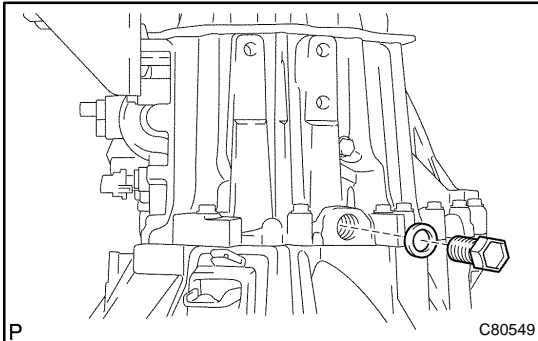
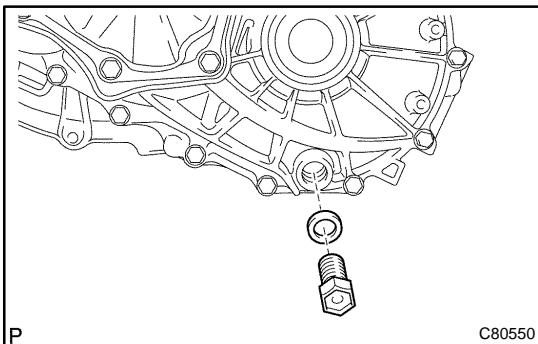


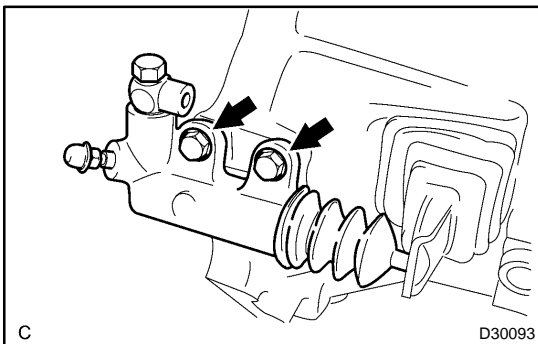
OVERHAUL



- 1. REMOVE MANUAL TRANSMISSION FILLER PLUG**
 - (a) Remove the manual transmission filler plug and gasket from the manual transmission case.



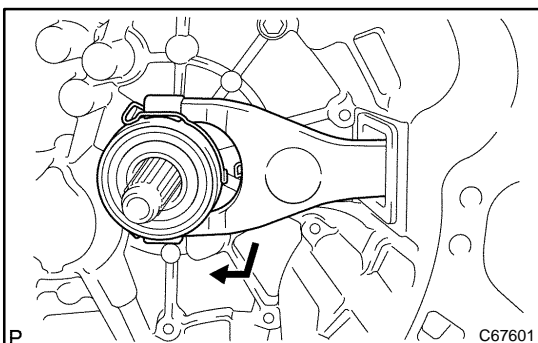
- 2. REMOVE DRAIN (MTM) PLUG SUB-ASSY**
 - (a) Remove the drain plug and gasket from the manual transmission case.



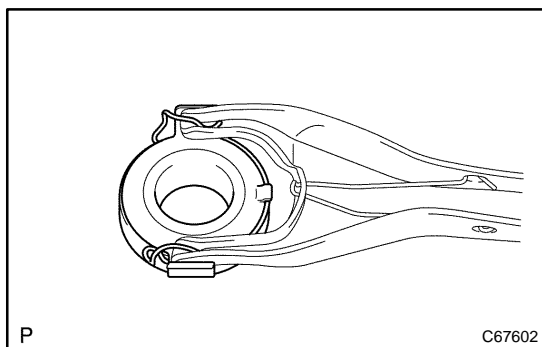
- 3. REMOVE CLUTCH RELEASE CYLINDER ASSY**
 - (a) Remove the 2 bolts and clutch release cylinder assy.

- 4. REMOVE SPEEDOMETER DRIVEN HOLE COVER SUB-ASSY**

- (a) Remove the bolt and speedometer driven hole cover sub-assy.
- (b) Remove the O-ring from the speedometer driven hole cover sub-assy.

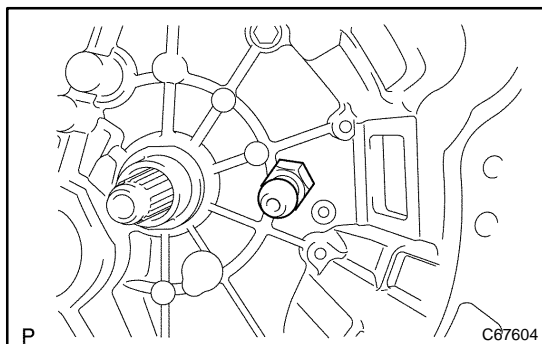


- 5. REMOVE CLUTCH RELEASE FORK SUB-ASSY**
 - (a) Remove the clutch release fork sub-assy with clutch release bearing assy from the front transaxle case.



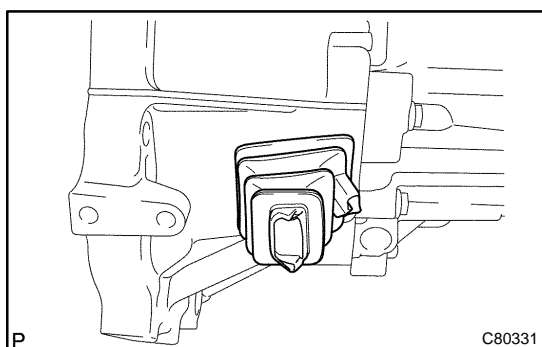
6. REMOVE CLUTCH RELEASE BEARING ASSY

- (a) Remove the clutch release fork bearing hub clip and clutch release bearing assy from the clutch release fork sub-assy.



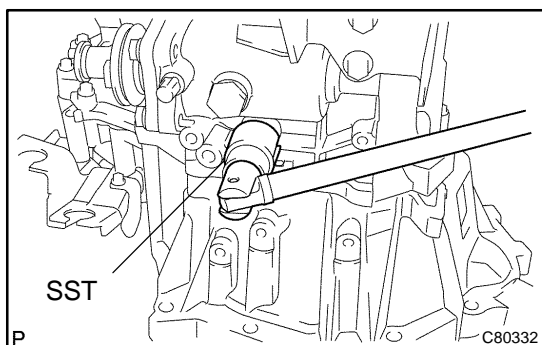
7. REMOVE RELEASE FORK SUPPORT

- (a) Remove the clutch release fork support from the front transaxle case.



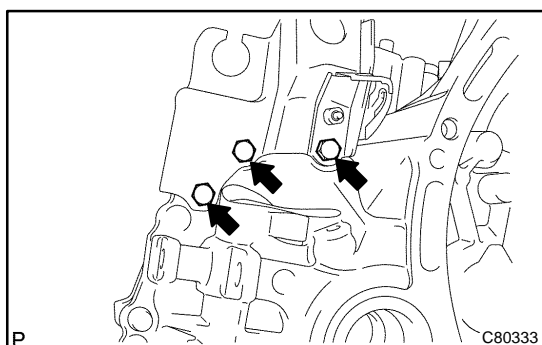
8. REMOVE CLUTCH RELEASE FORK BOOT

- (a) Remove the clutch release fork boot from the front transaxle case.



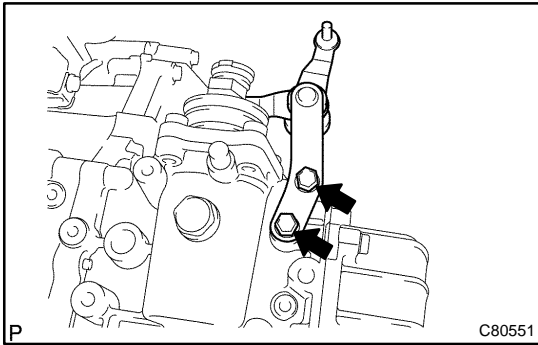
9. REMOVE BACK UP LAMP SWITCH ASSY

- (a) Using SST, remove the back-up lamp switch assy and gasket from the manual transmission case.
SST 09817-16011

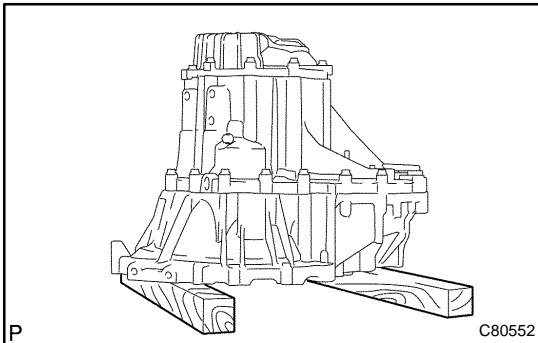


10. REMOVE FLOOR SHIFT CONTROL LEVER HOUSING SUPPORT BRACKET

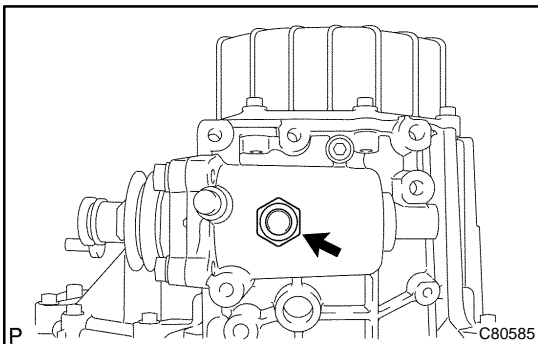
- (a) Remove the 3 bolts and control lever housing support bracket from the front transaxle case.

**11. REMOVE SELECTING BELL CRANK ASSY**

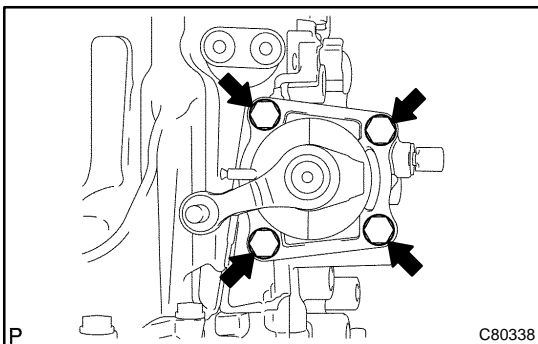
- (a) Remove the 2 bolts and selecting bell crank assy from the manual transmission case.

**12. FIX MANUAL TRANSAXLE ASSY**

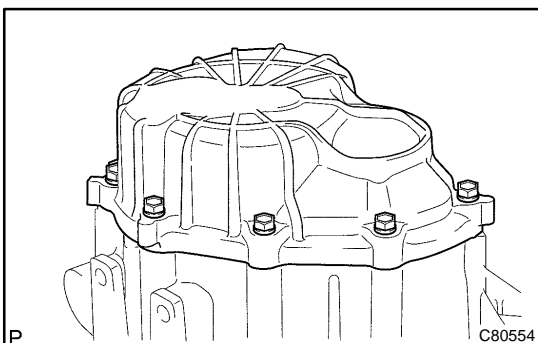
- (a) Using 2 wooden blocks, fix the manual transaxle assy.

**13. REMOVE LOCK BALL ASSY NO.1**

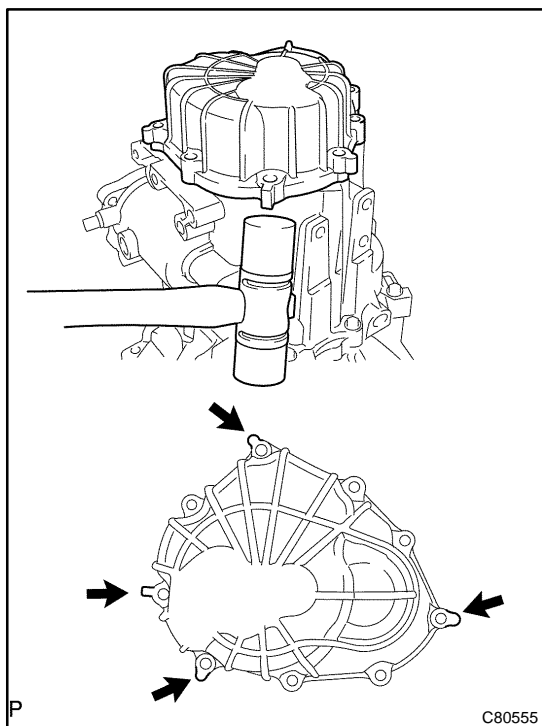
- (a) Remove the lock ball assy No.1 from the manual transmission case.

**14. REMOVE SHIFT & SELECT LEVER SHAFT ASSY**

- (a) Remove the 4 bolts, shift & select lever shaft assy and gasket from the manual transmission case.

**15. REMOVE MANUAL TRANSMISSION CASE COVER SUB-ASSY**

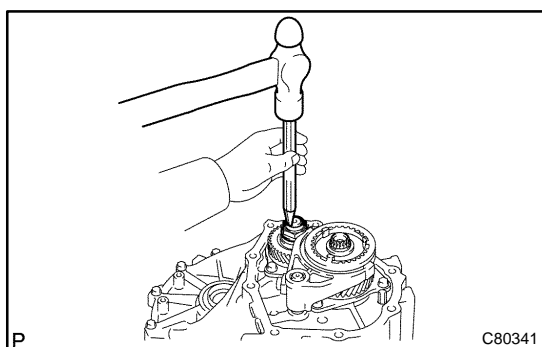
- (a) Remove the 9 bolts.



- (b) Gently tap the protrusion of the manual transmission case cover sub-assy with a hammer and remove it.

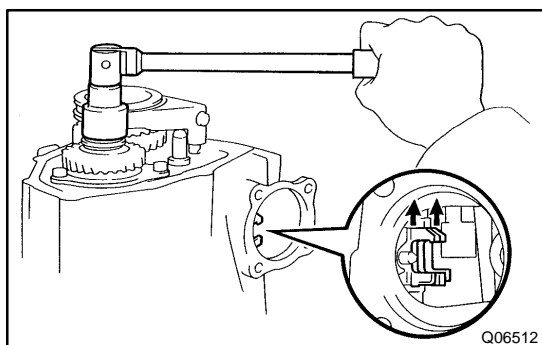
NOTICE:

Be careful not to damage the manual transmission case sub-assy.

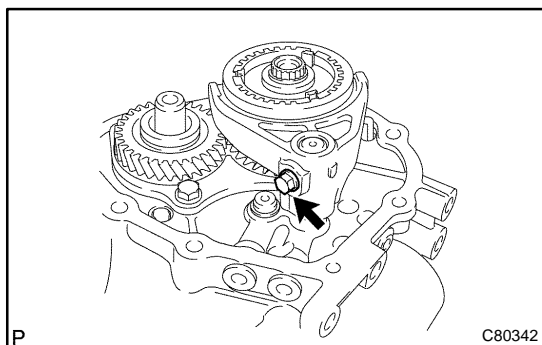


16. REMOVE MANUAL TRANSMISSION OUTPUT SHAFT REAR SET NUT

- (a) Using a chisel and a hammer, loosen the staked part of the manual transmission output shaft rear set nut.

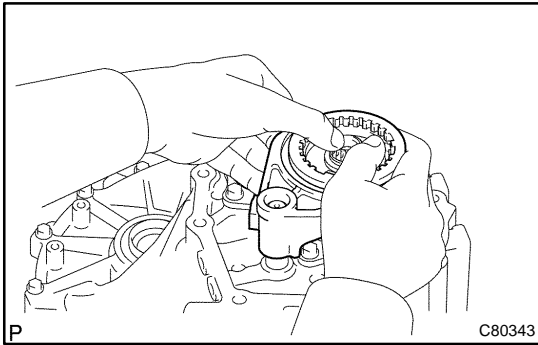


- (b) Engage the gears to make them the double meshed.
 (c) Remove the manual transmission output shaft rear set nut.
 (d) Disengage the double meshing of the gear.

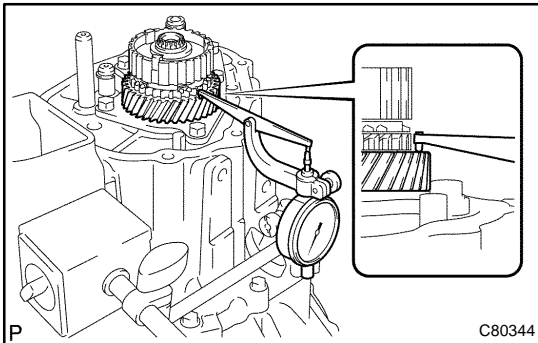


17. REMOVE GEAR SHIFT FORK NO.3

- (a) Remove the gear shift fork lock bolt from the gear shift fork No.3.



