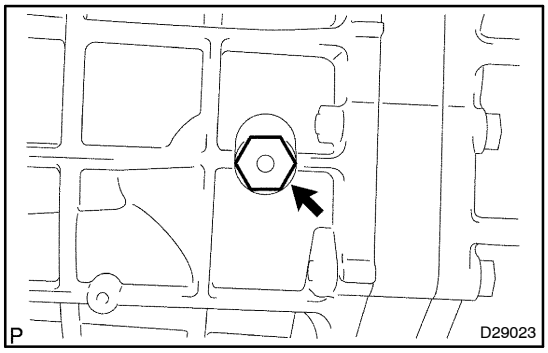
MANUAL TRANSMISSION ASSY (R150F)

410BE–01

OVERHAUL

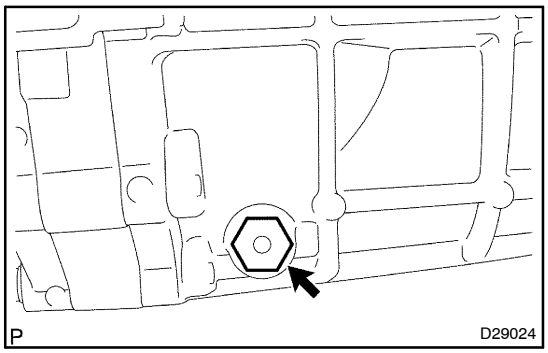
HINT:

COMPONENTS: See page 41–1



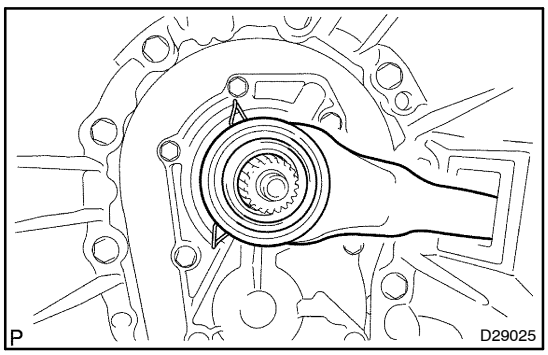
1. REMOVE MANUAL TRANSMISSION FILLER PLUG

(a) Remove the transmission filler plug and the gasket from the transmission case.



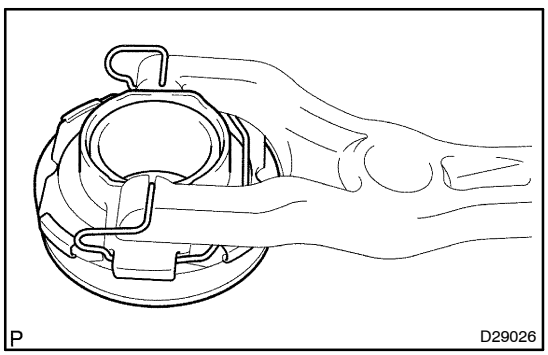
2. REMOVE DRAIN PLUG (MTM) GASKET

(a) Remove the transmission drain plug and the gasket from the transmission case.



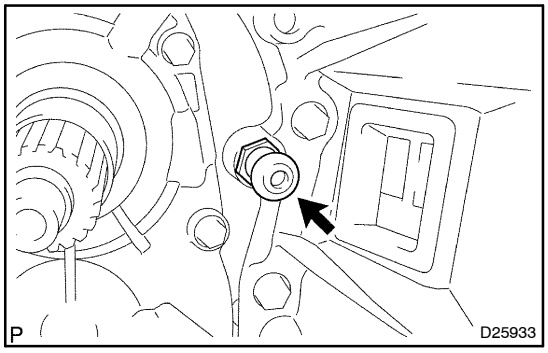
3. REMOVE CLUTCH RELEASE FORK SUB–ASSY

(a) Remove the clutch release fork and the clutch release bearing from the clutch housing.



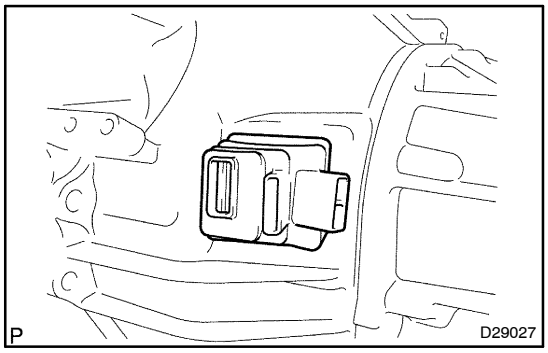
4. REMOVE CLUTCH RELEASE BEARING ASSY

(a) Remove the release bearing hub clip, and then remove the clutch release bearing from the clutch release fork.



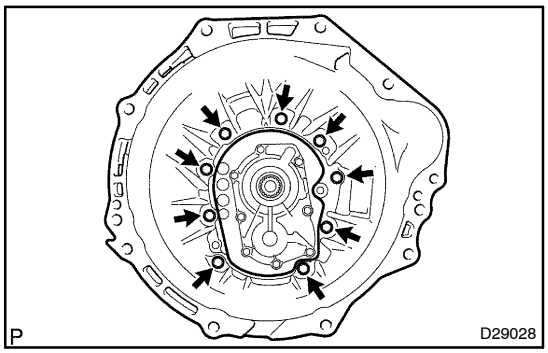
5. REMOVE RELEASE FORK SUPPORT

(a) Remove the release fork support form the clutch housing.



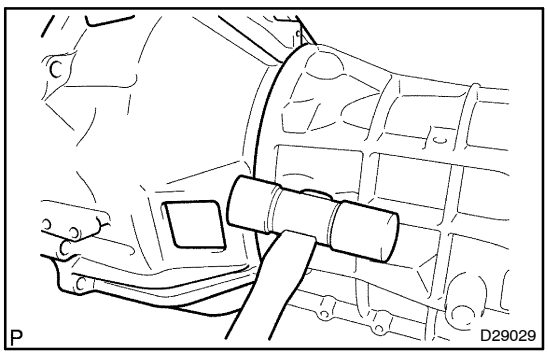
6. REMOVE CLUTCH RELEASE FORK BOOT

(a) Remove the clutch release fork boots from the clutch housing.

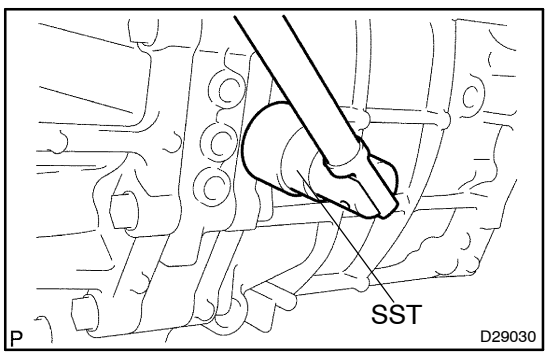


7. REMOVE CLUTCH HOUSING

(a) Remove the 9 bolts.

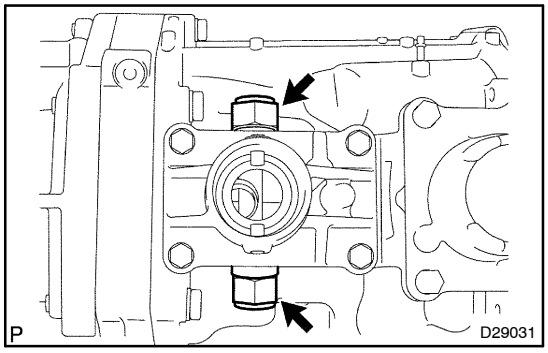


(b) Using a plastic hammer, remove the clutch housing from the transmission case.



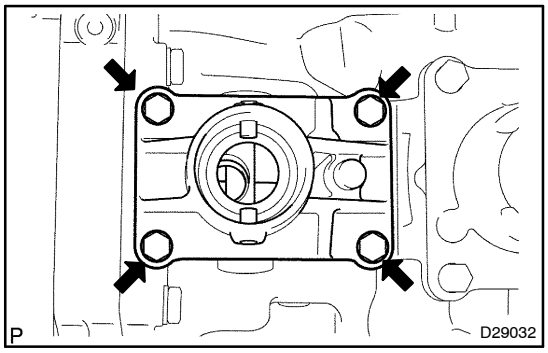
8. REMOVE BACK UP LAMP SWITCH ASSY

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



9. REMOVE REVERSE RESTRICT PIN ASSY

(a) Remove the 2 reverse restrict pins from the transfer adapter.

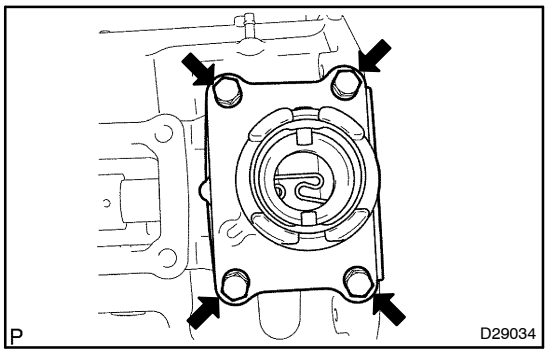


10. REMOVE FLOOR SHIFT CONTROL SHIFT LEVER RETAINER SUB–ASSY

(a) Remove the 4 bolts.

(b) Remove the floor shift control shift lever retainer from the transfer adapter.

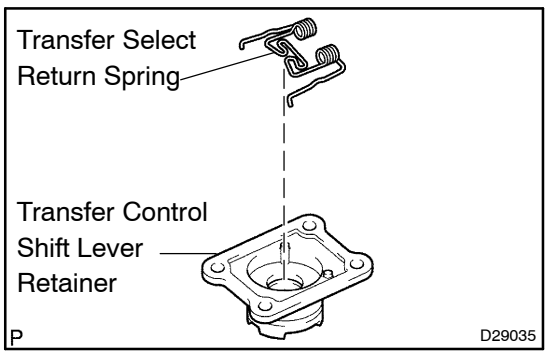
(c) Remove the extension housing oil deflector from the transfer adapter.



