 0 \\ -0.0010 \\ -0 \end{smallmatrix}$ (1.378)	35.04 (1.380)	
	4th gear	35.0 $\begin{smallmatrix} +0.025 \\ 0 \\ -0.0010 \\ -0 \end{smallmatrix}$ (1.378)	35.04 (1.380)	
Oil clearance	2nd gear	0.04 - 0.10 (0.0016 - 0.0039)	0.15 (0.0059)	
	3rd gear	0.04 - 0.10 (0.0016 - 0.0039)	0.15 (0.0059)	
Synchronizer ring-to-gear clearance		0.85 - 1.45 (0.0335 - 0.0570)	0.5 (0.020)	

Unit: mm (inch)

Item			Specified value	Allowable limit	Remarks
Key height	1st, 2nd		5.1 ± 0.1 (0.201 ± 0.0039)	4.7 (0.185)	
	3rd, 4th, 5th		5.0 ^{+0.2 -0.4} (0.197 ^{+0.0079 -0.0158})	4.3 (0.170)	
Spring outer dia- meter	1st, 2nd		69.0 ± 1 (2.717 ± 0.039)	67 (2.638)	
	3rd, 4th		59.0 ± 1 (2.323 ± 0.039)	57 (2.244)	
	5th		51.0 ± 1 (2.008 ± 0.039)	49 (1.929)	
Shift fork groove width of hub sleeve and reverse gear			7.0 ^{+0.12 -0.05} (0.276 ^{+0.0047 -0.0020})	7.3 (0.287)	
Reverse idler gear, shaft and spring	Shaft outer diameter		15 ^{+0.032 -0.059} (0.591 ^{+0.0013 -0.0023})	14.90 (0.587)	
	Groove width		8 ^{+0.058 -0} (0.315 ^{+0.0023 -0})	8.2 (0.322)	
	Free length of spring for idler gear		55 (2.17)	53 (2.09)	
Wear of both end surface contact position with gear			—	0.2 (0.0079)	
Shift fork & re- verse shift head	Thickness of fork tip-end	1st, 2nd & 5th	7.0 ^{+0 -0.4} (0.276 ^{+0 -0.0157})	6.3 (0.248)	
		3rd & 4th	7.0 - 0.2 (0.276 - 0.0079)	6.3 (0.248)	
	Groove width of shift inner lever contact section		12.1 ^{+0.1 -0} (0.476 ^{+0.0079 -0})	12.7 (0.500)	
Reverse shift arm	Contact surface with reverse idler gear		8.0 ^{+0.08 -0.116} (0.315 ^{+0.0031 -0.0046})	7.7 (0.303)	
	Groove width of reverse shift arm pin		9.0 ^{+0.0043 -0} (0.354 ^{+0.0017 -0})	9.2 (0.362)	
Reverse shift arm head & reverse shift arm pin	Groove width of reverse shift arm pin contact section		9.0 ^{+0.1 -0} (0.354 ^{+0.0039 -0})	9.1 (0.358)	
	Pin diameter of reverse shift arm head contact section		6.5 ± 0.1 (0.256 ± 0.0039)	6.7 (0.264)	
Shift inner lever	Contact section width with shift fork		12.0 ^{+0 -0.1} (0.472 ^{+0 -0.0039})	11.8 (0.465)	
Shift & select lever shaft support inner diameter			15.0 ^{+0.093 -0.068} (0.591 ^{+0.0037 -0.0026})	15.2 (0.598)	

Unit: mm (inch)

	Item	Specified value	Allowable limit	Remarks
Differential gear unit	Outer diameter of side gear boss section	$32.0^{+0.02}_{-0.05}$ (1.260 ^{+0.0008} _{-0.0020})	31.90 (1.256)	
	Hole diameter of pinion	$15.0^{+0.008}_{-0.003}$ (0.591 ^{+0.0003} _{-0.0001})	15.03 (0.591)	
	Outer diameter of pinion shaft	$15.0^{+0.046}_{-0.056}$ (0.591 ^{+0.0018} _{-0.0022})	14.90 (0.587)	
	Thickness of side gear thrust washer	0.8 ± 0.05 (0.0315 $\pm$ 0.002)	0.7 (0.0276)	
	Inner diameter of side gear boss inserting hole of differential case	$32.5^{+0.4}_{-0.1}$ (1.280 ^{+0.0157} _{-0.0039})	32.58 (1.283)	

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TIGHTENING TORQUES

Tightening components	Tightening torque		
	N·m	kgf-m	ft-lb
Control shaft cover × Shift & select lever shaft support	29.4 - 44.1	3.0 - 4.5	21.7 - 32.5
Shift & select lever shaft support × Transmission case	14.7 - 21.6	1.5 - 2.2	10.8 - 15.9
Shift inner lever × Shift & select lever shaft (Bolt)	39.2 - 49.0	4.0 - 5.0	28.9 - 36.2
Shift inner lever × Shift & select lever shaft (Nut)	19.6 - 29.4	2.0 - 3.0	14.5 - 21.7
Reverse restrict pin × Transmission case	29.4 - 49.0	3.0 - 5.0	21.7 - 36.2
Oil guide pipe × Transmission case	3.9 - 6.9	0.4 - 0.7	2.9 - 5.1
Transmission upper case × Transmission lower case (M8 bolt)	14.7 - 21.6	1.5 - 2.2	10.8 - 15.9
Transmission upper case × Transmission lower case (M10 bolt)	29.4 - 44.1	3.0 - 4.5	21.7 - 32.5
Input and output shaft × Lock nut	58.8 - 68.6	6.0 - 7.0	43.4 - 50.6
Backup lamp switch × Transmission case cover	29.4 - 49.0	3.0 - 5.0	21.7 - 32.5
Transmission case cover × Transmission case	14.7 - 21.6	1.5 - 2.2	10.8 - 15.9
Speedometer shaft sleeve lock nut × Transmission case	6.9 - 9.8	0.7 - 1.0	5.1 - 7.2
Shift shaft support × Transmission case	14.7 - 21.6	1.5 - 2.2	10.8 - 15.9
Oil filler plug × Transmission case	29.4 - 49.0	3.0 - 5.0	21.7 - 32.5
Oil drain plug × Transmission case	29.4 - 49.0	3.0 - 5.0	21.7 - 32.5
Differential ring gear × Differential case (w/wet condition)	88.2 - 103.0	9.0 - 10.5	65.1 - 75.9
Shift cable clamp × Engine mounting frame	9.8 - 15.7	1.0 - 1.6	7.2 - 11.6
Select cable bracket × Transmission case	14.7 - 21.6	1.5 - 2.2	10.8 - 15.9
Shift lever assembly × Body	9.8 - 15.7	1.0 - 1.6	7.2 - 11.6

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