- (b) Remove the hub sleeve No.3 and gear shift fork No.3 from the transmission clutch hub No.3.



18. INSPECT 5TH GEAR THRUST CLEARANCE

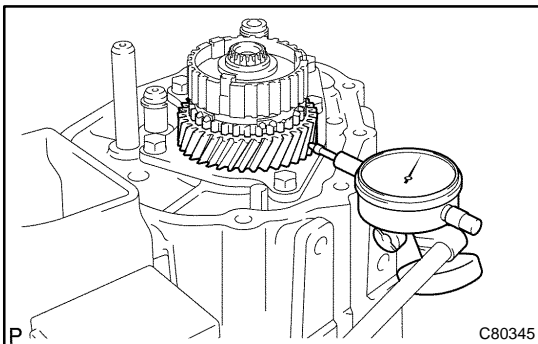
- (a) Using a dial indicator, measure the thrust clearance.

Standard clearance:

0.10 to 0.57 mm (0.0039 to 0.0224 in.)

Maximum clearance:

0.57 mm (0.0224 in.)



19. INSPECT 5TH GEAR RADIAL CLEARANCE

- (a) Using a dial indicator, measure the radial clearance.

Standard clearance:

KOYO made:

0.015 to 0.058 mm (0.0006 to 0.0023 in.)

NSK made:

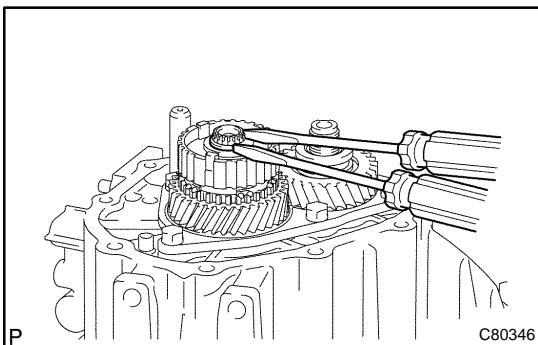
0.015 to 0.056 mm (0.0006 to 0.0022 in.)

Maximum clearance:

KOYO made: 0.058 mm (0.0023 in.)

NSK made: 0.056 mm (0.0022 in.)

If the clearance exceeds the maximum, replace the gear, needle roller bearing or shaft.

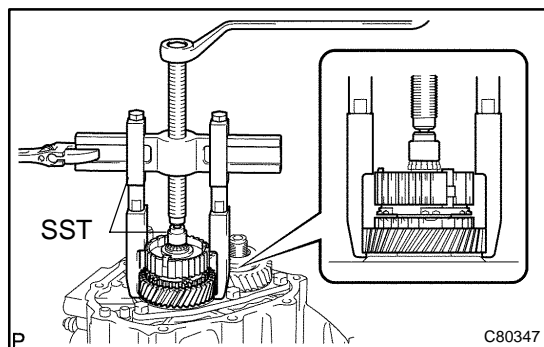


20. REMOVE TRANSMISSION CLUTCH HUB NO.3

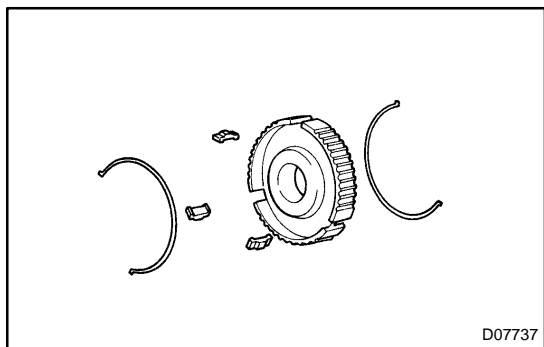
- (a) Using 2 screwdrivers and a hammer, tap out the snap ring.

HINT:

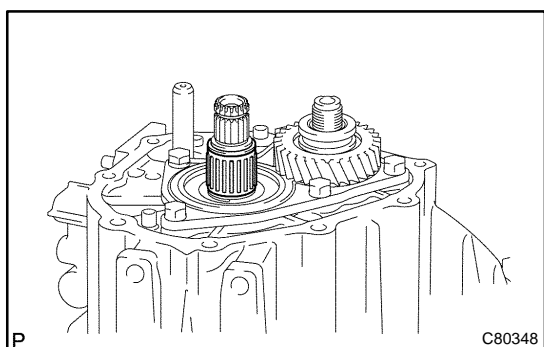
Use a shop rag to keep the snap ring from flying.



- (b) Using SST, remove the transmission clutch hub No.3, 5th gear and synchronizer ring No.3 from the input shaft.
 SST 09950-40011 (09951-04020, 09952-04010, 09953-04030, 09954-04010, 09955-04071, 09957-04010), 09950-60010 (09951-00200)

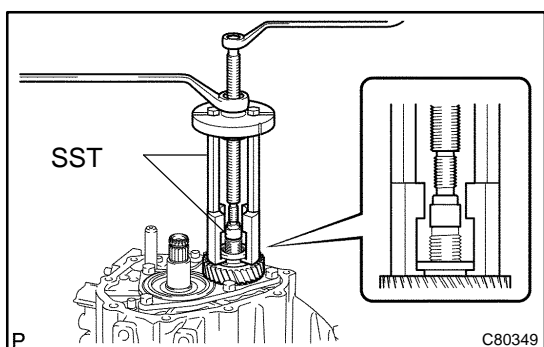


- (c) Remove the 3 synchromesh shifting keys and 2 synchromesh shifting key springs from the transmission clutch hub No.3.



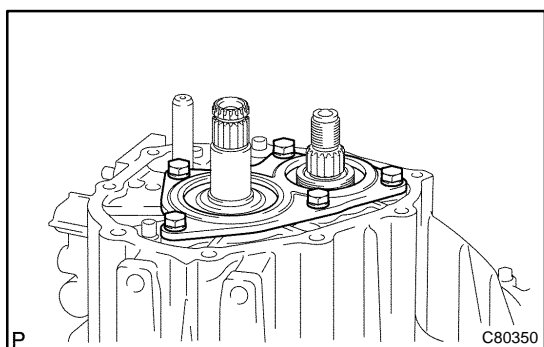
21. REMOVE 5TH GEAR NEEDLE ROLLER BEARING

- (a) Remove the 5th gear needle roller bearing and 5th gear bearing spacer from the input shaft.



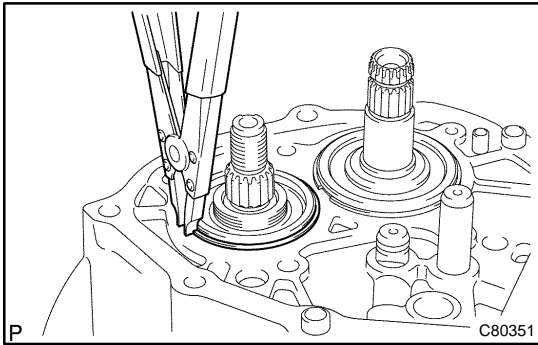
22. REMOVE 5TH DRIVEN GEAR

- (a) Using SST, remove the 5th driven gear from the output shaft.
 SST 09950-30012 (09951-03010, 09953-03010, 09954-03010, 09955-03011, 09957-04010), 09950-60010 (09951-00190)



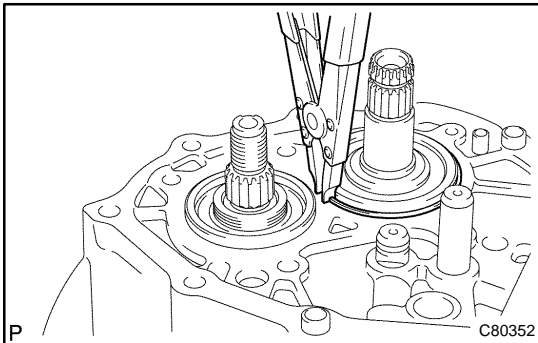
23. REMOVE BEARING RETAINER REAR (MTM)

- (a) Remove the 5 bolts and bearing retainer rear from the manual transmission case.



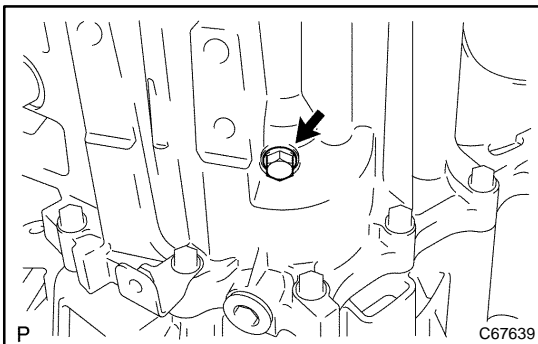
24. REMOVE OUTPUT SHAFT REAR BEARING HOLE SNAP RING

- (a) Using a snap ring expander, remove the output shaft rear bearing hole snap ring from the output shaft.



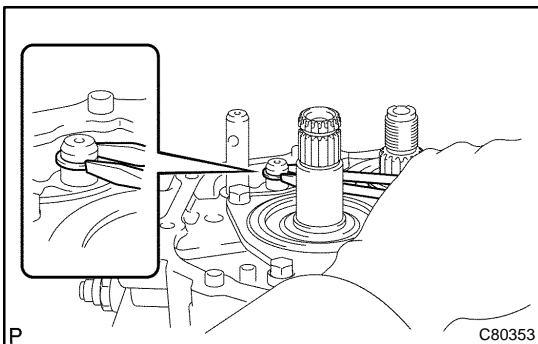
25. REMOVE INPUT SHAFT REAR BEARING HOLE SNAP RING

- (a) Using a snap ring expander, remove the input shaft rear bearing hole snap ring from the input shaft.



26. REMOVE REVERSE IDLER GEAR SHAFT BOLT

- (a) Remove the reverse idler gear shaft bolt and reverse idler gear shaft gasket from the manual transmission case.

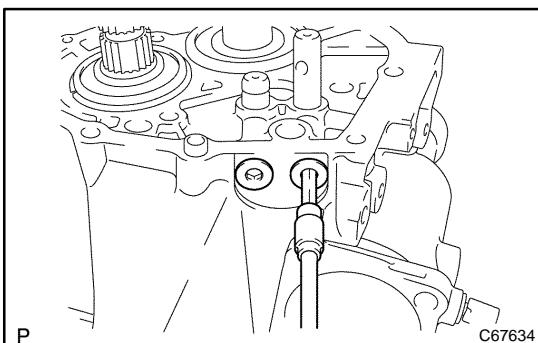


27. REMOVE SHIFT FORK SHAFT SHAFT SNAP RING

- (a) Using 2 screwdrivers and a hammer, tap out the snap ring.

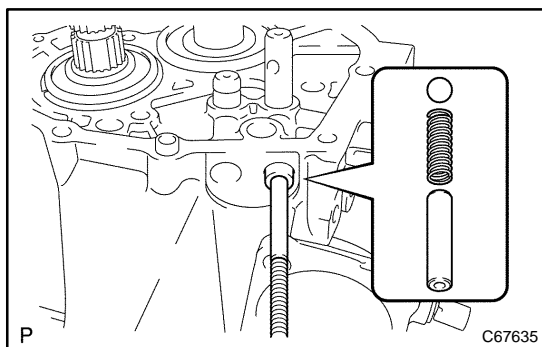
HINT:

Use a shop rag to keep the shifting key spring from flying.

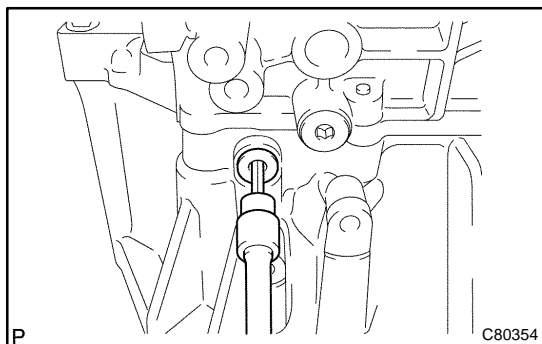


28. REMOVE SHIFT DETENT BALL

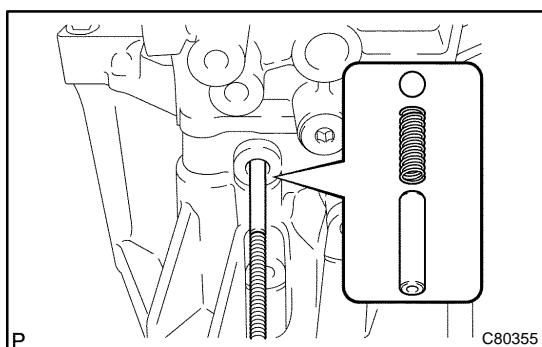
- (a) Using a hexagon wrench, remove the 2 shift detent ball plugs from the manual transmission case.



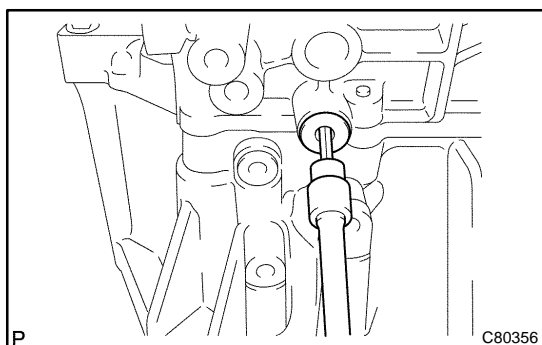
- (b) Using a magnetic finger, remove the 2 seats, springs and balls from the manual transmission case.



- (c) Using a hexagon wrench, remove the shift detent ball plug from the front transaxle case.

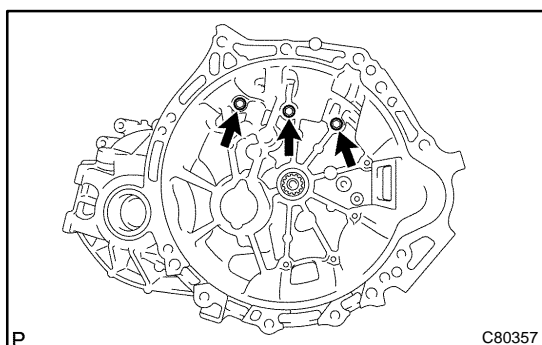


- (d) Using a magnetic finger, remove the seat, spring and ball from the front transaxle case.



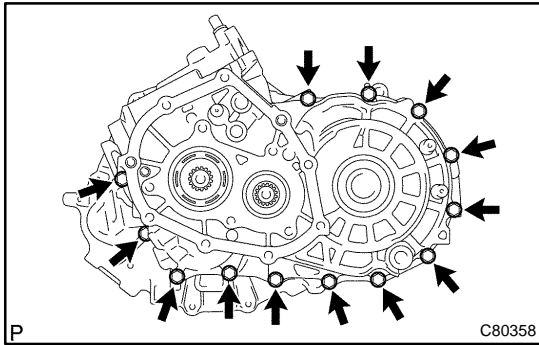
29. REMOVE LOCK BALL ASSY NO.2

- (a) Using a hexagon wrench, remove the lock ball assy No.2 from the manual transmission case.



30. REMOVE MANUAL TRANSMISSION CASE

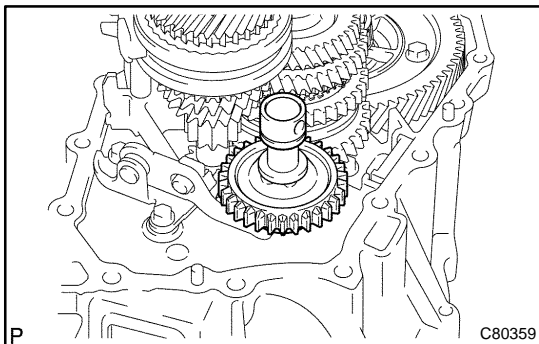
- (a) Remove the 3 bolts from the front transaxle case.



- (b) Remove the 13 bolts from the manual transmission case.