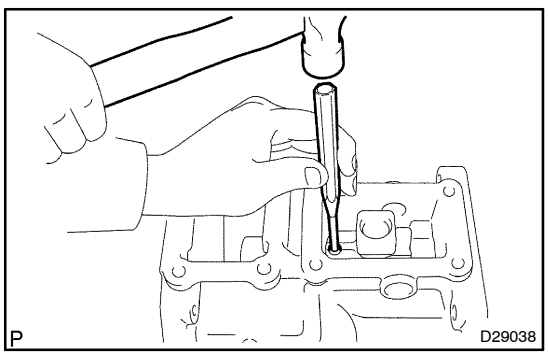
11. REMOVE TRANSFER CONTROL SHIFT LEVER RETAINER SUB–ASSY

(a) Remove the 4 bolts.

(b) Remove the transfer control shift lever retainer from the transfer adapter.

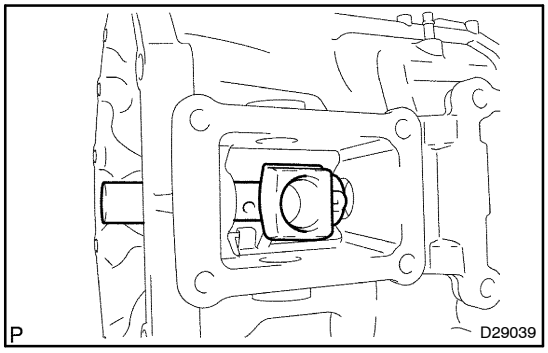


(c) Remove the transfer select return spring from the transfer control shift lever retainer.

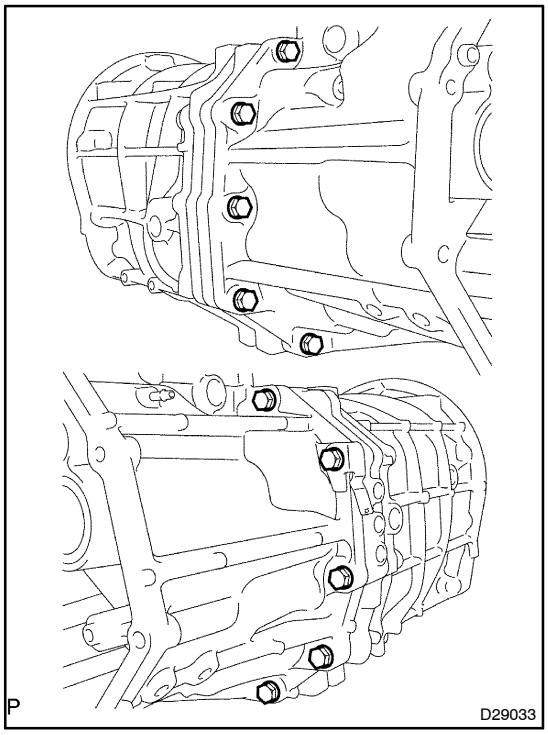


12. REMOVE SHIFT & SELECT LEVER SHAFT

(a) Using a pin punch (5 mm) and a hammer, remove the shift fork set slotted spring pin from the transfer adapter.

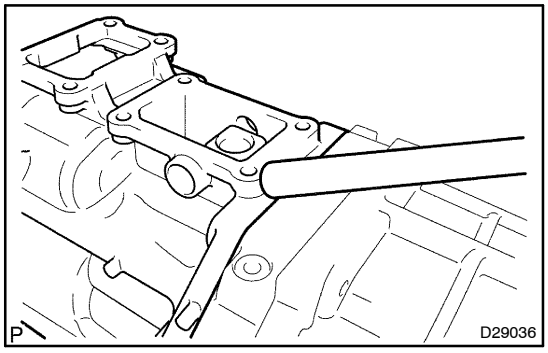


(b) Remove the shift & serect lever shaft and the shift lever housing from the transfer adapter.

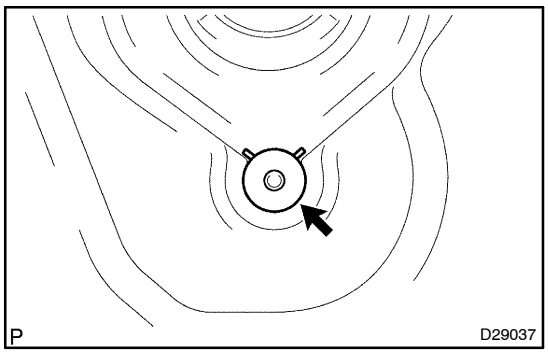


13. REMOVE TRANSFER ADAPTER

(a) Remove the 10 bolts.

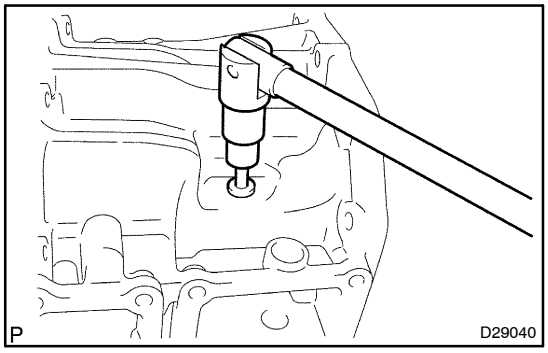


(b) Using a brass bar and a hammer, remove the transfer adapter from the transmission case.



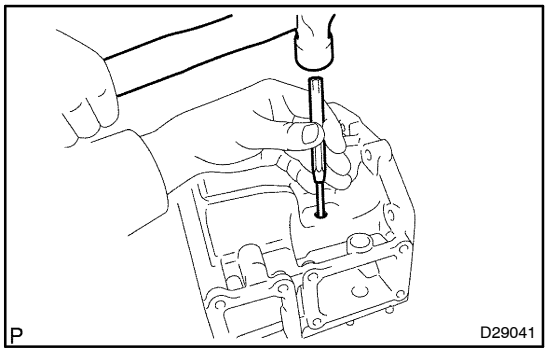
14. REMOVE TRANSFER OIL RECEIVER PIPE

(a) Remove the transfer oil receiver pipe from the transfer adapter.

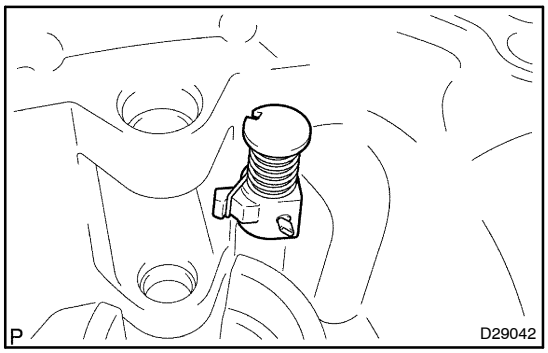


15. REMOVE REVERSE RESTRICT PIN ASSY

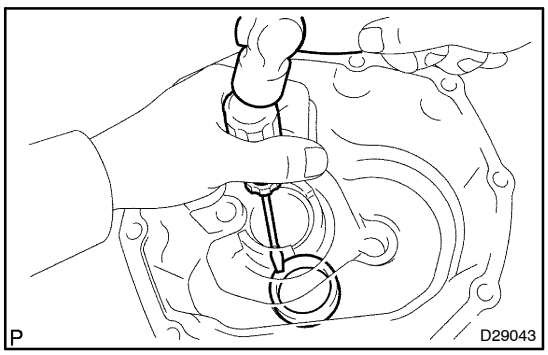
(a) Using a torx socket wrench T40, remove the reverse restrict pin plug from the transfer adapter.



(b) Using a pin punch (5 mm) and a hammer, remove the reverse restrict pin slotted pin from the transfer adapter.

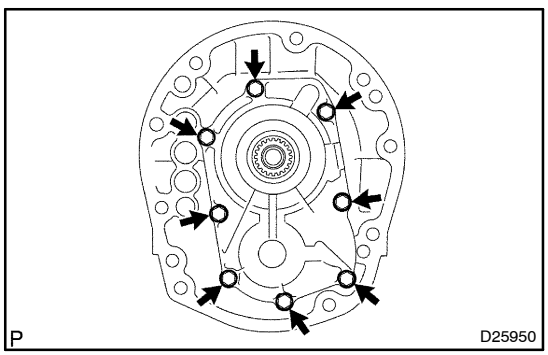


(c) Remove the reverse restrict pin from the transfer adapter.



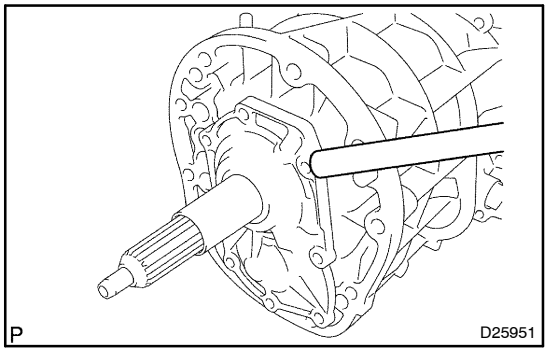
16. REMOVE TRANSFER ADAPTER OIL SEAL

(a) Using a screwdriver, remove the transfer adapter oil seal from the transfer adapter.

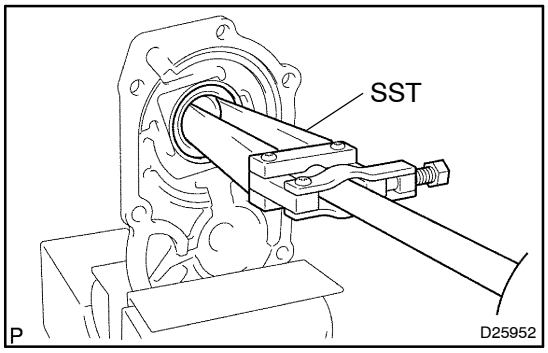


17. REMOVE BEARING RETAINER FRONT (MTM)

(a) Remove the 8 bolts.



(b) Using a brass bar and a hammer, remove the transmission bearing retainer front from the transmission case.

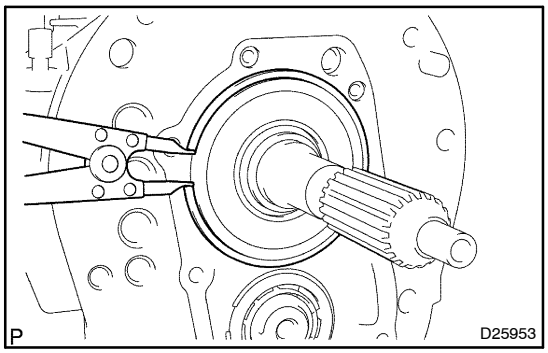


18. REMOVE TRANSMISSION FRONT BEARING RETAINER OIL SEAL

(a) Fix the bearing retainer front.

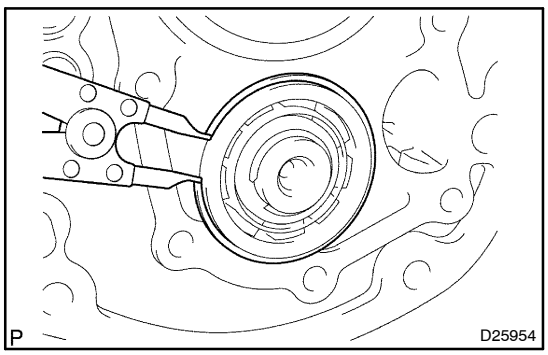
(b) Using SST, remove the transmission front bearing retainer oil seal.

SST 09308–00010



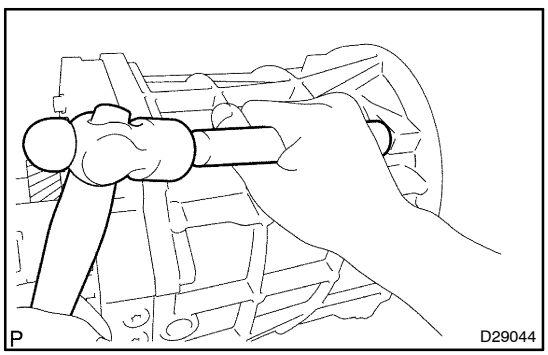
19. REMOVE FRONT BEARING SHAFT SNAP RING

(a) Using a snap ring expander, remove the front bearing shaft snap ring from the transmission case.



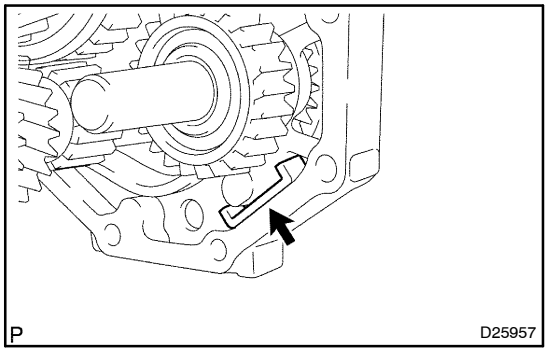
20. REMOVE COUNTER GEAR FRONT BEARING SNAP RING NO.1

(a) Using a snap ring expander, remove the counter gear front bearing snap ring No.1 from the transmission case.



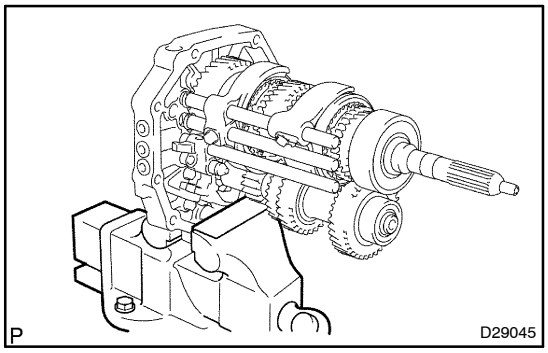
21. REMOVE MANUAL TRANSMISSION CASE

(a) Using a brass bar and a hammer, remove the transmission case from the intermediate plate.



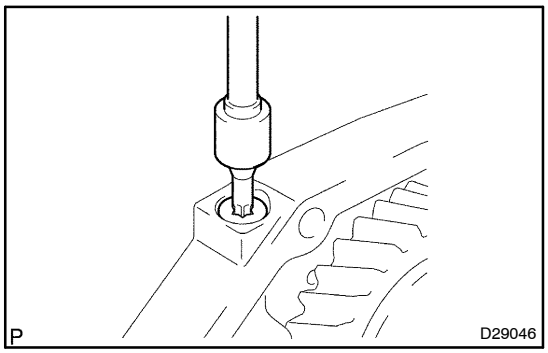
22. REMOVE TRANSMISSION MAGNET

(a) Remove the transmission magnet from the intermediate plate.



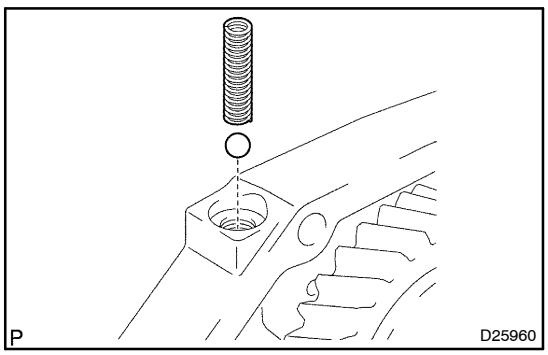
23. FIX INTERMEDIATE PLATE

(a) Fix the intermediate plate in a vice between aluminum plates.

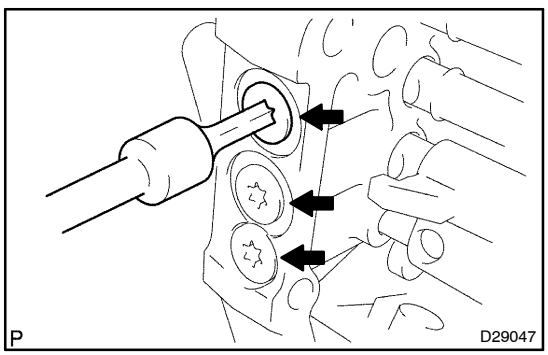


24. REMOVE SHIFT DETENT BALL SPRING SEAT NO.1

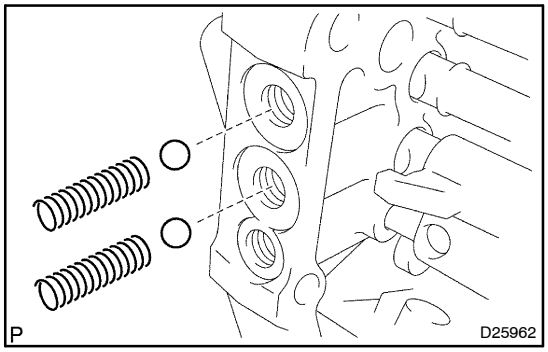
(a) Using a torx socket wrench T40, remove the shift detent ball spring seat No.1 from the intermediate plate.



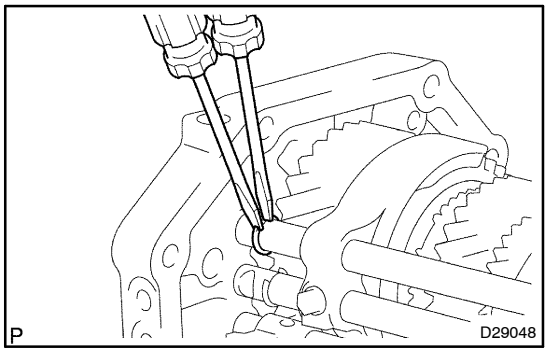
(b) Using a magnetic finger, remove the shift detent ball low side compression spring and the shift detent ball from the intermediate plate.



(c) Using a torx socket wrench T40, remove the 3 shift detent ball spring seat No.1 from the intermediate plate.



(d) Using a magnetic finger, remove the 2 shift detent ball low side compression springs and the 2 shift detent balls from the intermediate plate.

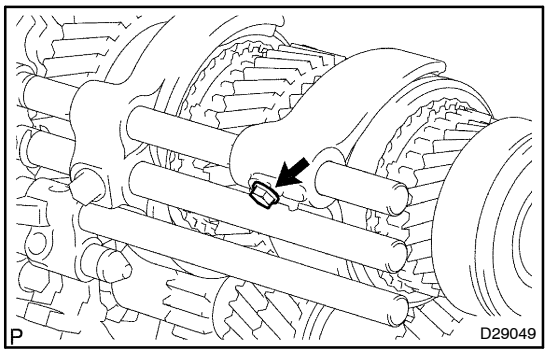


25. REMOVE GEAR SHIFT FORK SHAFT NO.2

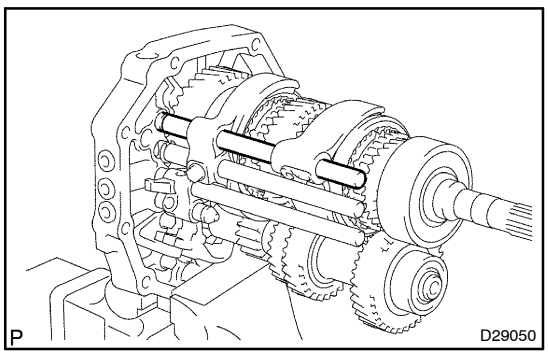
(a) Using 2 screwdrivers and a hammer, remove the shift fork shaft shaft snap ring from the gear shift fork shaft No.2.

NOTICE:

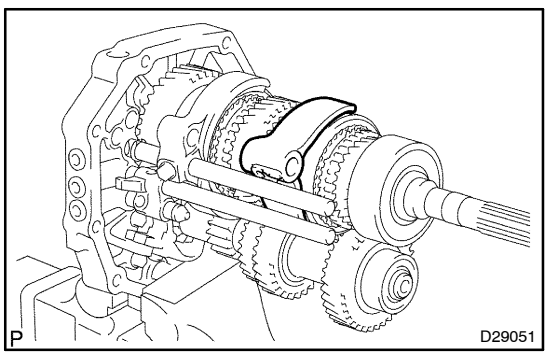
Use a shop rag to prevent the snapring from flying off.



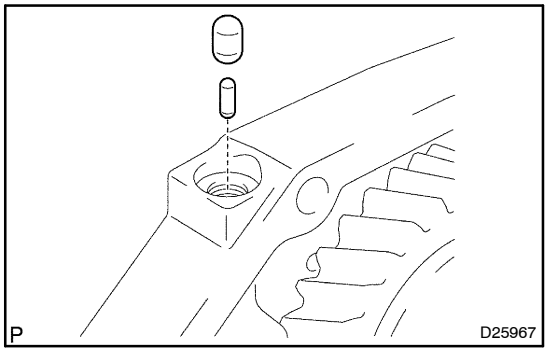
(b) Remove the shift fork set bolt from the gear shift fork No.2.