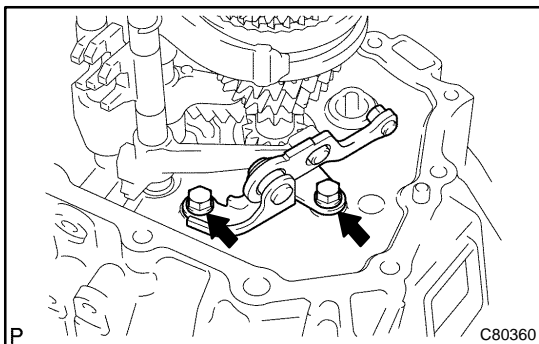


- (c) Gently tap the transmission case with a brass bar and hammer and remove it from the transaxle case.



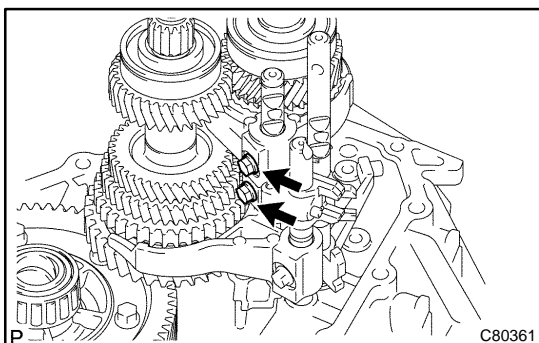
31. REMOVE REVERSE IDLER GEAR SUB-ASSY

- (a) Remove the reverse idler gear, thrust washer and reverse idler gear shaft from the front transaxle case.



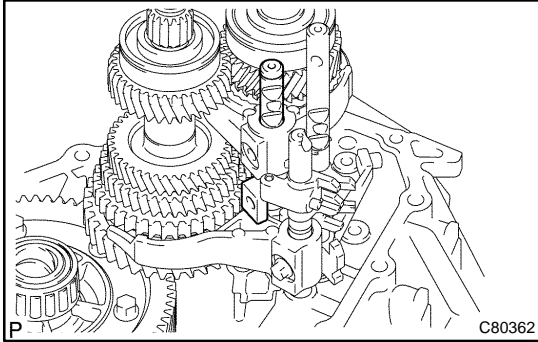
32. REMOVE REVERSE SHIFT ARM BRACKET ASSY

- (a) Remove the 2 bolts and reverse shift arm bracket assy from the front transaxle case.

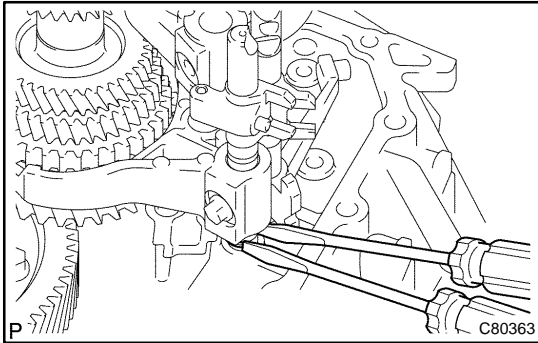


33. REMOVE GEAR SHIFT FORK SHAFT NO.2

- (a) Remove the 2 bolts from the gear shift fork No.2 and gear shift head No.1.



- (b) Remove the gear shift fork shaft No.2 and gear shift head No.1 from the front transaxle case.

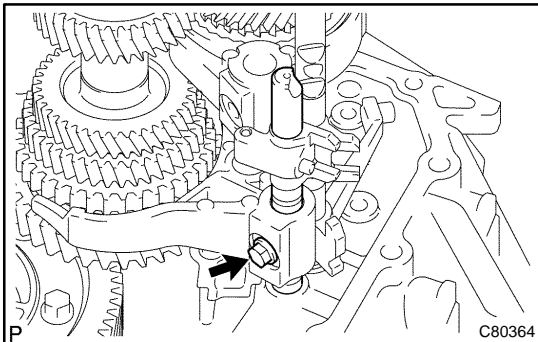


34. REMOVE GEAR SHIFT FORK SHAFT NO.1

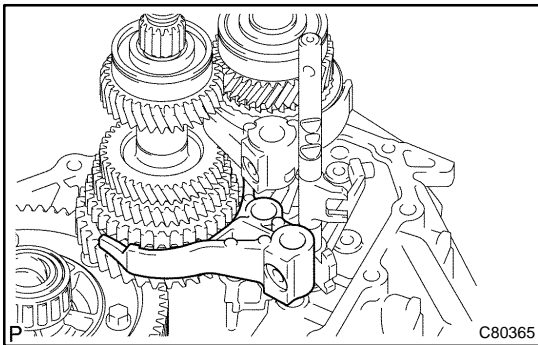
- (a) Using 2 screwdrivers and a hammer, tap out the snap rings.

HINT:

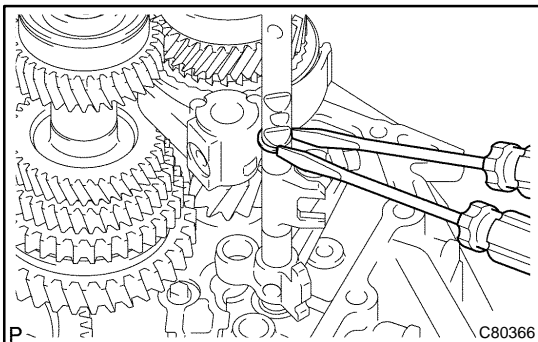
Use a shop rag to keep the snap ring from flying.



- (b) Remove the shift fork set bolt and gear shift fork shaft No.1 from the gear shift fork No.1.



- (c) Remove the shift fork No.1.

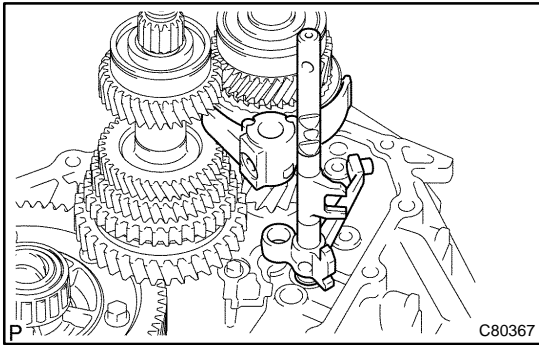


35. REMOVE GEAR SHIFT FORK SHAFT NO.3

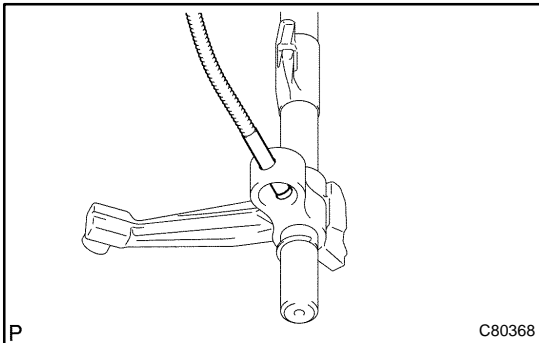
- (a) Using 2 screwdrivers and a hammer, tap out the snap ring from the gear shift fork shaft No.3.

HINT:

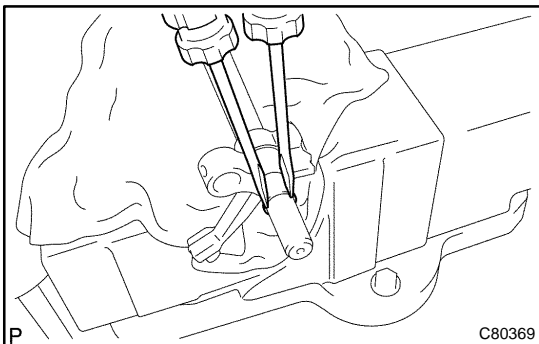
Use a shop rag to keep the snap ring from flying.



- (b) Remove the shift fork shaft No.3 with reverse shift fork and gear shift fork No.2 from the manual transaxle case.



- (c) Using a magnetic finger, remove the 2 reverse shift fork balls from the reverse shift fork.

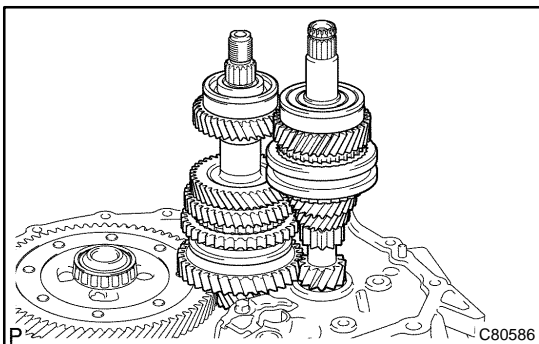


- (d) Using 2 screwdrivers and a hammer, tap out the snap ring from the shift fork shaft No.3.

HINT:

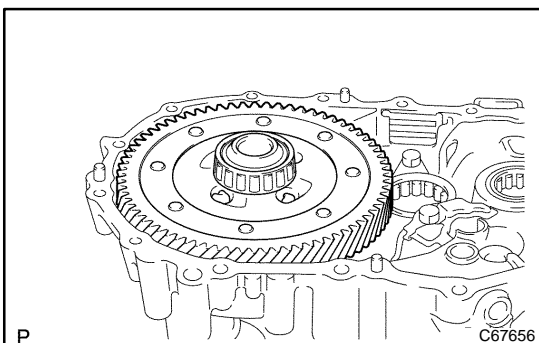
Use a shop rag to keep the snap ring from flying.

- (e) Remove the reverse shift fork from the gear shift fork shaft No.3.



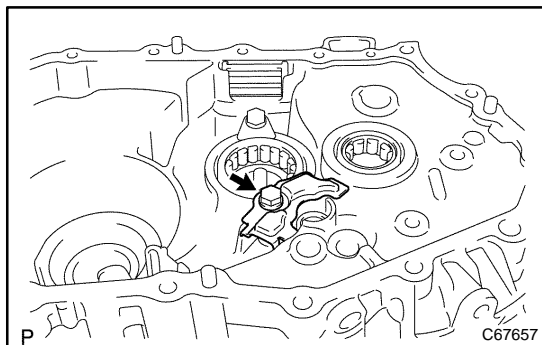
36. REMOVE INPUT SHAFT ASSY

- (a) Remove the input shaft assy and output shaft assy from the front transaxle case.

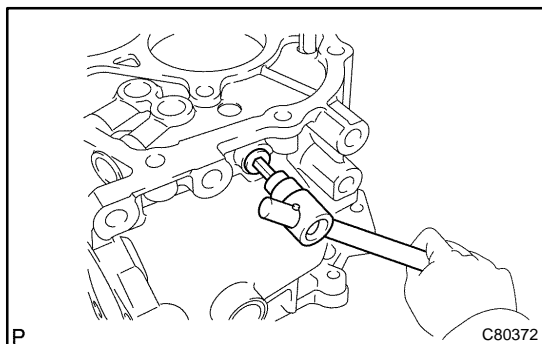


37. REMOVE DIFFERENTIAL CASE ASSY

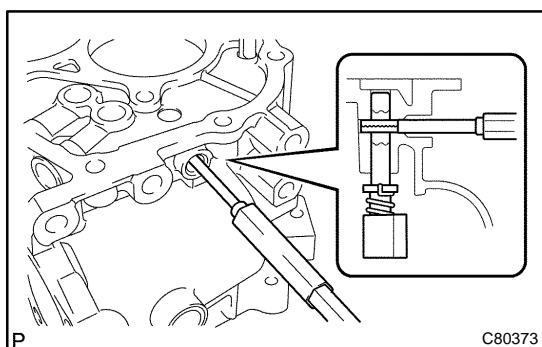
- (a) Remove the differential case assy from the front transaxle case.

**38. REMOVE MANUAL TRANSAXLE CASE RECEIVER**

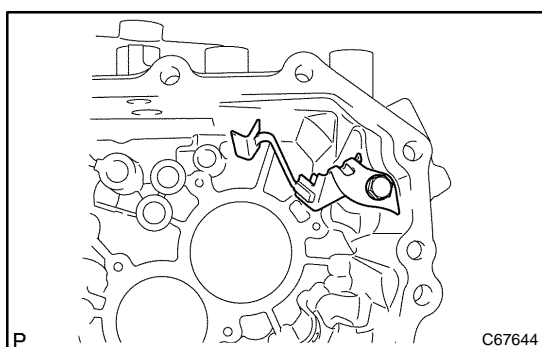
- (a) Remove the bolt and manual transaxle case receiver from the front transaxle case.

**39. REMOVE REVERSE RESTRICT PIN ASSY**

- (a) Using a hexagon wrench, remove the reverse restrict pin plug from the manual transmission case.



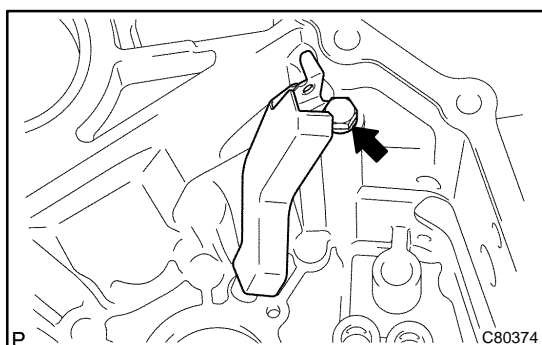
- (b) Using a pin punch (ϕ 5 mm) and a hammer, drive out the slotted spring pin and reverse restrict pin assy from the manual transmission case.

**40. REMOVE OIL RECEIVER PIPE NO.1 (MTM)**

- (a) Remove the bolt and oil receiver pipe No.1 from the manual transmission case.

NOTICE:

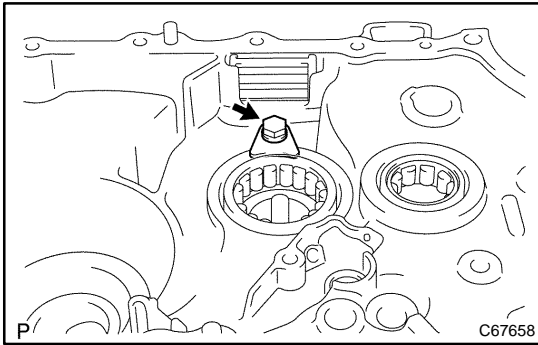
Be careful not to damage the oil receiver pipe No.1.

**41. REMOVE OIL RECEIVER PIPE NO.2 (MTM)**

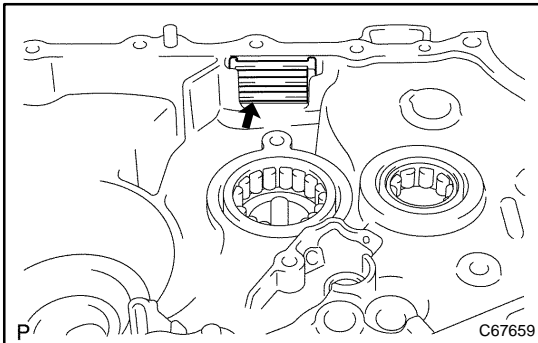
- (a) Remove the bolt and oil receiver pipe No.2 from the manual transmission case.

NOTICE:

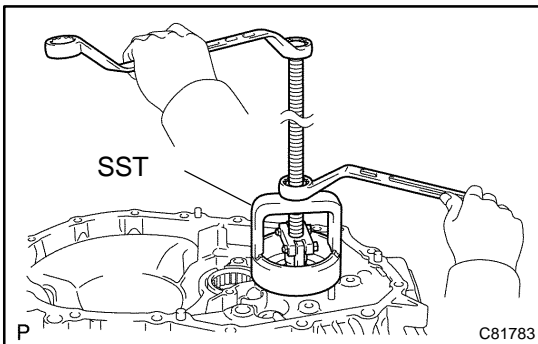
Be careful not to damage the oil receiver pipe No.2.

**42. REMOVE BEARING LOCK PLATE**

- (a) Remove the bolt and bearing lock plate from the front transaxle case.

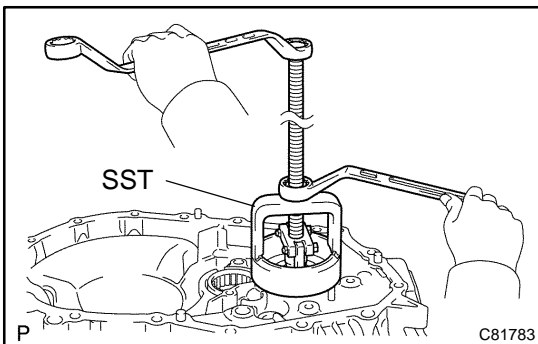
**43. REMOVE TRANSMISSION MAGNET**

- (a) Remove the transmission magnet from the front transaxle case.