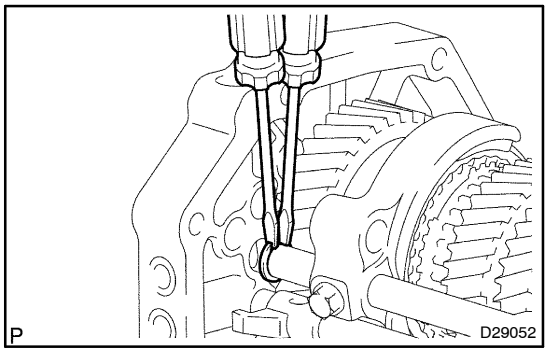
(c) Remove the gear shift fork shaft No.2 from the intermediate plate.



(d) Remove the gear shift fork No.2 from the transmission hub sleeve No.2.



(e) Using a magnetic finger, remove the shift interlock No.1 roller and the shift interlock pin (ball) from the intermediate plate.

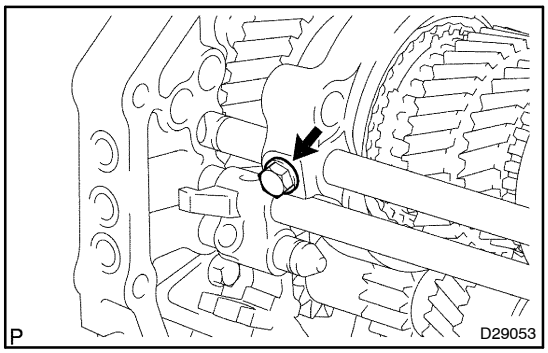


26. REMOVE GEAR SHIFT FORK SHAFT NO.1

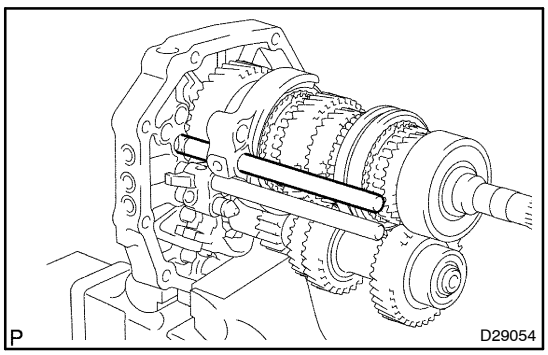
(a) Using 2 screwdrivers and a hammer, remove the shift fork shaft shaft snap ring from the gear shift fork shaft No.1.

NOTICE:

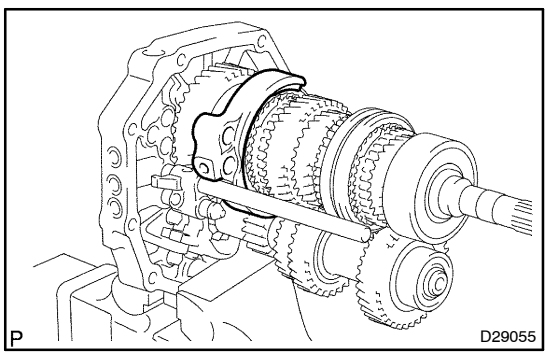
Use a shop rag to prevent the snapring from flying off.



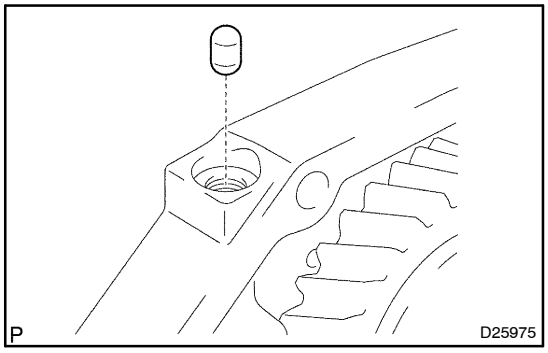
(b) Remove the shift fork set bolt from the gear shift fork No.1.



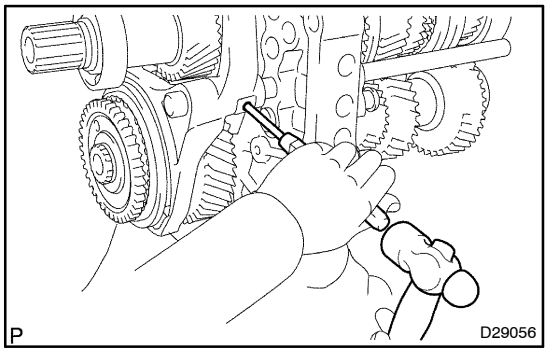
(c) Remove the gear shift fork shaft No.1 from the intermediate plate.



(d) Remove the gear shift fork No.1 from the reverse gear.

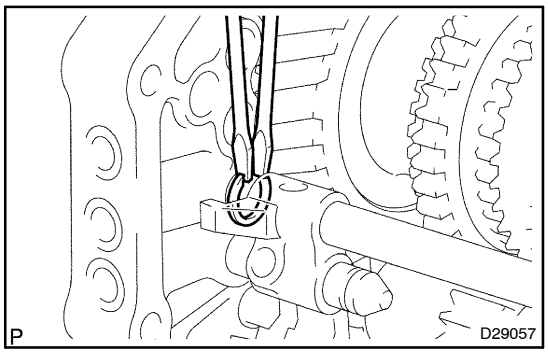


(e) Using a magnetic finger, remove the shift interlock No.1 roller from the intermediate plate.



27. REMOVE REVERSE SHIFT FORK SHAFT

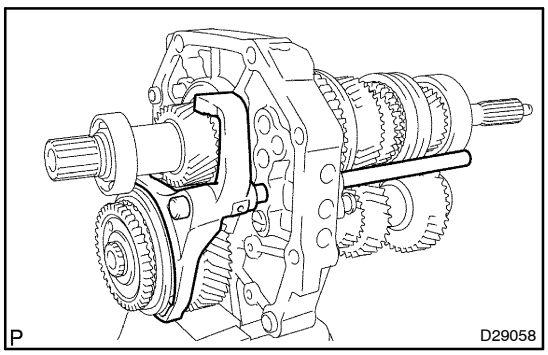
(a) Using a pin punch (5 mm) and a hammer, remove the shift fork set slotted spring pin from the gear shift fork No.3.



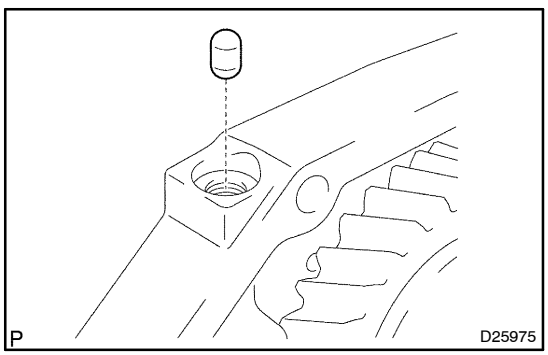
(b) Using 2 screwdrivers and a hammer, remove the shift fork shaft shaft snap ring from the reverse shift fork shaft.

NOTICE:

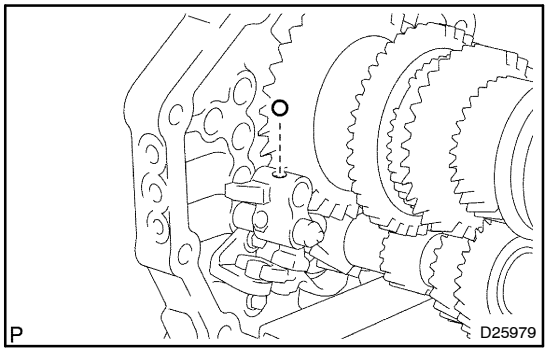
Use a shop rag to prevent the snapring from flying off.



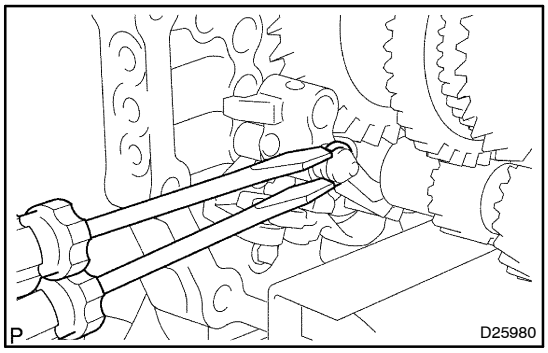
(c) Remove the gear shift fork No.3 and the reverse shift fork shaft from the intermediate plate.



(d) Using a magnetic finger, remove the shift interlock No.1 roller from the intermediate plate.



(e) Using a magnetic finger, remove the reverse shift fork ball from the reverse shift fork.

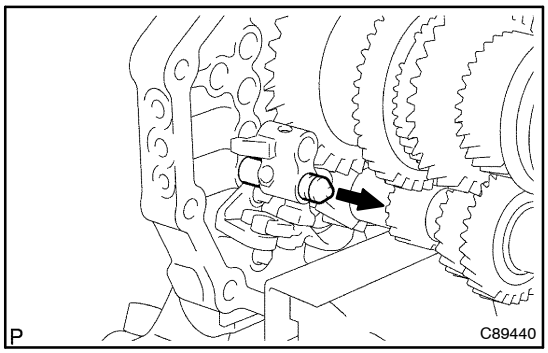


28. REMOVE GEAR SHIFT FORK SHAFT NO.4

(a) Using 2 screwdrivers and a hammer, remove the shift fork shaft shaft snap ring from the gear shift fork shaft No.4.

NOTICE:

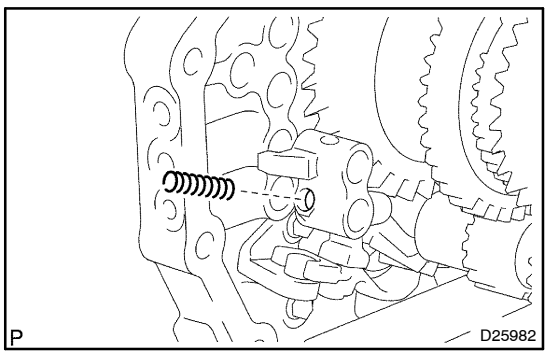
Use a shop rag to prevent the snapring from flying off.



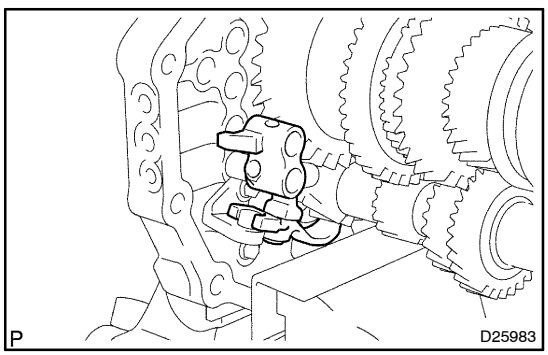
(b) Remove the gear shift fork shaft No.4 from the intermediate plate.

NOTICE:

Cover the hole with a shop rag to prevent the reverse shift fork ball from popping out.

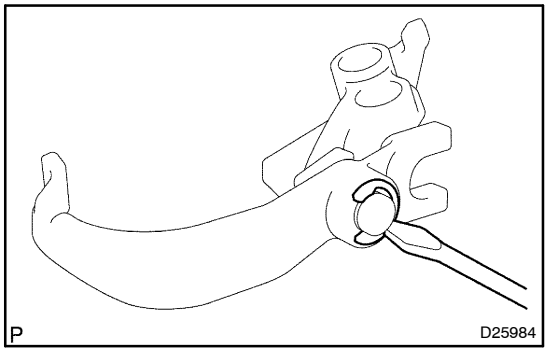


(c) Using a magnetic finger, remove the reverse shift fork return compression spring from the reverse shift fork.

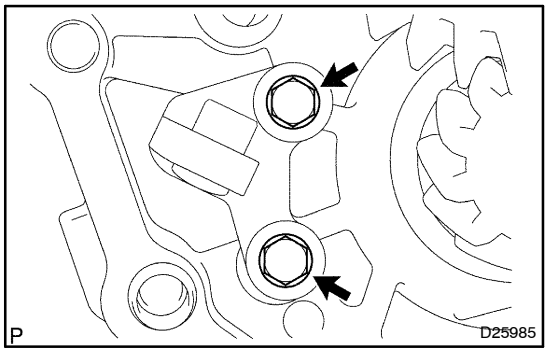


29. REMOVE REVERSE SHIFT FORK

(a) Remove the reverse shift fork with the reverse shift arm from the intermediate plate.

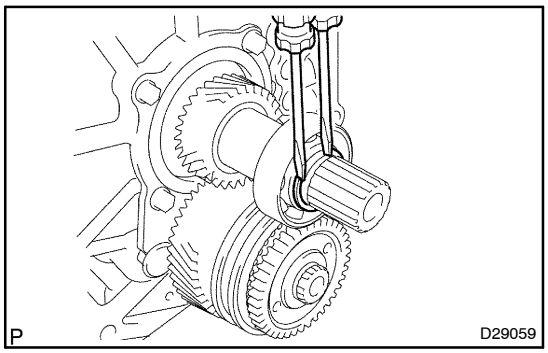


(b) Using a screwdriver, remove the reverse shift arm end shaft ring and the reverse shift fork from the reverse shift arm.



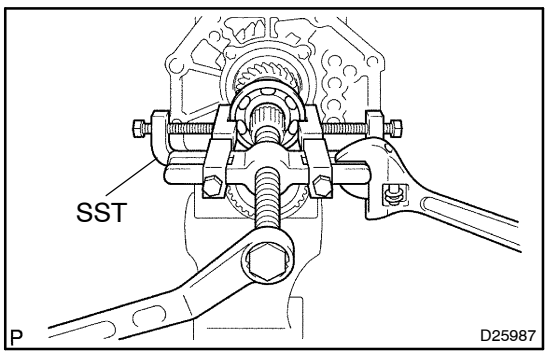
30. REMOVE REVERSE SHIFT ARM BRACKET

(a) Remove the 2 bolts and the reverse shift arm bracket from the intermediate plate.



31. REMOVE OUTPUT SHAFT BEARING SHAFT SNAP RING

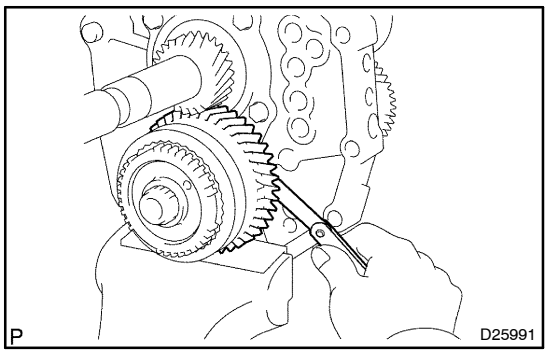
(a) Using 2 screwdrivers and a hammer, remove the output shaft bearing shaft snap ring from the output shaft.



32. REMOVE OUTPUT SHAFT REAR BEARING

(a) Using SST, remove the output shaft rear bearing and the output shaft spacer from the output shaft.

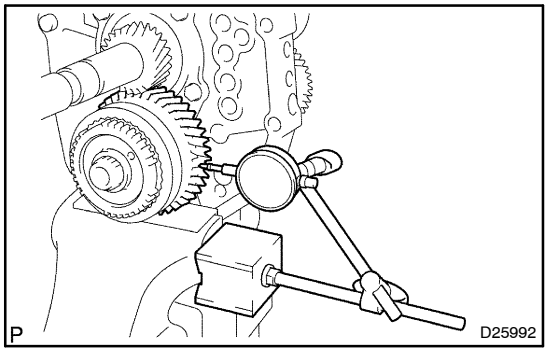
SST 09950–40011 (09951–04010, 09952–04010, 09953–04020, 09954–04010, 09955–04051, 09957–04010, 09958–04011)



33. INSPECT COUNTER SHAFT 5TH GEAR THRUST CLEARANCE

(a) Using a feeler gauge, measure the counter shaft fifth gear thrust clearance.

Standard clearance:
0.10 – 0.35 mm (0.0039 – 0.0138 in.)



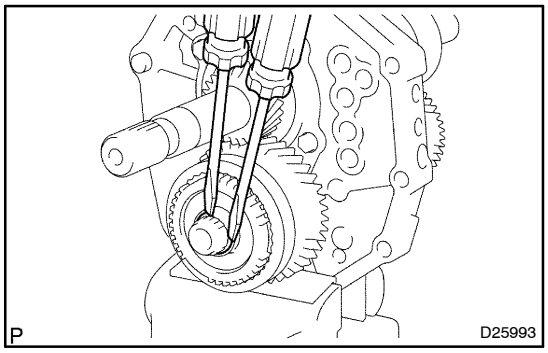
34. INSPECT COUNTER SHAFT 5TH GEAR RADIAL CLEARANCE

(a) Using a dial indicator, measure the radial clearance of the counter shaft fifth gear.

Standard clearance:
0.015 – 0.068 mm (0.0059 – 0.0027 in.)

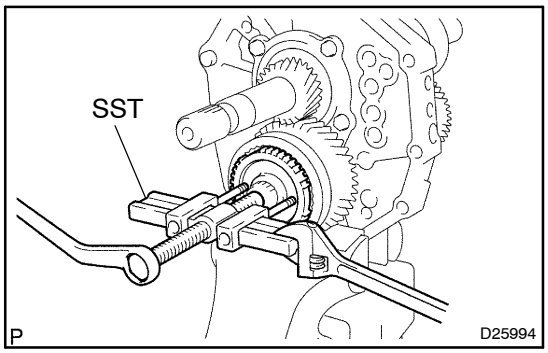
NOTICE:

If the value is not within the specification, replace the counter fifth gear bearing with a new one.



35. REMOVE COUNTER GEAR REAR SHAFT SNAP RING

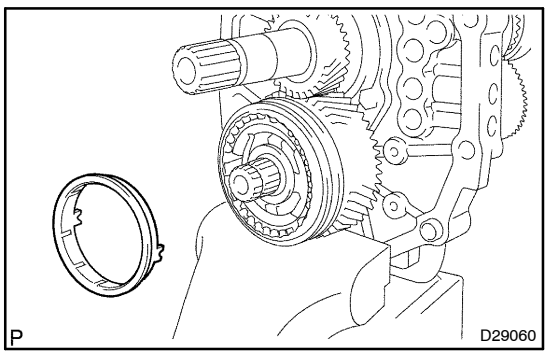
(a) Using 2 screwdrivers and a hammer, remove the counter gear rear shaft snap ring from the counter gear.



36. REMOVE GEAR SPLINE PIECE NO.5

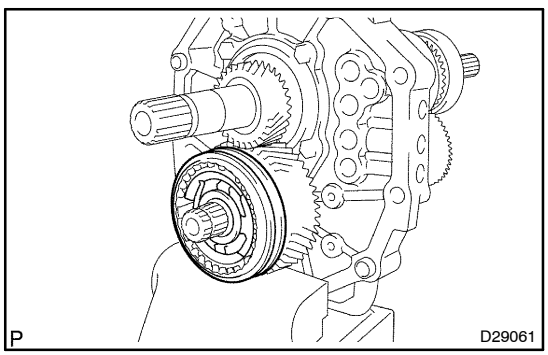
(a) Using SST, remove the gear spline piece No.5 from the counter gear.

SST 09950–50013 (09951–05010, 09952–05010, 09953–05020, 09954–05021, 09957–04010)



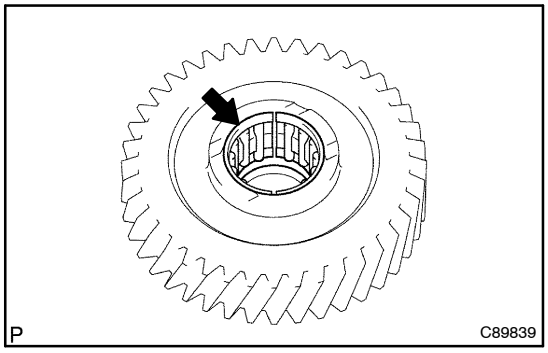
37. REMOVE SYNCHRONIZER RING OUTER NO.3

(a) Remove the synchronizer ring outer No.3 from the counter gear.