**44. REMOVE INPUT SHAFT FRONT BEARING**

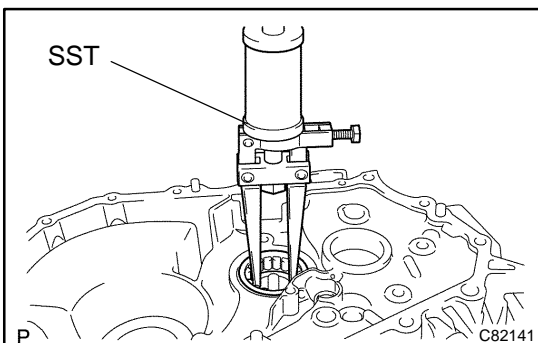
- (a) Using SST, remove the input shaft front bearing from the front transaxle case.

SST 09612-65014 (09612-01050, 09612-01060)

**45. REMOVE FRONT TRANSAXLE CASE OIL SEAL**

- (a) Using SST, remove the front transaxle case oil seal from the front transaxle case.

SST 09612-65014 (09612-01040, 09612-01050)

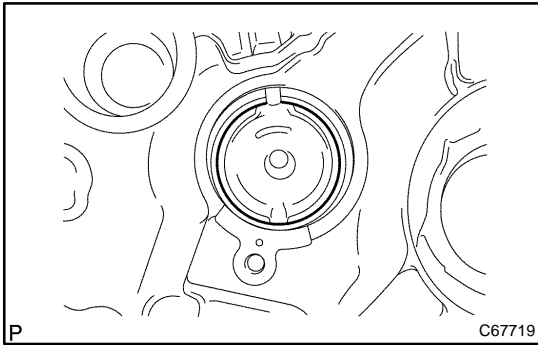
**46. REMOVE OUTPUT SHAFT FRONT BEARING**

- (a) Using SST, remove the output shaft front bearing from the front transaxle case.

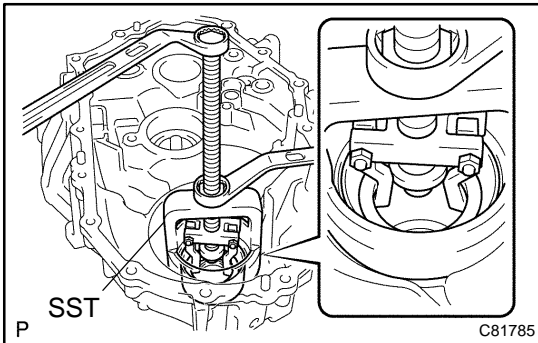
SST 09308-00010

NOTICE:

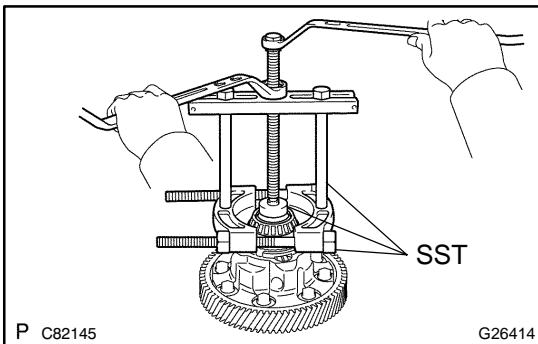
Do not apply excessive force to the front transaxle case when installing it.

**47. REMOVE OUTPUT SHAFT (MTM) COVER**

- (a) Remove the output shaft cover from the front transaxle case.

**48. REMOVE FR DIFFERENTIAL CASE FRONT TAPERED ROLLER BEARING**

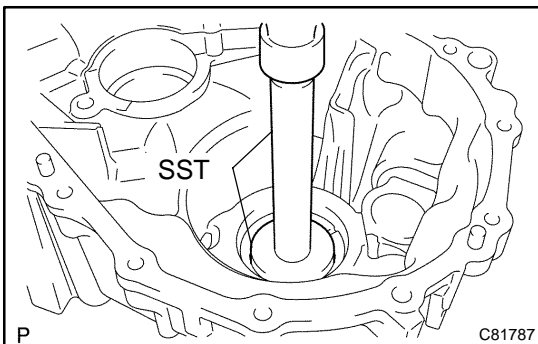
- (a) Using SST, remove the front differential case front tapered roller bearing (outer race) and plate washer from the front transaxle case.
SST 09612-65014 (09612-01040, 09612-01050),



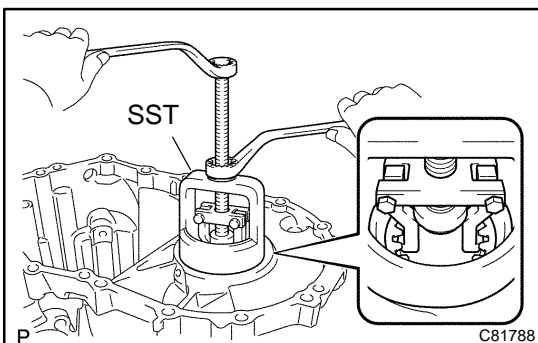
- (b) Using SST, remove the front differential case front tapered roller bearing (inner race) from the differential case.
SST 09950-00020, 09950-00030, 09950-40011 (09957-04010), 09950-60010 (09951-00360)

NOTICE:

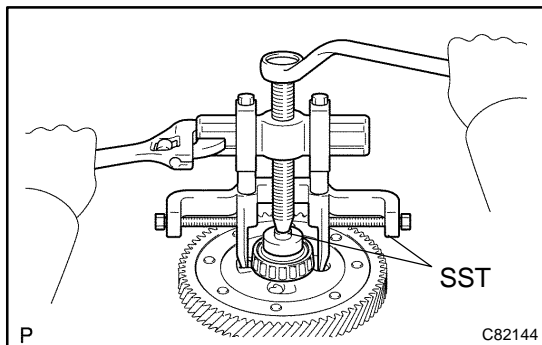
Be careful not to damage the bearing.

**49. REMOVE TRANSAXLE CASE OIL SEAL**

- (a) Using SST and hammer, remove the transaxle case oil seal from the front transaxle case.
SST 09950-60010 (09951-00530), 09950-70010 (09951-07150)

**50. REMOVE FR DIFFERENTIAL CASE REAR TAPERED ROLLER BEARING**

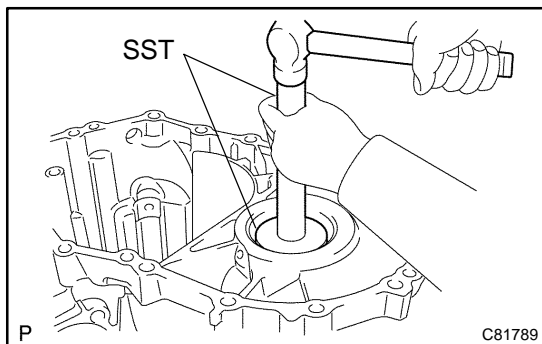
- (a) Using SST, remove the front differential case rear tapered roller bearing (outer race) and plate washer from the transmission case.
SST 09612-65014 (09612-01040, 09612-01050)



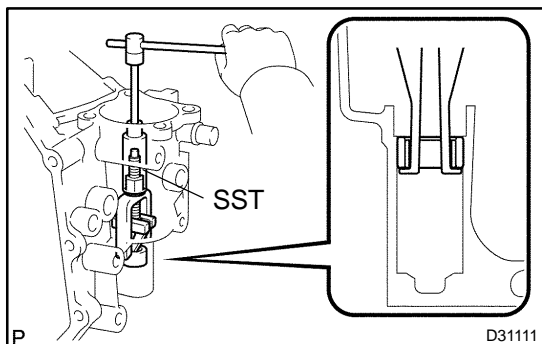
- (b) Using SST, remove the front differential case rear tapered roller bearing (inner race) from the front differential case.
 SST 09950-40011 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04061, 09957-04010, 09958-04011), 09950-60010 (09951-00360)

NOTICE:

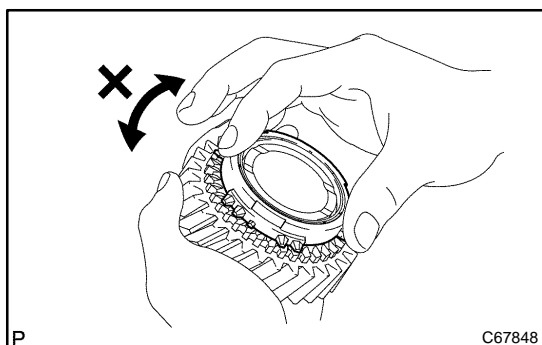
Be careful not to damage the bearing.

**51. REMOVE TRANSMISSION CASE OIL SEAL**

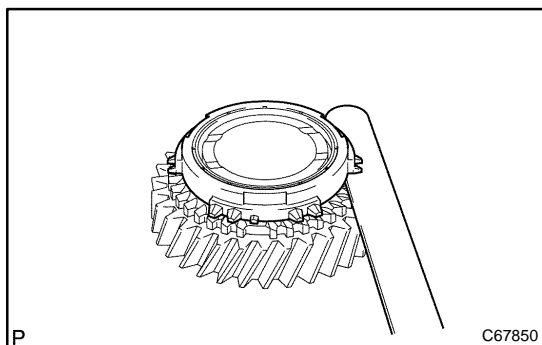
- (a) Using SST and a hammer, drive out the transmission case oil seal from the manual transmission case.
 SST 09950-60010 (09951-00530), 09950-70010 (09951-07150)

**52. REMOVE SHIFT & SELECT LEVER SHAFT BIMETAL FORMED BUSH**

- (a) Using SST, remove the shift & select lever shaft bimetal formed bush.
 SST 09319-60020

**53. INSPECT SYNCHRONIZER RING NO.3**

- (a) Check for any wear or damage.
 (b) Apply gear oil to the cone of the 5th gear and check with the synchronizer ring No.3 contacted by pressure that the gear does not turn in the direction as shown in the illustration.



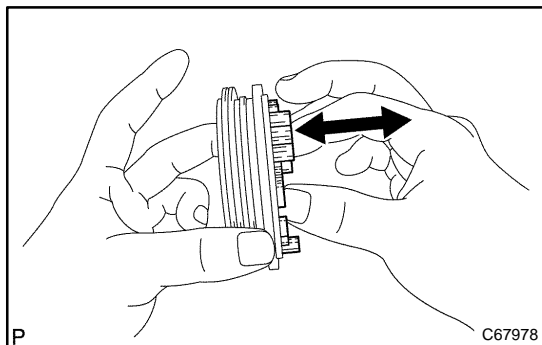
- (c) Using a feeler gauge, check the clearance between the synchronizer ring No.3 and 5th gear with the synchronizer ring No.3 contacted to the cone of the 5th gear.

Standard clearance:

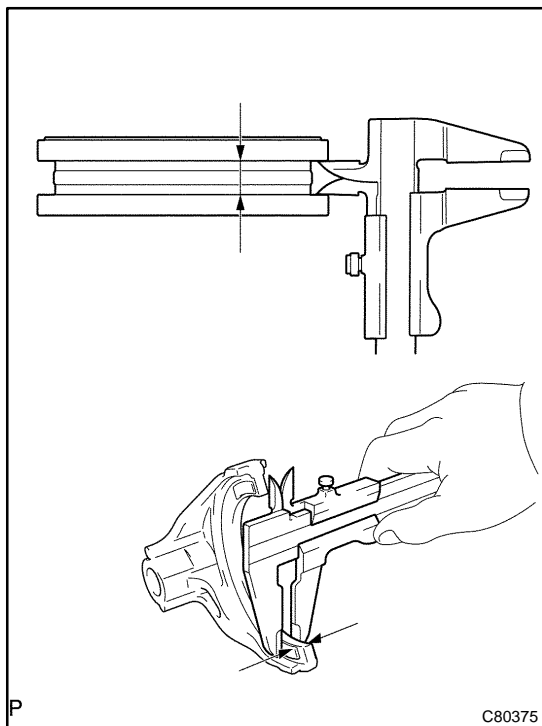
0.75 to 1.65 mm (0.0295 to 0.0649 in.)

Minimum clearance: 0.75 mm (0.0295 in.)

If the clearance is less than the minimum, replace the synchronizer ring No.3.

**54. INSPECT TRANSMISSION HUB SLEEVE NO.3**

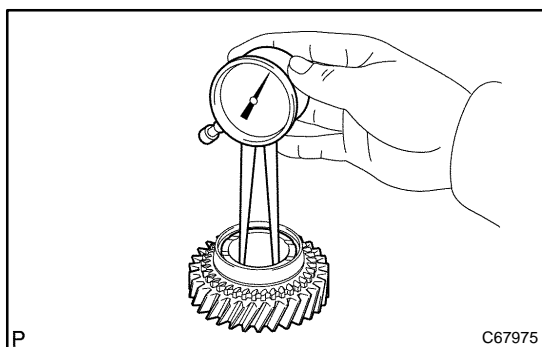
- (a) Check the sliding condition between the transmission hub sleeve No.3 and transmission clutch hub No.3.
- (b) Check that the spline gear's edges of the transmission hub sleeve No.3 are not worn down.



- (c) Using vernier calipers, measure the clearance between the transmission hub sleeve No.3 and gear shift fork No.3.

Standard clearance:**0.3 to 0.5 mm (0.0012 to 0.0020 in.)**

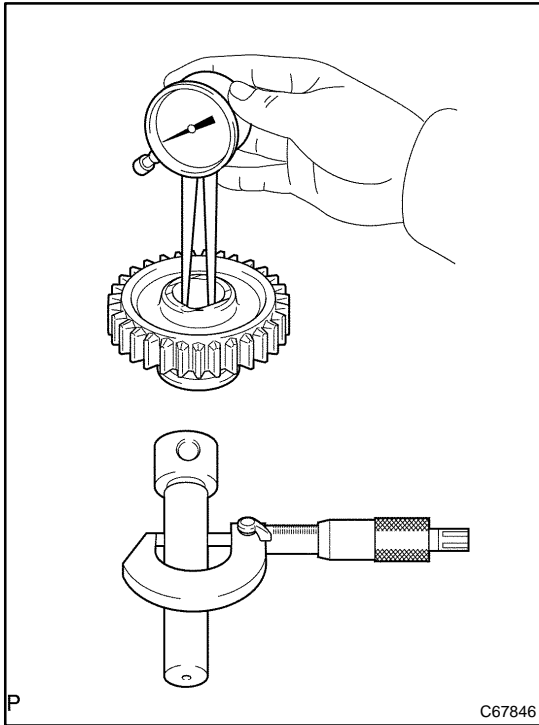
If the clearance exceeds the standard clearance, replace the transmission hub sleeve No.3 and gear shift fork No.3.

**55. INSPECT 5TH GEAR**

- (a) Using a caliper gauge, inspect the 5th gear as shown in the illustration.

Standard clearance:**29.915 to 29.931 mm (1.1778 to 1.1783 in.)**

If the clearance exceeds the standard clearance, replace the 5th gear.

**56. INSPECT REVERSE IDLER GEAR SUB-ASSY**

- (a) Using a caliper gauge, inspect the reverse idler gear sub-assy as shown in the illustration.

Standard clearance:

18.040 to 18.058 mm (0.7102 to 0.7109 in.)

Maximum clearance:

18.058 mm (0.7109 in.)

If the clearance exceeds the maximum, replace the reverse idler gear sub-assy.

- (b) Using a micrometer, inspect the reverse idler gear shaft as shown in the illustration.

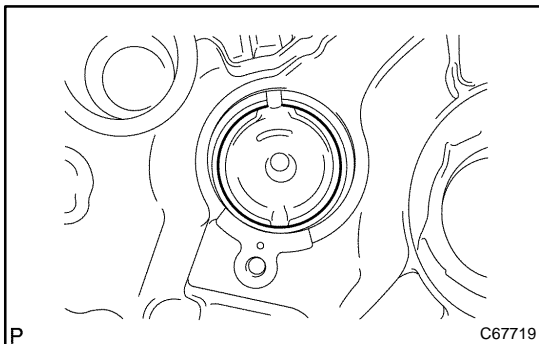
Standard outer diameter:

17.966 to 17.984 mm (0.7073 to 0.7080 in.)