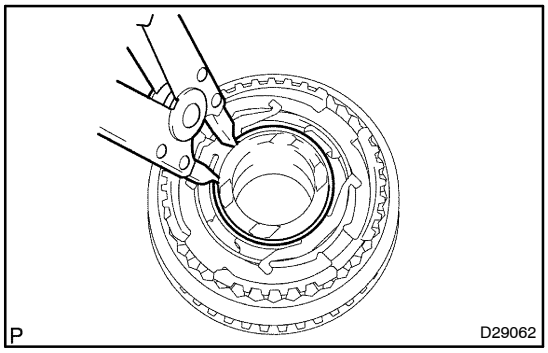
38. REMOVE COUNTERSHAFT 5TH GEAR

(a) Remove the counter shaft 5th gear and the transmission hub sleeve No.3 assy from the counter gear.



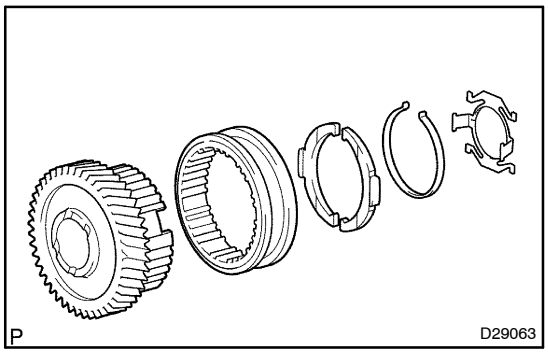
39. REMOVE COUNTER 5TH GEAR BEARING

(a) Remove the counter 5th gear bearing from the counter gear.

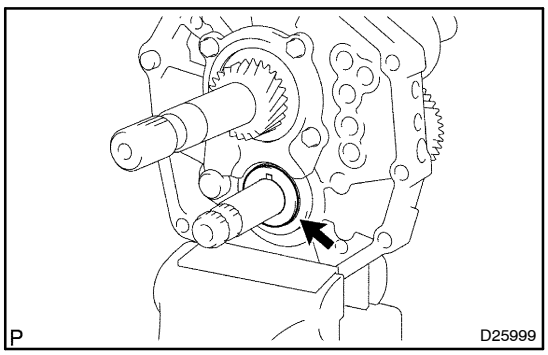


40. REMOVE TRANSMISSION HUB SLEEVE NO.3

(a) Using a snap ring expander, remove the bearing shaft snap ring.

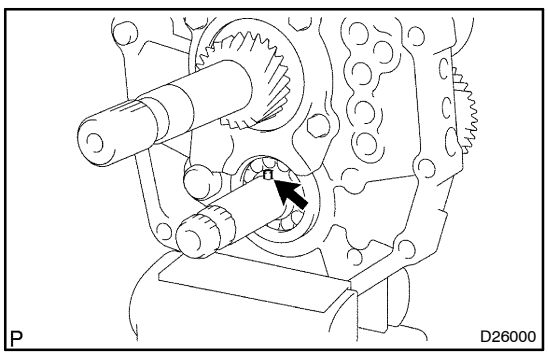


(b) Remove the transmission hub sleeve No.3, the 2 synchro–mesh shifting keys No.3 and the 2 synchro–mesh shifting key springs No.3 from the counter shaft 5th gear.



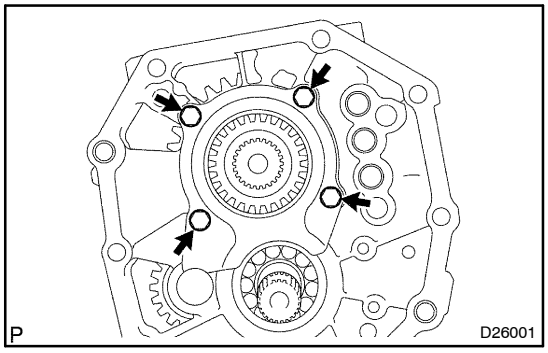
41. REMOVE 5TH GEAR THRUST WASHER

(a) Remove the 5th gear thrust washer from the counter gear.



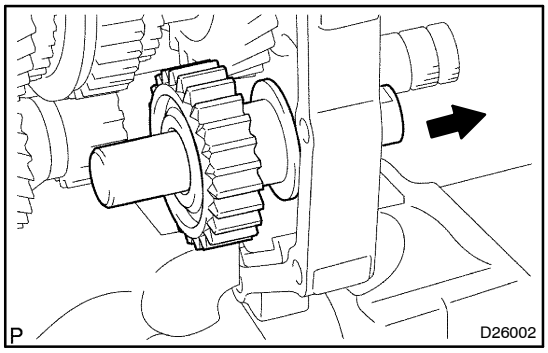
42. REMOVE 5TH GEAR THRUST WASHER PIN

(a) Remove the 5th gear thrust washer pin from the counter gear.



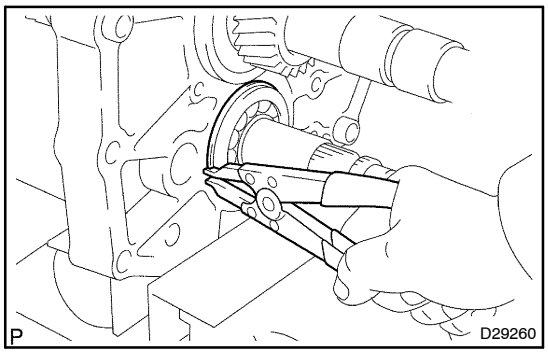
43. REMOVE OUTPUT SHAFT REAR BEARING (MTM) RETAINER

(a) Remove the 4 bolts and the output shaft rear bearing retainer from the intermediate plate.



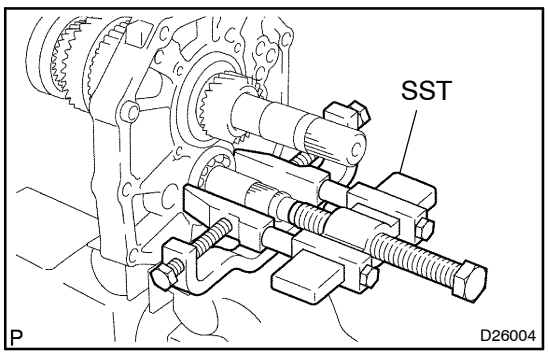
44. REMOVE REVERSE IDLER GEAR SUB–ASSY

(a) Pull out the reverse idler gear shaft to the rear side and remove the reverse idler gear from the intermediate plate.



45. REMOVE COUNTER SHAFT CENTER BEARING

(a) Using snap ring expander, remove the snap ring.

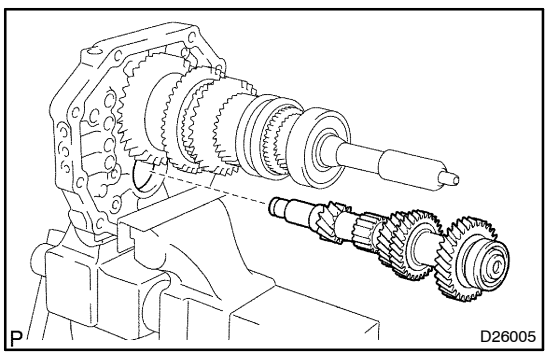


(b) Using SST, remove the counter shaft center bearing from the intermediate plate.

SST 09950–40011 (09951–04010, 09952–04010, 09953–04020, 09954–04010, 09955–04011, 09957–04010, 09958–04011)

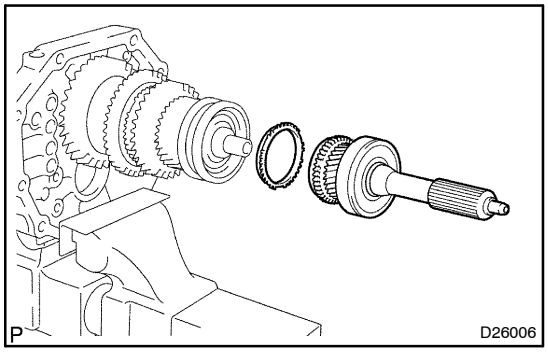
HINT:

Remove the bearing while tapping the tip of the counter gear so that the counter gear assy does not hit the side wall of the output shaft gear by being pushed forward.



46. REMOVE COUNTER GEAR ASSY

(a) Remove the counter gear assy from the intermediate plate.

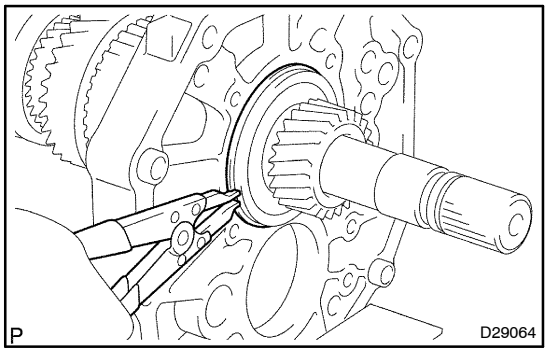


47. REMOVE INPUT SHAFT ASSY

(a) Remove the input shaft assy and the synchronizer ring No.2 from the output shaft.

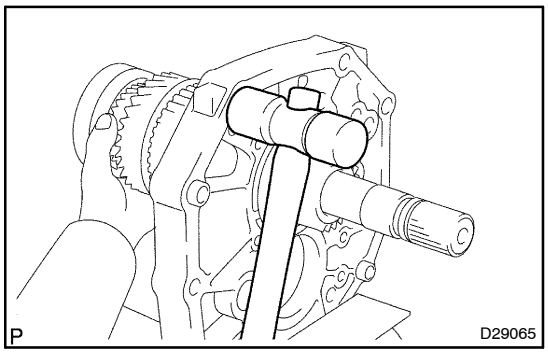
NOTICE:

Do not drop the input shaft bearing and the synchronizer ring No.2.



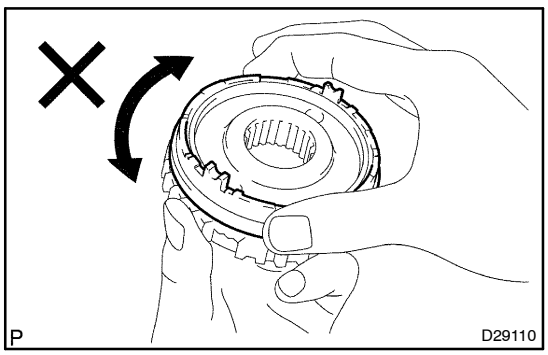
48. REMOVE OUTPUT SHAFT BEARING SHAFT SNAP RING

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



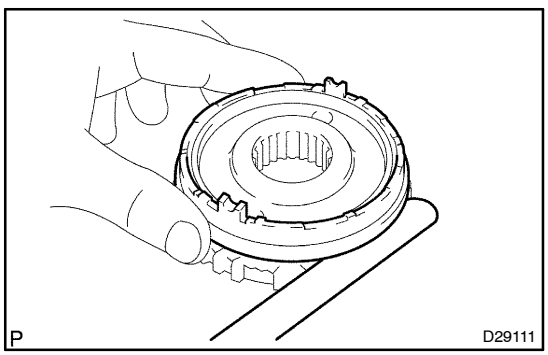
49. REMOVE OUTPUT SHAFT ASSY

(a) Using a plastic hammer, remove the output shaft assy by tapping the intermediate plate.



50. INSPECT SYNCHRONIZER RING OUTER NO.3

(a) Apply gear oil to the cone part of the gear spline piece No.5, and check that it does not turn in the both directions while pushing the synchronizer ring outer No.3 to the gear spline piece No.5.



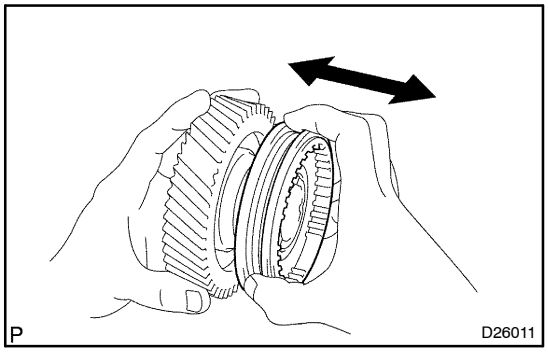
(b) Measure the clearance between the synchronizer ring outer No.3 and the gear spline piece No.5 while pushing the synchronizer ring outer No.3 to the cone part of the gear spline piece No.5.

Standard clearance:

0.85 – 1.55 mm (0.0334 – 0.0610 in.)

NOTICE:

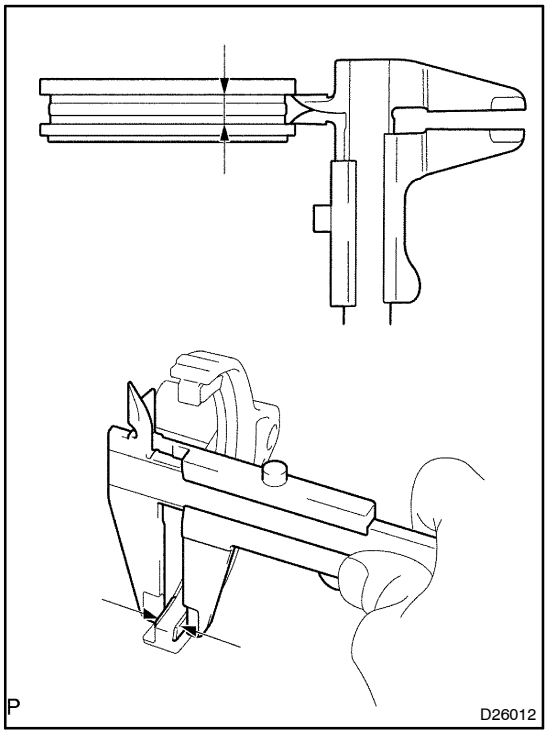
If the clearance is out of the specification, replace synchronizer ring outer No.3 with a new one.



51. INSPECT TRANSMISSION HUB SLEEVE NO.3

(a) Check the sliding condition between the counter shaft 5th gear and the transmission hub sleeve No.3.

(b) Check the tip of the spline gear of the transmission hub sleeve No.3 for wear.

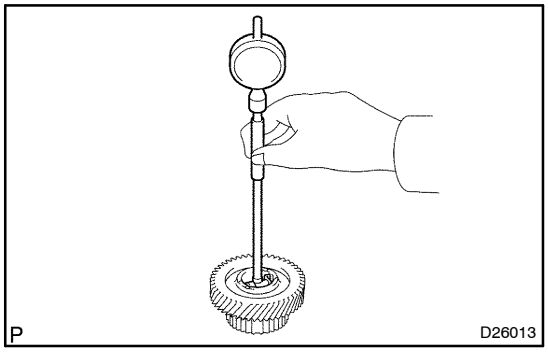


(c) Using a vernier caliper, measure the transmission hub sleeve No.3 groove and the thickness of the claw part of the gear shift fork No.3 to calculate the clearance.

Standard clearance:
0.26 – 0.84 mm (0.0102 – 0.0331 in.)

NOTICE:

If the clearance is out of the specification, replace the transmission hub sleeve No.3 and the gear shift fork No.3 with the new ones.



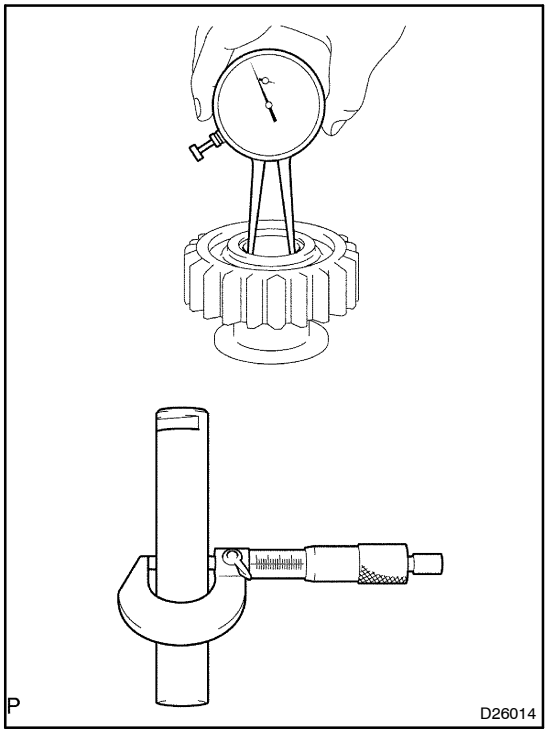
52. INSPECT COUNTERSHAFT 5TH GEAR

(a) Using a cylinder gauge, measure the inner diameter of the counter shaft 5th gear.

Standard clearance:
38.015 – 38.040 mm (1.4967 – 1.4976 in.)
Maximum clearance:
38.040 mm (1.4976 in.)

NOTICE:

If the value exceeds the maximum, replace the counter shaft 5th gear with a new one.



53. INSPECT REVERSE IDLER GEAR SUB–ASSY

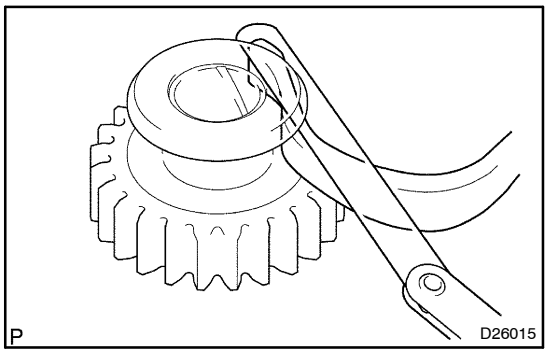
(a) Using a caliper gauge, measure the inner diameter of the reverse gear.

Standard clearance:
24.040 – 24.061 mm (0.9465 – 0.9473 in.)
Maximum clearance:
24.061 mm (0.9473 in.)

NOTICE:
If the value exceeds the maximum, replace the reverse idler gear with a new one.

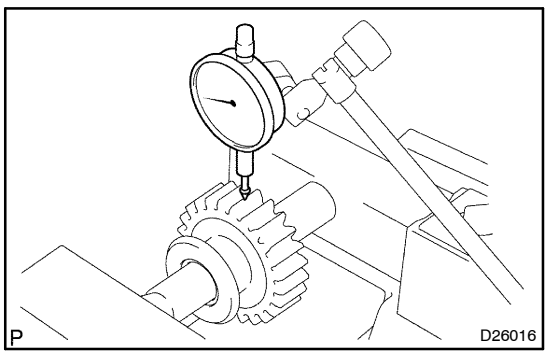
(b) Using a micrometer, measure the outer diameter of the sliding part of the reverse idler gear on the reverse idler gear shaft.

Standard clearance:
23.979 – 24.000 mm (0.9441 – 0.9449 in.)
Minimum clearance:
23.979 mm (0.9441 in.)



(c) Using a feeler gauge, measure the thrust clearance of the shoe part between the reverse idler gear and the reverse shift arm.

Standard clearance:
0.05 – 0.35 mm (0.0020 – 0.0138 in.)

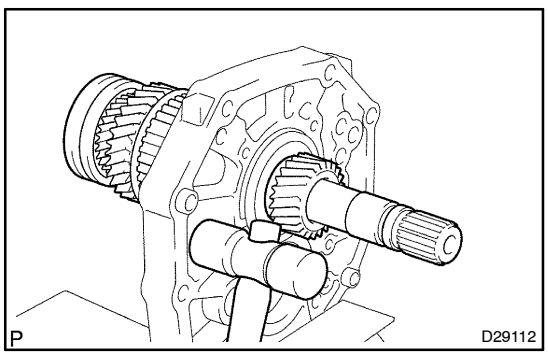


54. INSPECT REVERSE IDLER GEAR RADIAL CLEARANCE

(a) Install the reverse idler gear on the reverse idler gear shaft, and fix it to the vice.

(b) Using dial indicator, measure the radial clearance of the reverse idler gear.

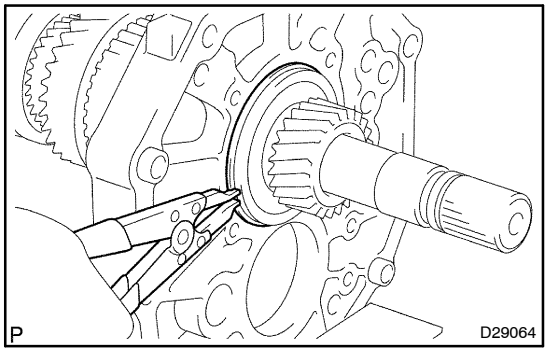
Standard clearance:
0.040 – 0.082 mm (0.0016 – 0.0032 in.)