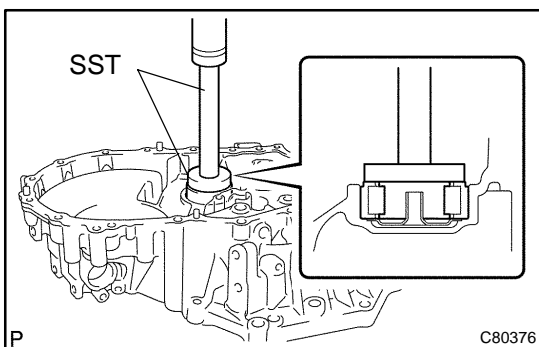
Minimum outer diameter:

17.966 mm (0.7073 in.)

If the outer diameter exceeds the minimum, replace the reverse idler gear shaft.

**57. INSTALL OUTPUT SHAFT (MTM) COVER**

- (a) Coat the output shaft cover with MP grease and install it to the front transaxle case.

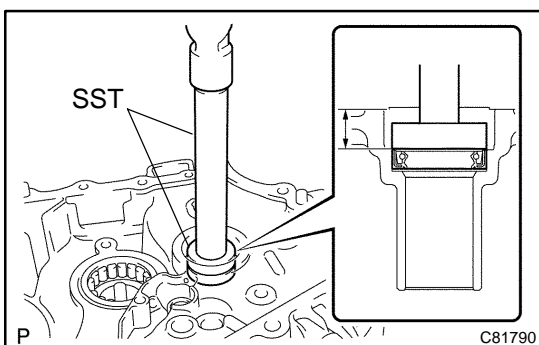
**58. INSTALL OUTPUT SHAFT FRONT BEARING**

- (a) Coat a new output shaft front bearing with gear oil. Using SST and a press, install it.

SST 09950-60010 (09951-00550), 09950-70010 (09951-07150)

NOTICE:

Be careful not to damage the output shaft front bearing.

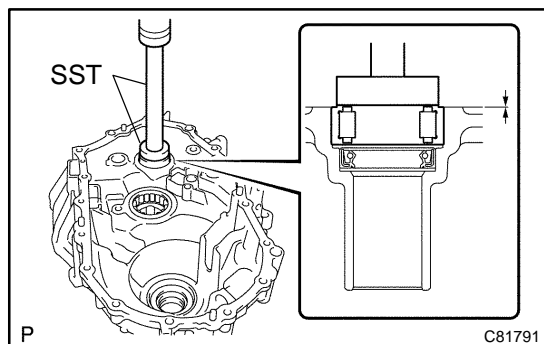
**59. INSTALL FRONT TRANSAXLE CASE OIL SEAL**

- (a) Using SST and a hammer, install a new front transaxle case oil seal to the front transaxle case.

SST 09950-60010 (09951-00370), 09950-70010 (09951-07150)

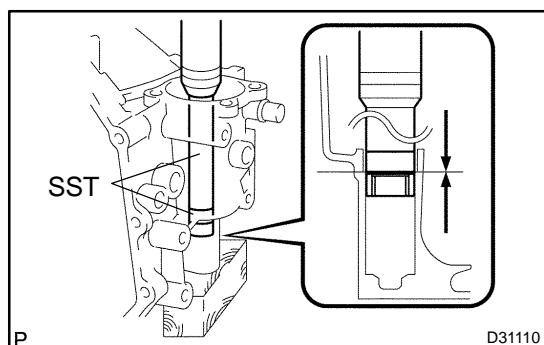
Drive in depth: 15.6 to 16.0 mm (0.6141 to 0.6299 in.)

- (b) Coat the lip of the front transaxle case oil seal with MP grease.

**60. INSTALL INPUT SHAFT FRONT BEARING**

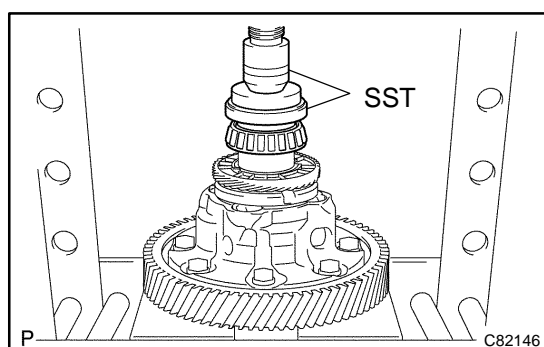
- (a) Coat a new input shaft front bearing with MP grease. Using SST and a press, install it to the front transaxle case. SST 09950-60010 (09951-00420), 09950-70010 (09951-07150)

Drive in depth: 0 to 0.3 mm (0 to 0.0118 in.)

**61. INSTALL SHIFT & SELECT LEVER SHAFT BIMETAL FORMED BUSH**

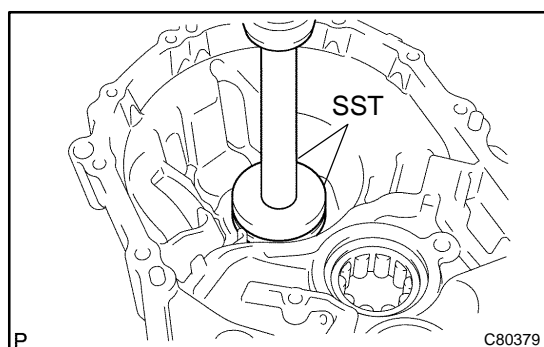
- (a) Using SST, install the shift & select lever shaft bimetal formed bush. SST 09950-60010 (09951-00220), 09950-70010 (09951-07100)

Drive in depth: 0 to 0.5 mm (0 to 0.0020 in.)

**62. INSTALL FR DIFFERENTIAL CASE FRONT TAPERED ROLLER BEARING**

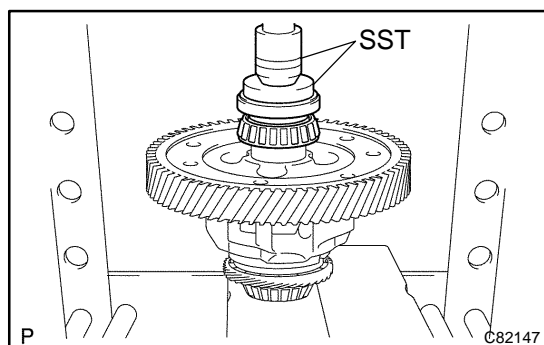
- (a) Using SST and a press, install the front differential case front tapered roller bearing (inner race) to the front differential case.

SST 09350-32014 (09351-32120), 09950-60010 (09951-00530)



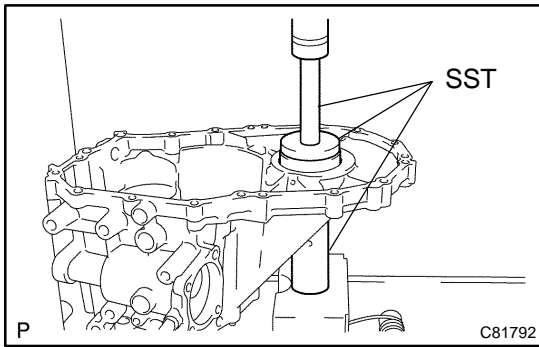
- (b) Using SST and a press, install the front differential case front tapered roller bearing (outer race) with plate washer to the front transaxle case.

SST 09950-60020 (09951-00680), 09950-70010 (09951-07150)

**63. INSTALL FR DIFFERENTIAL CASE REAR TAPERED ROLLER BEARING**

- (a) Using SST and a press, install the front differential case rear tapered roller bearing (inner race) to the differential case.

SST 09350-32014 (09351-32120), 09950-60010 (09951-00530)

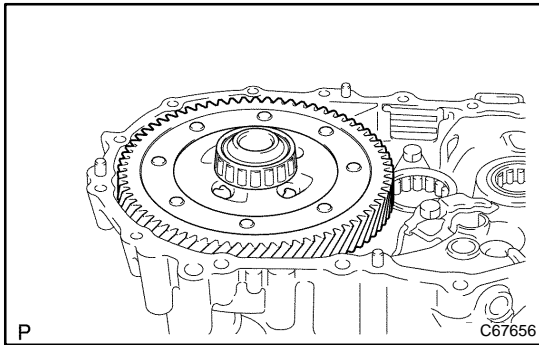


- (b) Using SST and a press, install the front differential case rear tapered roller bearing (outer race) with plate washer to the transmission case.

SST 09309-36010, 09950-60020 (09951-00710), 09950-70010 (09951-07150)

HINT:

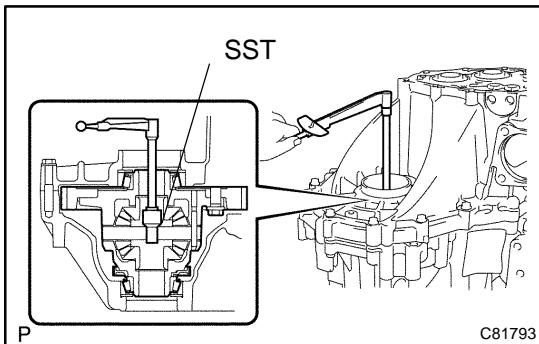
Use a front differential case rear plate washer rear of the same thickness as the one that was removed.



64. ADJUST DIFFERENTIAL SIDE BEARING PRELOAD

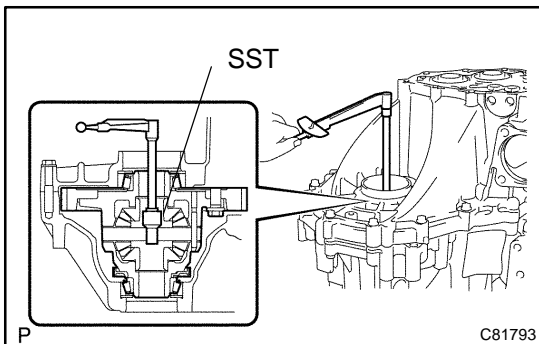
- (a) Coat the differential case assy with gear oil, and install it to the front transaxle case.

- (b) Install the manual transmission case with the 16 bolts.
Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)



- (c) Using SST and a torque wrench, turn the differential case assy to the right and left 2 or 3 times to allow the bearings to settle.

SST 09564-32011



- (d) Using SST and a torque wrench, measure the preload.

SST 09564-32011

Preload (at starting):

New bearing:

0.78 to 1.57 N·m (7.95 to 16.0 kgf·cm, 6.9 to 13.89 in·lbf)

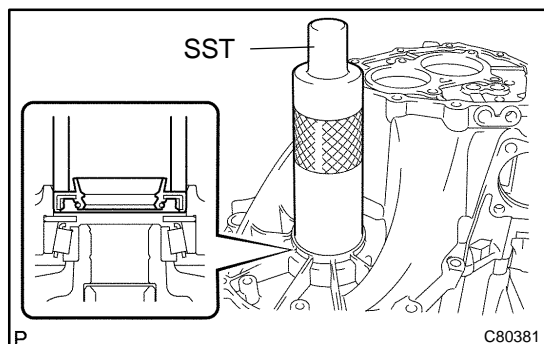
Reuse bearing:

0.49 to 0.98 N·m (5.0 to 10.0 kgf·cm, 4.34 to 8.67 in·lbf)

- (e) Select another plate washer.

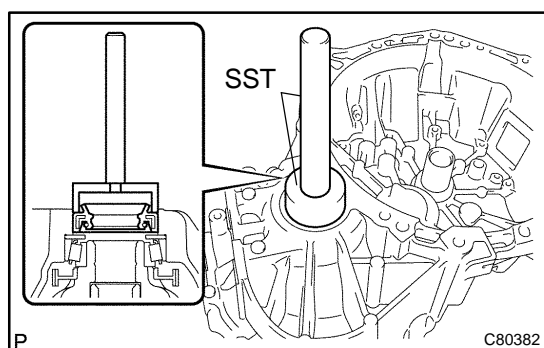
Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
AA	2.10 (0.0827)	LL	2.60 (0.1024)
BB	2.15 (0.0846)	MM	2.65 (0.1043)
CC	2.20 (0.0866)	NN	2.70 (0.1063)
DD	2.25 (0.0886)	PP	2.75 (0.1083)
EE	2.30 (0.0906)	QQ	2.80 (0.1102)
FF	2.35 (0.0925)	RR	2.85 (0.1122)
GG	2.40 (0.0945)	SS	2.90 (0.1142)
HH	2.45 (0.0965)	TT	2.95 (0.1161)
JJ	2.50 (0.0984)	UU	3.00 (0.1181)
KK	2.55 (0.1004)	-	-

- (f) Remove the 16 bolts and manual transmission case.
- (g) Remove the differential case assy.



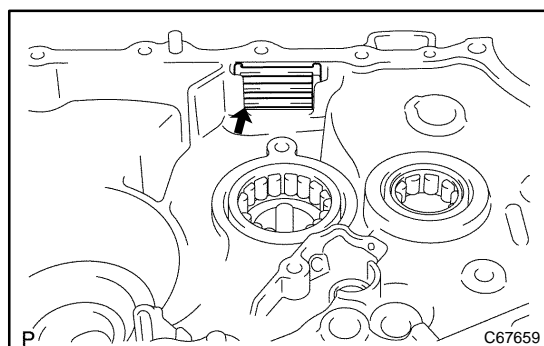
65. INSTALL TRANSMISSION CASE OIL SEAL

- (a) Using SST and a hammer, install a new transmission case oil seal to the manual transmission case.
SST 09316-60011 (09316-00011)
Drive in depth: 2.1 to 2.7 mm (0.082677 to 0.106299)
- (b) Coat the lip of the front transmission case oil seal with MP grease.



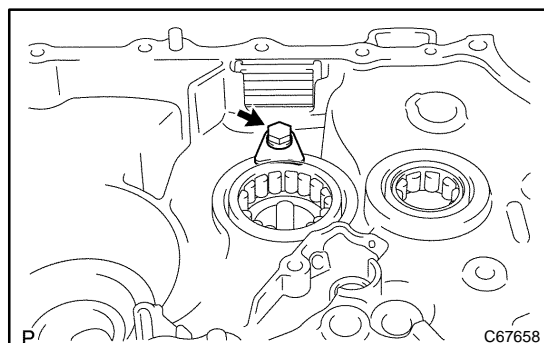
66. INSTALL TRANSAXLE CASE OIL SEAL

- (a) Using SST and a hammer, install a new transaxle case oil seal to the front transaxle case.
Drive in depth: 1.6 to 2.2 mm (0.0629 to 0.0866 in.)
SST 09710-20011 (09710-06071), 09950-70010
(09951-07150)
- (b) Coat the lip of the transaxle case oil seal with MP grease.



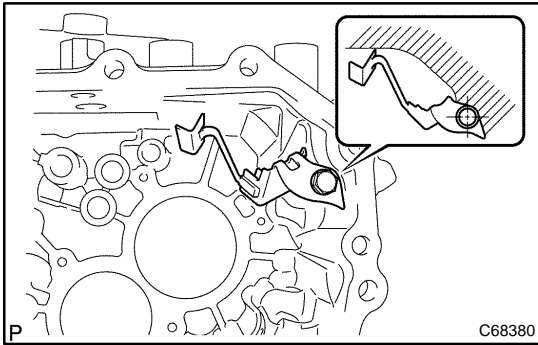
67. INSTALL TRANSMISSION MAGNET

- (a) Clean the transmission magnet and install it to the front transaxle case.



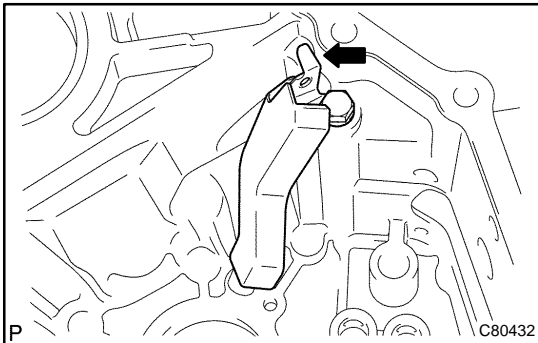
68. INSTALL BEARING LOCK PLATE

- (a) Install the bearing lock plate with the bolt.
Torque: 11 N·m (115 kgf·cm, 8.3 ft·lbf)

**69. INSTALL OIL RECEIVER PIPE NO.1 (MTM)**

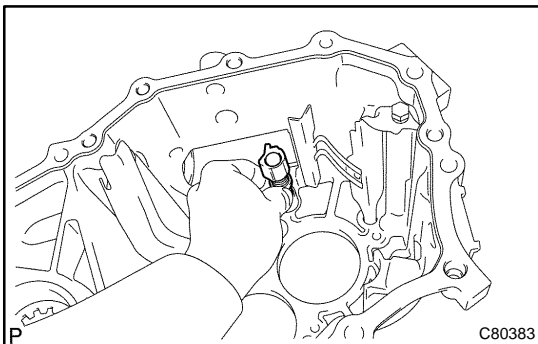
- (a) Install the oil receiver pipe No.1 with the bolt to the manual transmission case.

Torque: 17 N·m (175 kgf·cm, 13 ft·lbf)

**70. INSTALL OIL RECEIVER PIPE NO.2 (MTM)**

- (a) Install the oil receiver pipe No.2 with the bolt to the manual transmission case.

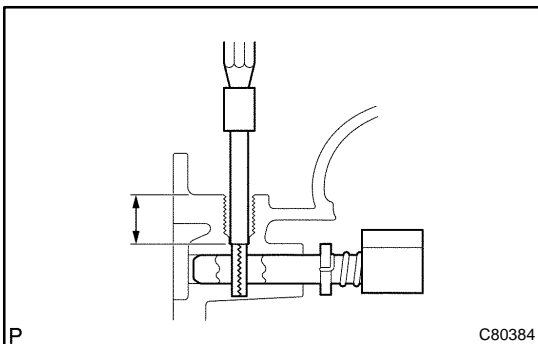
Torque: 17 N·m (175 kgf·cm, 13 ft·lbf)

**71. INSTALL REVERSE RESTRICT PIN ASSY**

- (a) Install the reverse restrict pin assy to the manual transmission case.

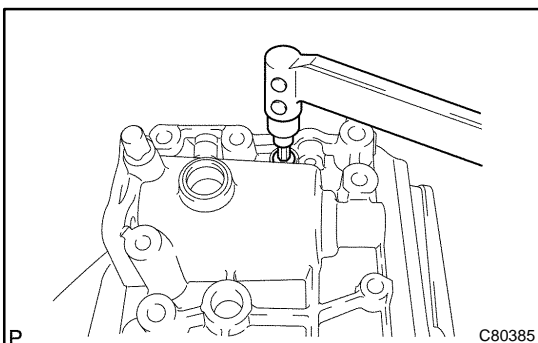
HINT:

Do set the reverse restrict pin assy in correct orientation.



- (b) Using a pin punch (ϕ 5 mm) and a hammer, install the slotted pin to the restrict pin assy.

Drive in depth: 16.0 to 17.0 mm (0.6299 to 0.6693 in.)



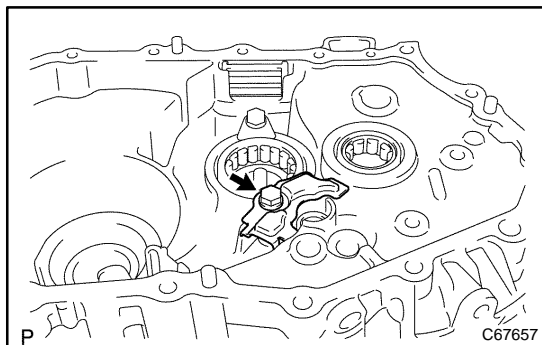
- (c) Apply sealant to the reverse restrict pin plug.

Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

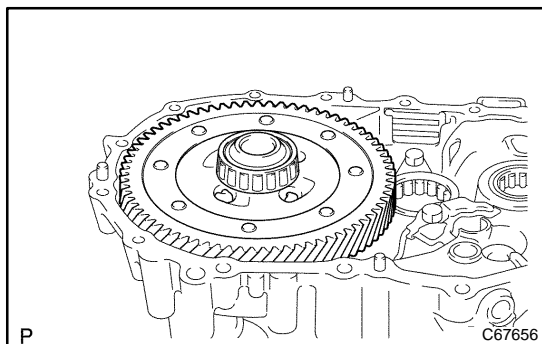
- (d) Using a hexagon wrench and a torque wrench, install the reverse restrict pin plug to the manual transmission case.

Torque: 13 N·m (130 kgf·cm, 9.3 ft·lbf)

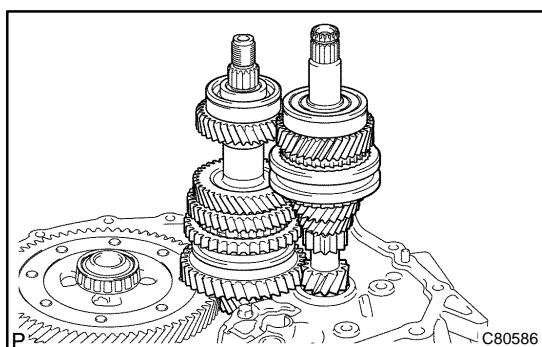
**72. INSTALL MANUAL TRANSAXLE CASE RECEIVER**

- (a) Install the manual transaxle case receiver with the bolt to the front transaxle case.

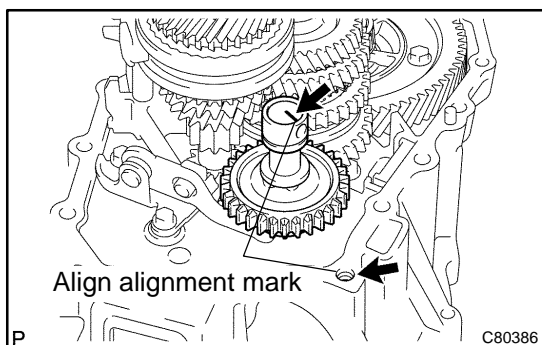
Torque: 11 N·m (115 kgf·cm, 8.3 ft·lbf)

**73. INSTALL DIFFERENTIAL CASE ASSY**

- (a) Coat the differential case tapered roller bearings with gear oil, and install them to the front transaxle case.

**74. INSTALL INPUT SHAFT ASSY**

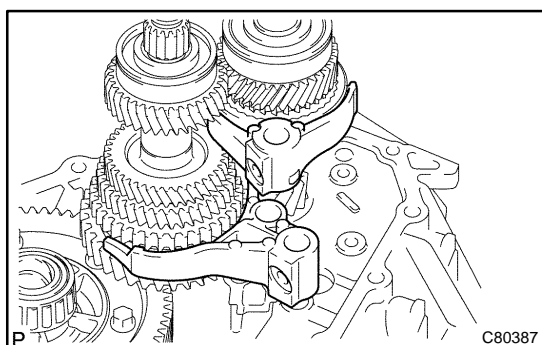
- (a) Coat the sliding and rotating surface of the input and output shafts with gear oil, install them to the transaxle case.

**75. INSTALL REVERSE IDLER GEAR SUB-ASSY**

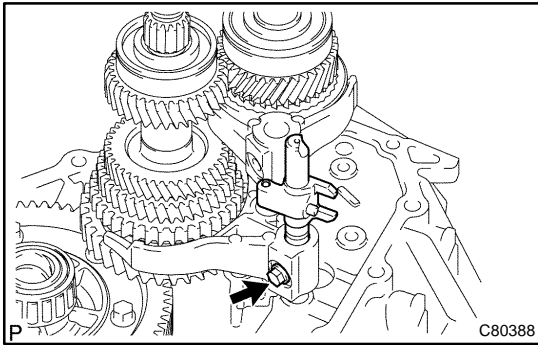
- (a) Coat the reverse idler gear, thrust washer and reverse idler gear shaft with gear oil, install them.

HINT:

Align the mark on the reverse idler gear shaft and the bolt hole as shown in the illustration.

**76. INSTALL GEAR SHIFT FORK SHAFT NO.1**

- (a) Coat the gear shift fork No.1 and gear shift fork No.2 with gear oil, and install them.



(b) Coat the gear shift fork shaft No.1 with gear oil, and install it.

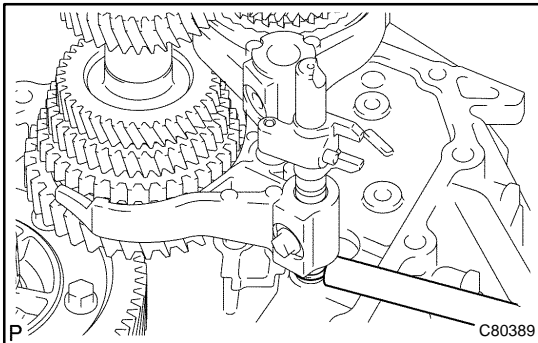
(c) Apply sealant to the shift fork set bolt.

Sealant:

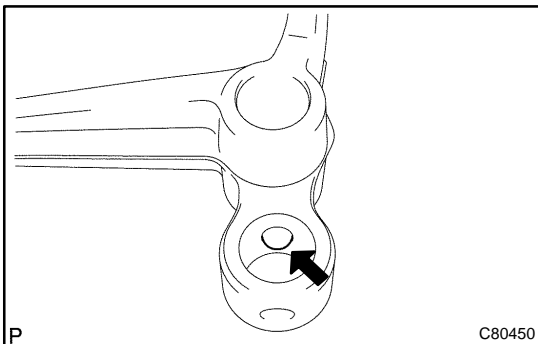
Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

(d) Install the shift fork set bolt.

Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)



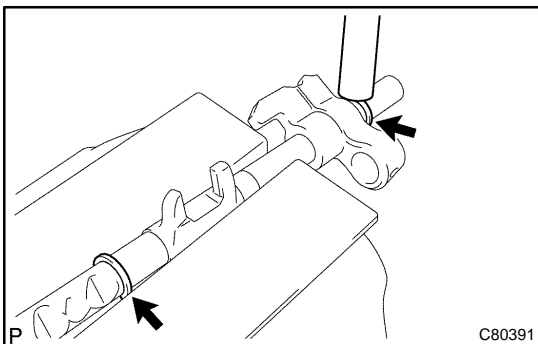
(e) Using a brass bar and a hammer, install a new shaft snap ring to the gear shift fork shaft No.1.



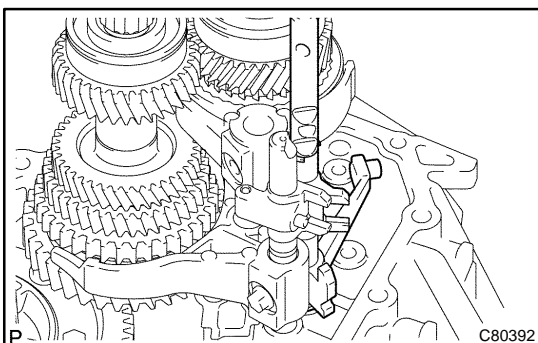
77. INSTALL GEAR SHIFT FORK SHAFT NO.3

(a) Coat the 2 shift fork balls with MP grease, and install them to the reverse shift fork.

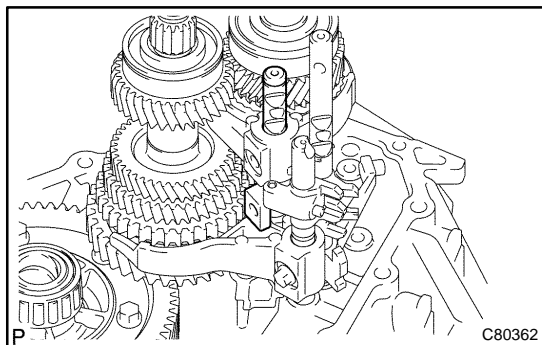
(b) Install the reverse shift fork to the shift fork shaft No.3.



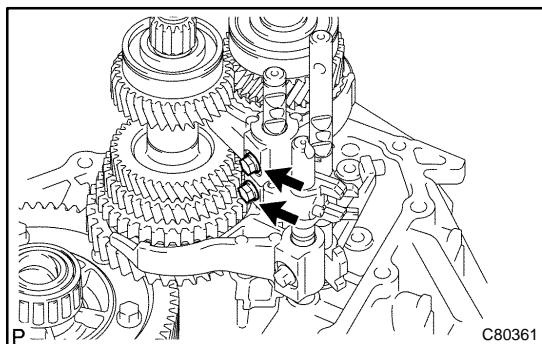
(c) Using a brass bar and a hammer, install 2 new shift fork shaft snap rings to the shift fork shaft No.3.



(d) Coat the shift fork shaft No.3 with gear oil, and install it.

**78. INSTALL GEAR SHIFT FORK SHAFT NO.2**

- (a) Coat the gear shift head No.1 and gear shift fork shaft No.2 with gear oil, and install them.

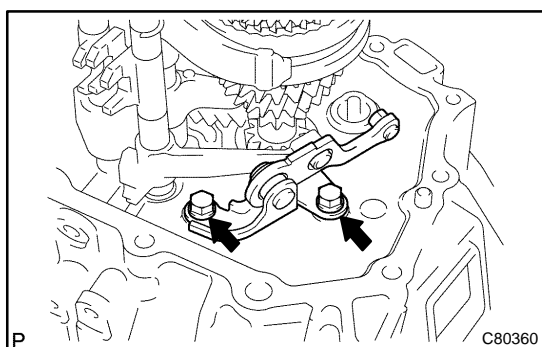


- (b) Coat the 2 shift lock bolts with sealant, and install them to the gear shift fork No.2 and shift head No.1.

Sealant:

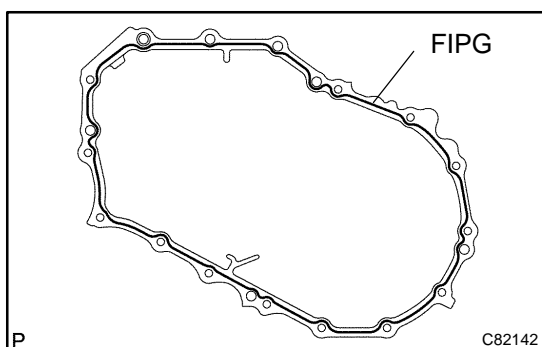
Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)

**79. INSTALL REVERSE SHIFT ARM BRACKET ASSY**

- (a) Install the reverse shift arm bracket assy with the 2 bolts to the front transaxle case.

Torque: 17 N·m (175 kgf·cm, 13 ft·lbf)

**80. INSTALL MANUAL TRANSMISSION CASE**

- (a) Apply FIPG to the manual transmission case, as shown in the illustration.

FIPG:

Part No. 08826-00090, THREE BOND 1281 or equivalent

NOTICE:

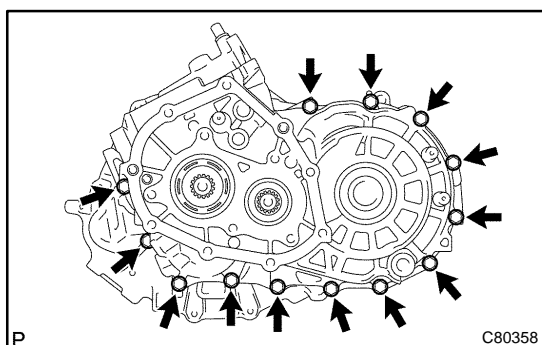
Parts must be assembled within 10 minutes of application. Otherwise, the packing (FIPG) material must be removed and reapplied.

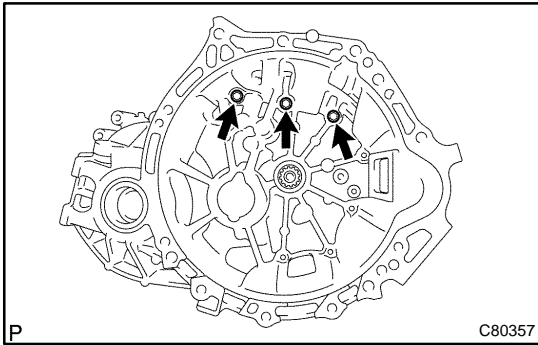
- (b) Coat the 13 bolts with sealant, and install them to the manual transmission case.

Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)



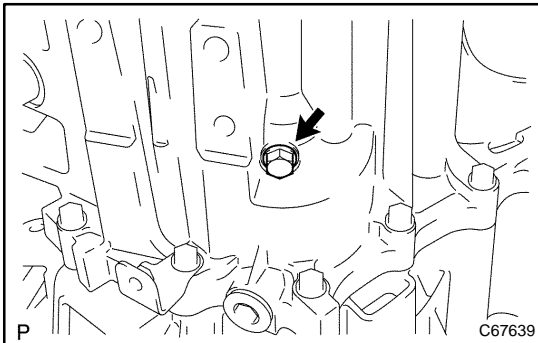


- (c) Coat the 3 bolts with sealant, and install them to the front transaxle case.

Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)



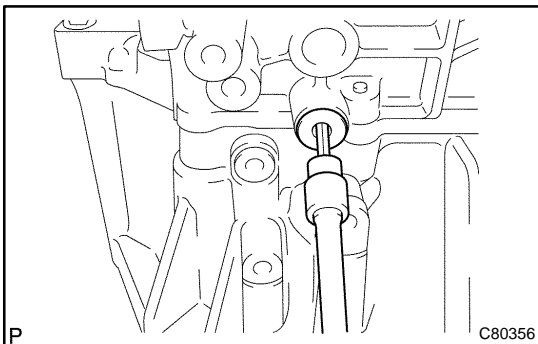
81. INSTALL REVERSE IDLER GEAR SHAFT BOLT

- (a) Coat the reverse idler gear shaft bolt with sealant, and install it with a new gasket.

Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)



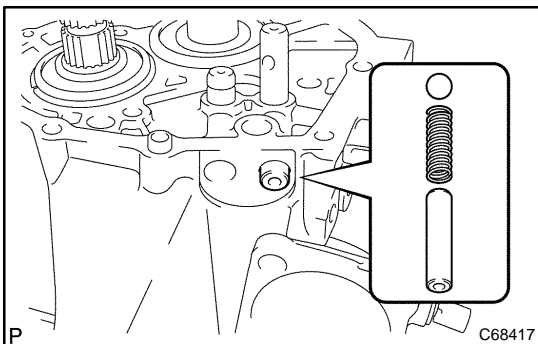
82. INSTALL LOCK BALL ASSY NO.2

- (a) Coat the lock ball assy No.2 with sealant, and install it with a hexagon wrench.

Sealant:

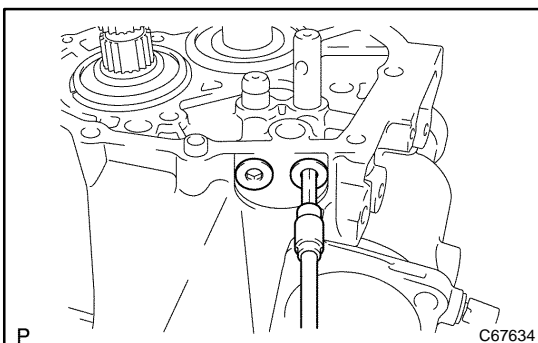
Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)



83. INSTALL SHIFT DETENT BALL

- (a) Install the 2 shift detent balls, 2 shift detent ball springs with 2 shift detent ball spring seats No.1 to the manual transmission case.

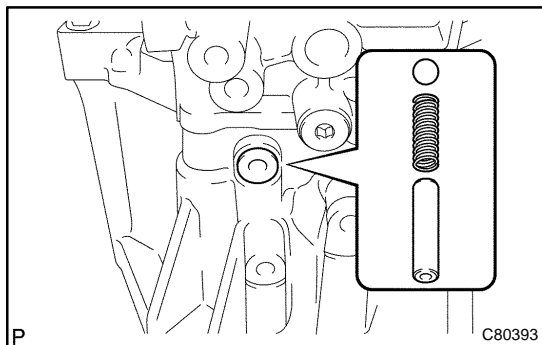


- (b) Coat the 2 shift detent ball plugs with sealant, install them using a hexagon wrench.

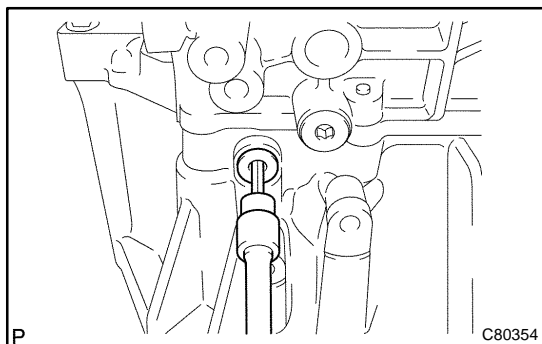
Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 22 N·m (224 kgf·cm, 16 ft·lbf)



- (c) Install the shift detent ball, shift detent ball compression spring and shift detent ball spring seat No.1 to the front transaxle case.

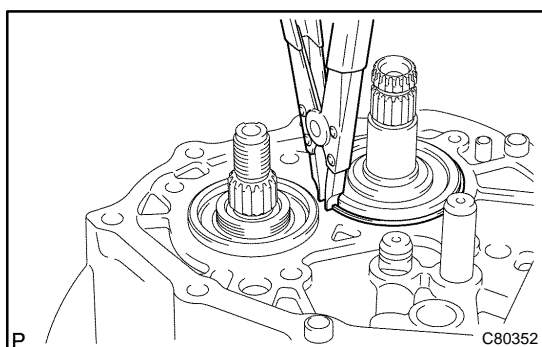


- (d) Coat the shift detent ball plug with sealant, and install it using a hexagon wrench.

Sealant:

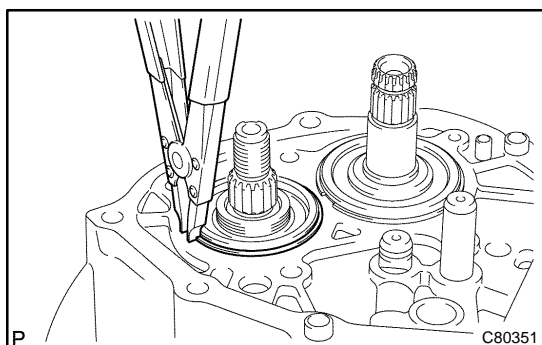
Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 22 N·m (224 kgf·cm, 16 ft·lbf)



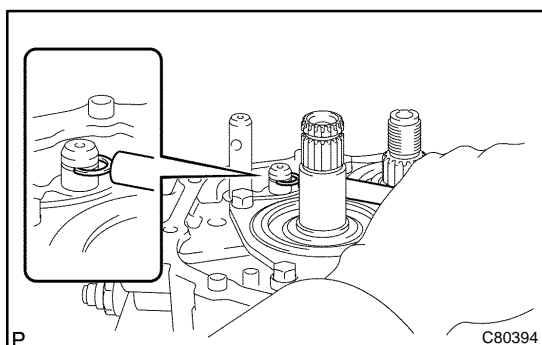
84. INSTALL INPUT SHAFT REAR BEARING HOLE SNAP RING

- (a) Using a snap ring expander, install the input shaft rear bearing hole snap ring to the input shaft.



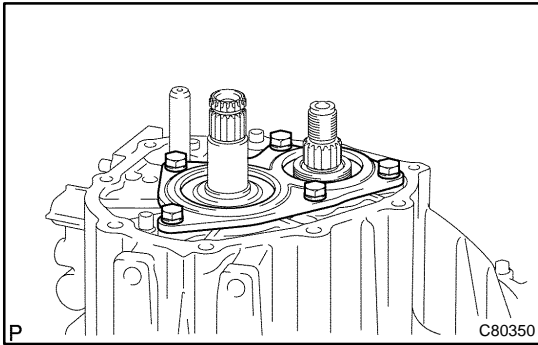
85. INSTALL OUTPUT SHAFT REAR BEARING HOLE SNAP RING

- (a) Using a snap ring expander, install the output shaft rear bearing hole snap ring to the output shaft.



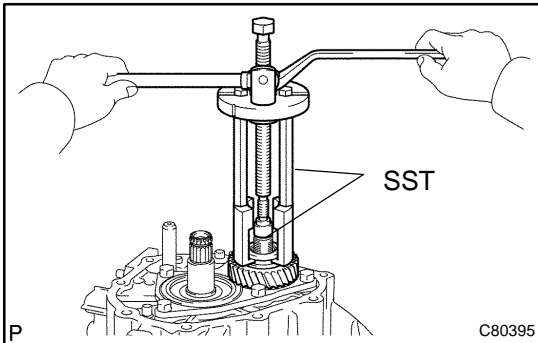
86. INSTALL SHIFT FORK SHAFT SHAFT SNAP RING

- (a) Using a brass bar and a hammer, install a new shift fork shaft snap ring to the shift fork shaft No.2.

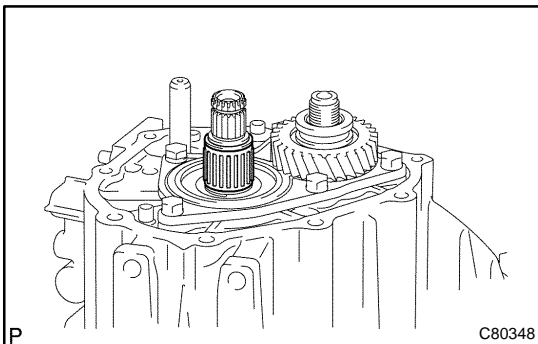
**87. INSTALL BEARING RETAINER REAR (MTM)**

- (a) Coat the 5 bolts with sealant, and install the bearing retainer rear with the 5 bolts to the manual transmission case.

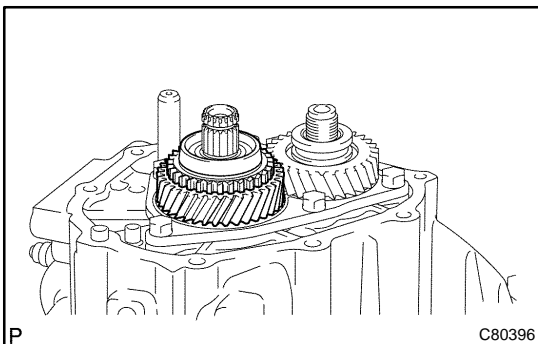
Torque: 27 N·m (280 kgf·cm, 20 ft·lbf)

**88. INSTALL 5TH DRIVEN GEAR**

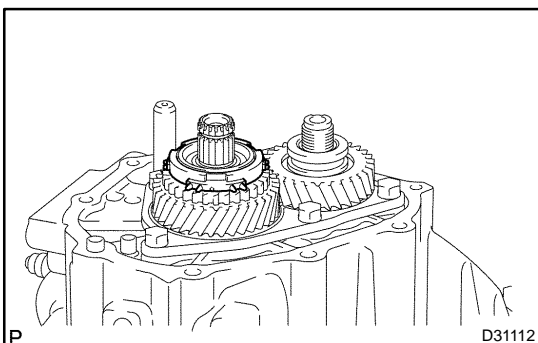
- (a) Using SST, install the 5th driven gear to the output shaft.
 SST 09950-30012 (09951-03010, 09953-03010, 09954-03010, 09955-03011, 09956-03020)

**89. INSTALL 5TH GEAR NEEDLE ROLLER BEARING**

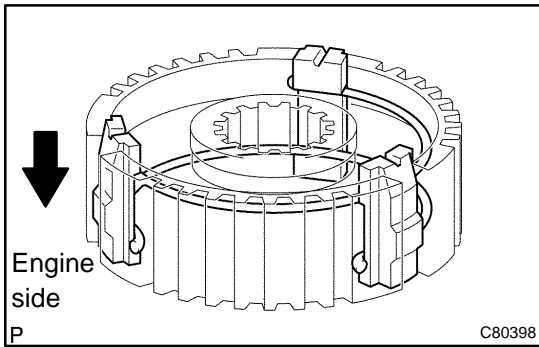
- (a) Coat the 5th gear needle roller bearing and spacer with gear oil, and install them to the input shaft.

**90. INSTALL 5TH GEAR**

- (a) Coat the 5th gear with gear oil, and install it to the input shaft.

**91. INSTALL SYNCHRONIZER RING NO.3**

- (a) Coat the synchronizer ring No.3 with gear oil, and install it to the 5th gear.

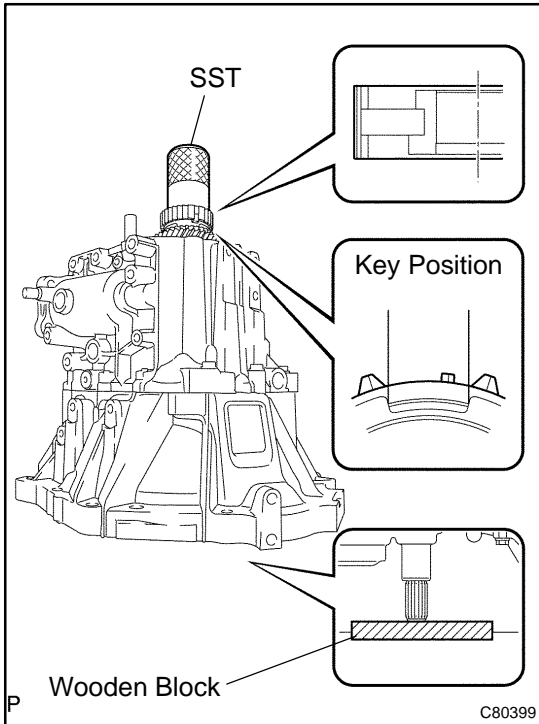


92. INSTALL TRANSMISSION CLUTCH HUB NO.3

- (a) Install the 3 synchromesh shifting keys and 2 synchromesh shifting key springs to the transmission clutch hub No.3 as shown in the illustration.

NOTICE:

Do not set both openings of the shifting key springs in the same position.



- (b) Using SST and a hammer, install the transmission clutch hub No.3 to the input shaft.

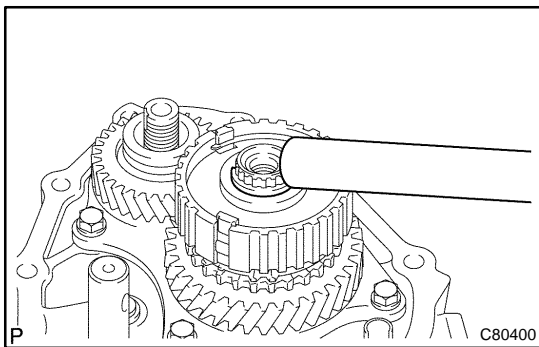
SST 09636-20010

NOTICE:

- Do not install the transmission clutch hub No.3 with it facing wrong direction.
- Install the transmission clutch hub No.3 checking the positions of the synchronizer ring No.3 key groove and the synchromesh shifting key No.3.
- Check that the 5th gear is rotating.

NOTICE:

Place the suitable sized wooden block to support the input shaft.

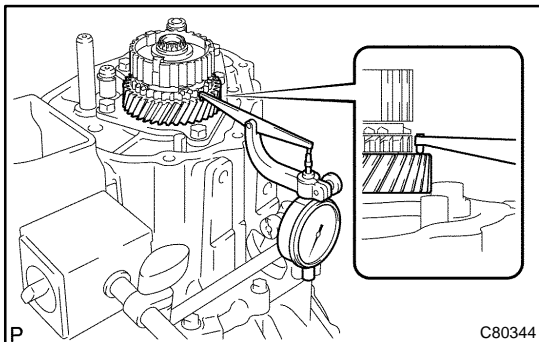


- (c) Select a clutch hub No.3 shaft snap ring that will allow minimum axial play.

Clearance: 0.1 mm or less

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
A	2.25 (0.0886)	E	2.49 (0.0980)
B	2.31 (0.0909)	F	2.55 (0.1004)
C	2.37 (0.0933)	G	2.61 (0.1028)
D	2.43 (0.0957)		

- (d) Using a brass bar and a hammer, install the snap ring to the input shaft.



93. INSPECT 5TH GEAR THRUST CLEARANCE

- (a) Using a dial indicator, inspect the 5th gear thrust clearance.

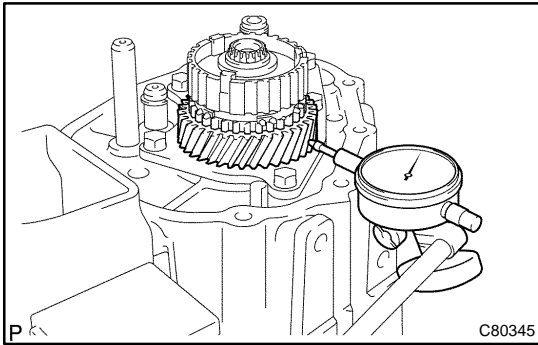
Standard clearance:

0.1 to 0.57 mm (0.0039 to 0.0224 in.)

Maximum clearance:

0.57 mm (0.0224 in.)

If the clearance exceeds the maximum, replace the gear, needle roller bearing or shaft.



94. INSPECT 5TH GEAR RADIAL CLEARANCE

- (a) Using a dial indicator, inspect the 5th gear radial clearance.

Standard clearance:

KOYO made:

0.015 to 0.058 mm (0.0006 to 0.0023 in.)

NSK made:

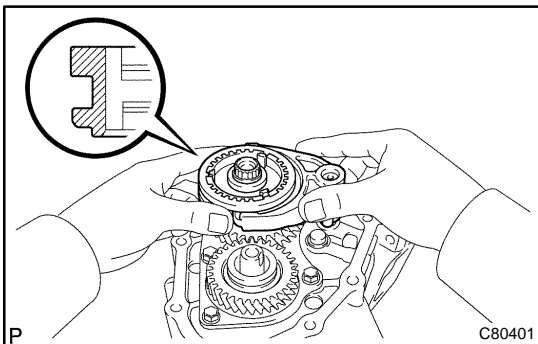
0.015 to 0.056 mm (0.0006 to 0.0022 in.)

Maximum clearance:

KOYO made: 0.058 mm (0.0023 in.)

NSK made: 0.056 mm (0.0022 in.)

If the clearance exceeds the maximum, replace the gear, needle roller bearing or shaft.

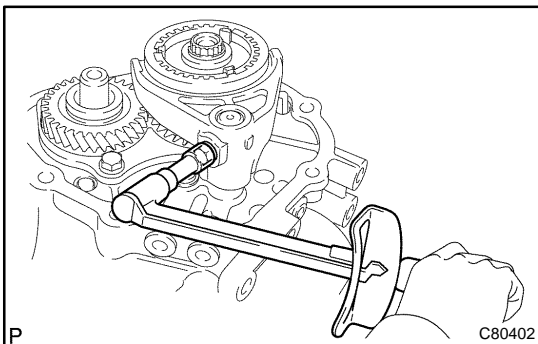


95. INSTALL GEAR SHIFT FORK NO.3

- (a) Coat the transmission clutch hub sleeve No.3 with gear oil, and install it and gear shift fork No.3 to the transmission clutch hub No.3.

HINT:

Do set the transmission clutch hub No.3 in correct orientation.

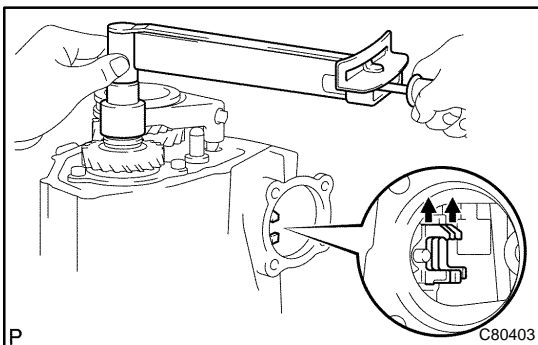


- (b) Coat the gear shift fork lock bolt with sealant, and install it to the gear shift fork No.3.

Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)



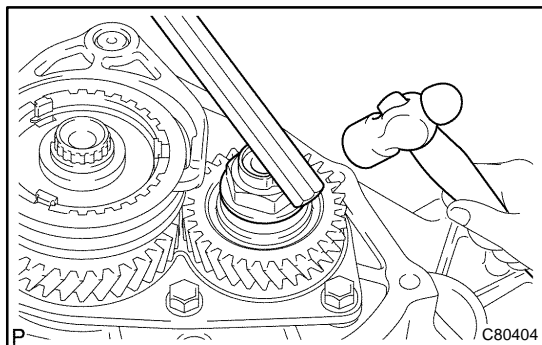
96. INSTALL MANUAL TRANSMISSION OUTPUT SHAFT REAR SET NUT

- (a) Engage the gears to make them the double meshed.
 (b) Install a new manual transmission output shaft rear set nut.

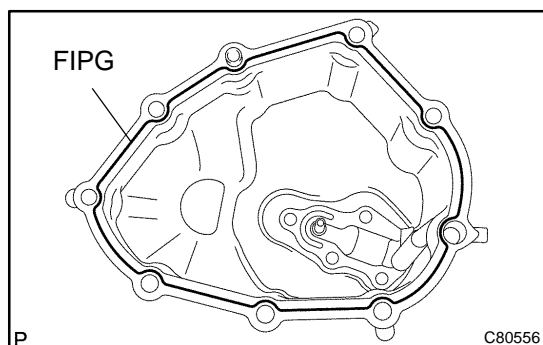
Torque: 118 N·m (1200 kgf·cm, 87 ft·lbf)

Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent



- (c) Using a chisel and a hammer, stake the manual transmission output shaft rear set nut.
- (d) Disengage the gears.



97. INSTALL MANUAL TRANSMISSION CASE COVER SUB-ASSY

- (a) Apply FIPG to the transaxle case cover as shown in the illustration.

FIPG:

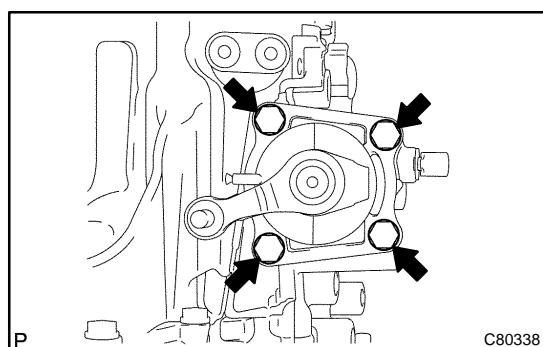
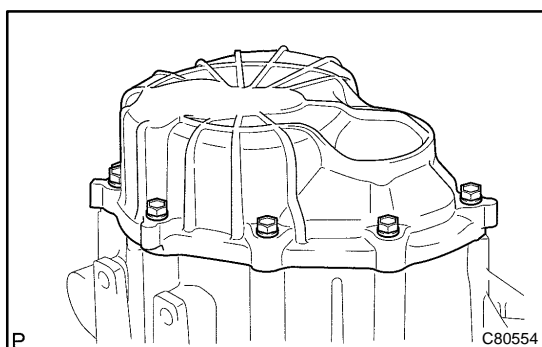
Part No. 08826-00090, THREE BOND 1281

NOTICE:

Parts must be assembled within 10 minutes of application. Otherwise, the packing (FIPG) material must be removed and reapplied.

- (b) Install the manual transmission case cover to the manual transmission case with the 9 bolts.

Torque: 18 N·m (185 kgf·cm, 14 ft·lbf)



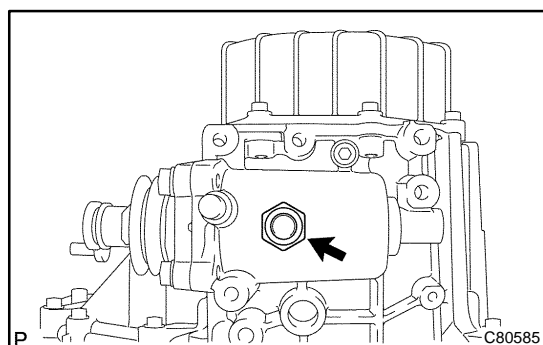
98. INSTALL SHIFT & SELECT LEVER SHAFT ASSY

- (a) Coat the 4 bolts with sealant. Install a new gasket and shift & select lever shaft assy to the manual transmission case with the 4 bolts.

Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent



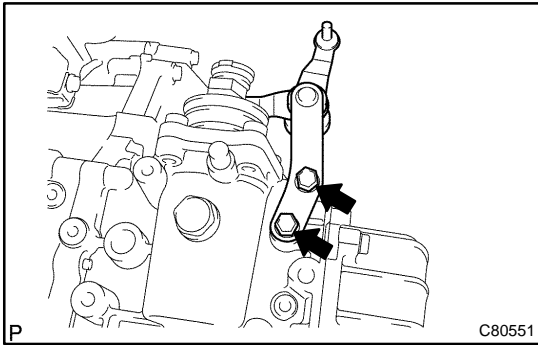
99. INSTALL LOCK BALL ASSY NO.1

- (a) Coat the lock ball assy No.1 with sealant, install it to the manual transmission case.

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)

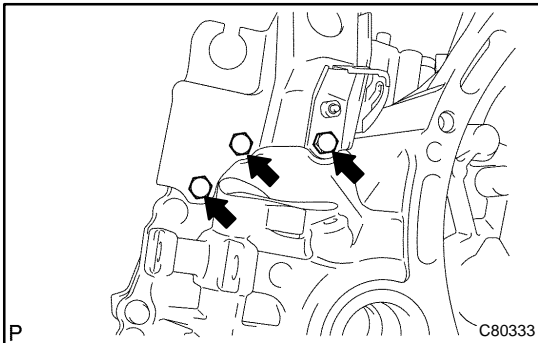
Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

**100. INSTALL SELECTING BELL CRANK ASSY**

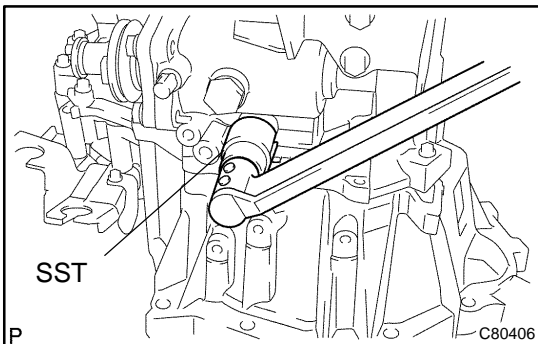
- (a) Install the selecting bell crank assy to the manual transmission case with the 2 bolts.

Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)

**101. INSTALL FLOOR SHIFT CONTROL LEVER HOUSING SUPPORT BRACKET**

- (a) Install the floor shift control lever housing support bracket to the front transaxle case with the 3 bolts.

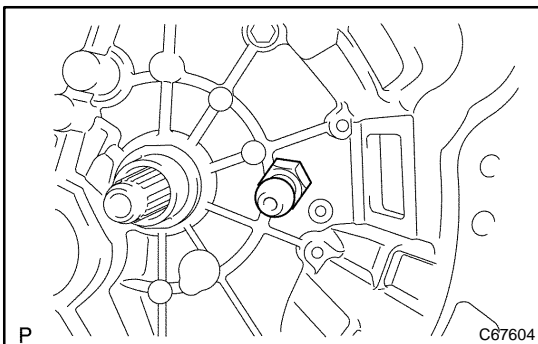
Torque: 18 N·m (188 kgf·cm, 14 ft·lbf)

**102. INSTALL BACK UP LAMP SWITCH ASSY**

- (a) Using SST, install the back-up lamp switch assy with a new gasket to the manual transmission case.

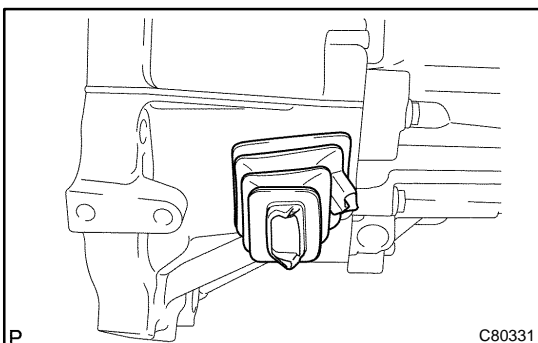
SST 09817-16011

Torque: 40 N·m (410 kgf·cm, 30 ft·lbf)

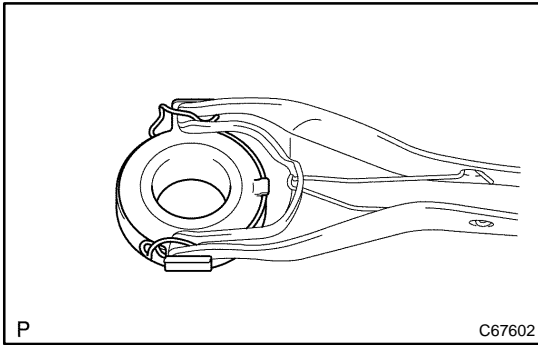
**103. INSTALL RELEASE FORK SUPPORT**

- (a) Install the release fork support to the front transaxle case.

Torque: 37 N·m (375 kgf·cm, 25 ft·lbf)

**104. INSTALL CLUTCH RELEASE FORK BOOT**

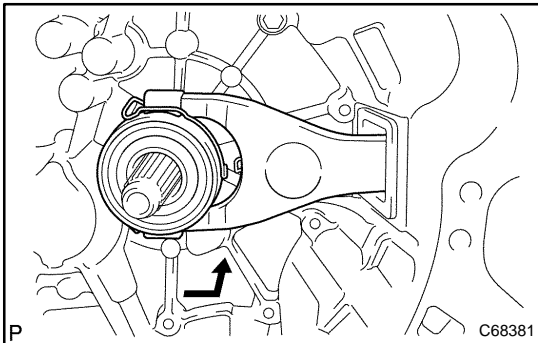
- (a) Install the clutch release fork boot to the front transaxle case.

**105. INSTALL CLUTCH RELEASE BEARING ASSY**

- (a) Coat the clutch release bearing assy with release hub grease, and install it to the clutch release fork sub-assy with the clip.

Sealant:

Part No. 08887-01806, RELEASE HUB GREASE or equivalent

**106. INSTALL CLUTCH RELEASE FORK SUB-ASSY**

- (a) Install the clutch release fork sub-assy to the input shaft.

Sealant:

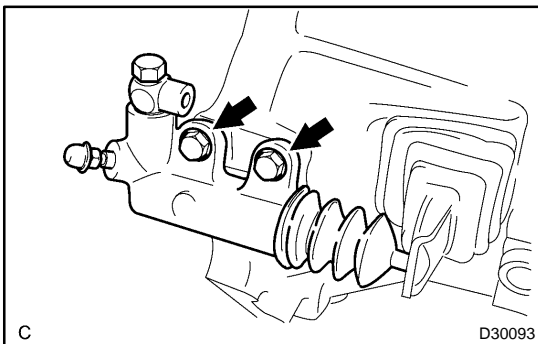
Part No. 08887-01806, CLUTCH SPLINE GREASE or equivalent

- (b) Apply clutch spline grease to the input shaft spline.

107. INSTALL SPEEDOMETER DRIVEN HOLE COVER SUB-ASSY

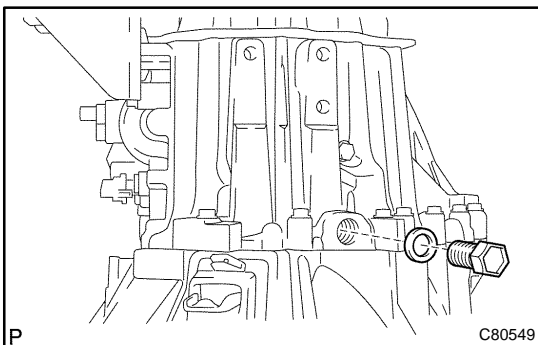
- (a) Install a new O-ring to the speedometer driven hole cover sub-assy.
- (b) Install the speedometer driven hole cover sub-assy to the manual transaxle case with the bolt.

Torque: 11 N·m (115 kgf·cm, 8.3 ft·lbf)

**108. INSTALL CLUTCH RELEASE CYLINDER ASSY**

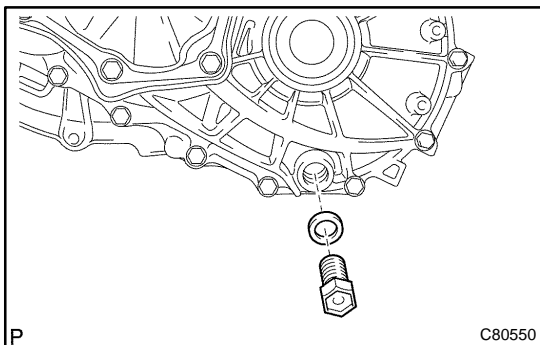
- (a) Install the clutch release cylinder with the 2 bolt.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)

**109. INSTALL MANUAL TRANSMISSION FILLER PLUG**

- (a) Install the manual transmission filler plug with a new gasket to the manual transmission case.

Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

**110. INSTALL DRAIN (MTM) PLUG SUB-ASSY**

- (a) Install the drain plug with a new gasket to the manual transmission case.

Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)