55. INSTALL OUTPUT SHAFT ASSY

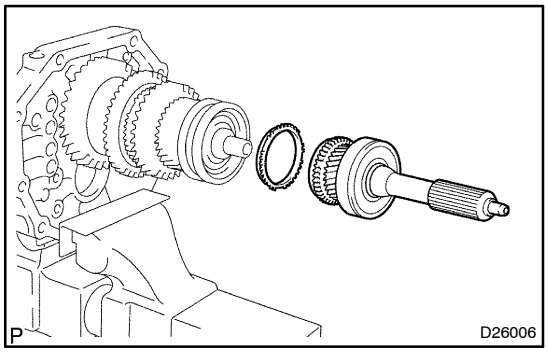
(a) Apply gear oil to the sliding part of the output assy.

(b) Using a plastic hammer, install the output shaft assy by tapping the intermediate plate.



56. INSTALL OUTPUT SHAFT BEARING SHAFT SNAP RING

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

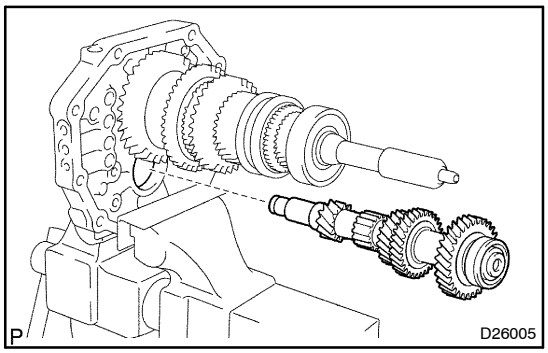


57. INSTALL INPUT SHAFT ASSY

(a) Apply gear oil to the input shaft assy and the synchronizer ring No.2, and install them to the output shaft.

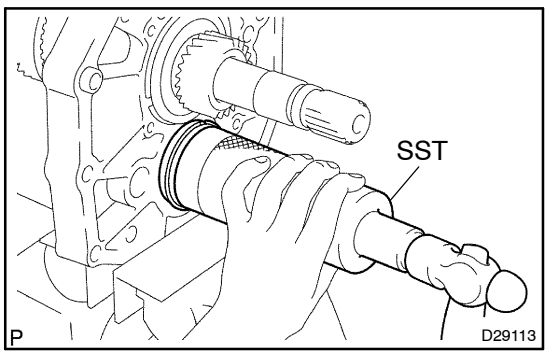
NOTICE:

- **Install the synchronizer ring No.2 so that its groove fits into the synchromesh shifting key No.2.**
- **Check that the input shaft assy rotates slightly.**



58. INSTALL COUNTER GEAR ASSY

(a) Temporarily install the counter gear assy to the intermediate plate.



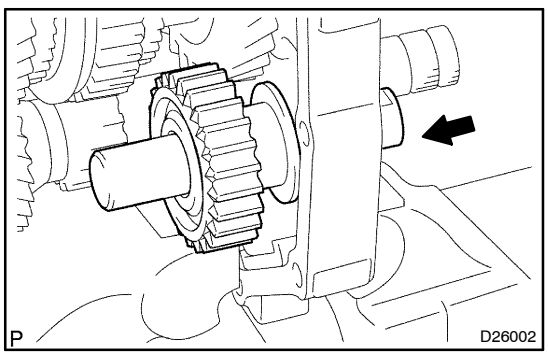
59. INSTALL COUNTER SHAFT CENTER BEARING

(a) Using SST and a hammer, install the new counter shaft center bearing to the intermediate plate.

SST 09316–60011 (09316–00011)

HINT:

Install the bearing while tapping the tip of the counter gear with a plastic hammer so that the counter gear assy will not hit the side wall of the output shaft gear by being pushed forward.

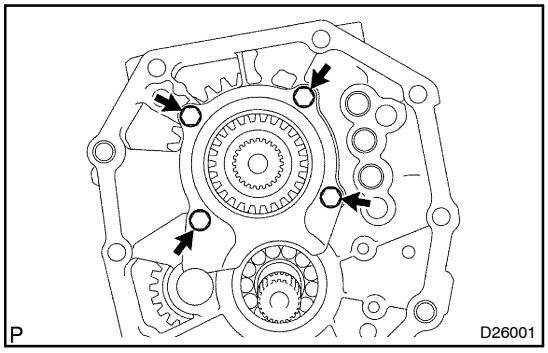


60. INSTALL REVERSE IDLER GEAR SUB–ASSY

(a) Apply gear oil to each sliding part of the reverse idler gear and the reverse idler gear shaft, and install the reverse idler gear and the reverse idler shaft to the intermediate plate.

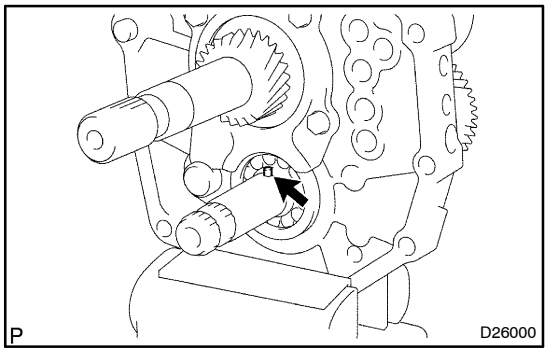
NOTICE:

Face the groove side of the reverse idler shaft to the rear side and install it from the rear side.



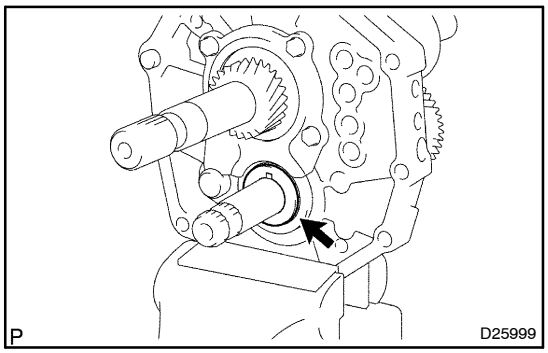
61. INSTALL OUTPUT SHAFT REAR BEARING (MTM) RETAINER

(a) Install the output shaft rear bearing retainer inserting to the groove of the reverse idler gear shaft with 4 bolts.
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)



62. INSTALL 5TH GEAR THRUST WASHER PIN

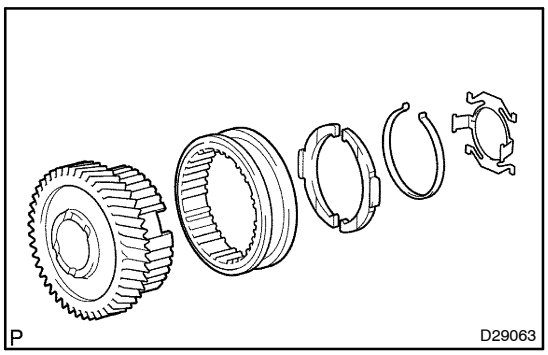
(a) Apply MP grease to the 5th gear trust washer pin, and install it to the counter gear.



63. INSTALL 5TH GEAR THRUST WASHER

(a) Apply gear oil to the 5th gear thrust washer, and install it to the counter gear.

NOTICE:
Install the thrust washer so that its side of chamfer faces to the front side.

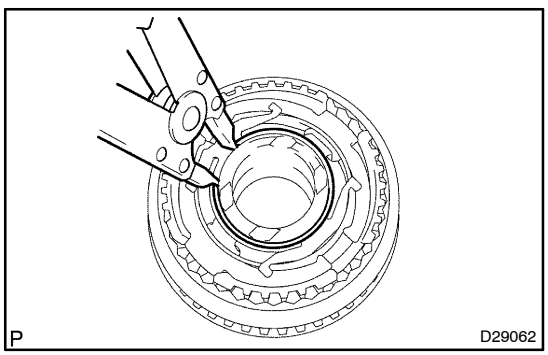


64. INSTALL TRANSMISSION HUB SLEEVE NO.3

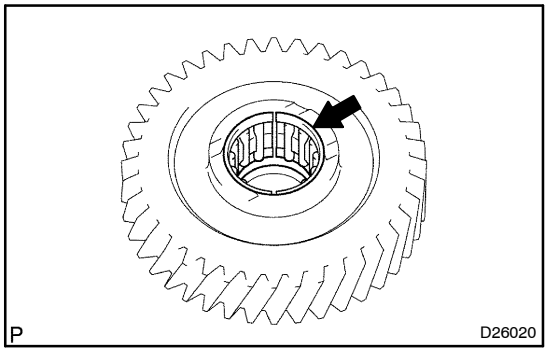
(a) Apply gear oil to the sliding part of transmission hub sleeve No.3, and install it to the counter shaft 5th gear.

NOTICE:
Be sure of the direction of the transmission hub sleeve No.3 and the counter shaft 5th gear.

(b) Install the 2 synchro–mesh shifting keys No.3 and the 2 synchro–mesh shifting key spring to the counter shaft 5th gear.

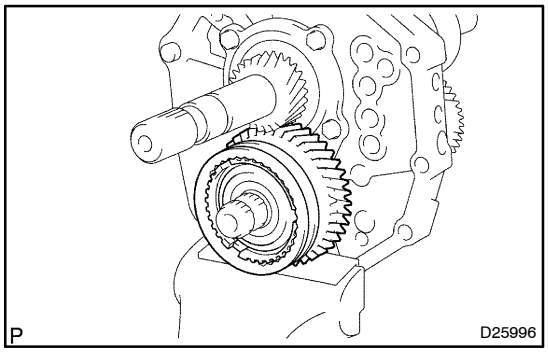


(c) Using snap ring expander, install the bearing shaft snap-ring to the countershaft 5th gear.



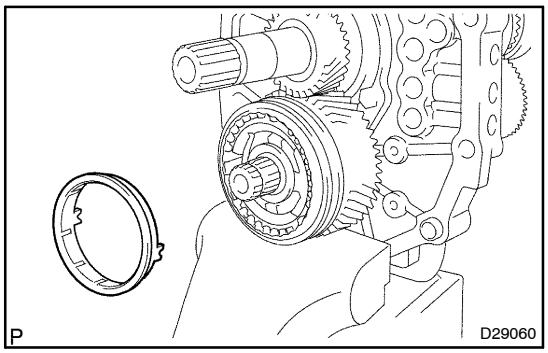
65. INSTALL COUNTER 5TH GEAR BEARING

(a) Apply gear oil to the counter 5th gear bearing and install it to the counter gear.



66. INSTALL COUNTERSHAFT 5TH GEAR

(a) Apply gear oil to the counter 5th and the transmission hub sleeve No.3 assy, and install it to the counter gear.

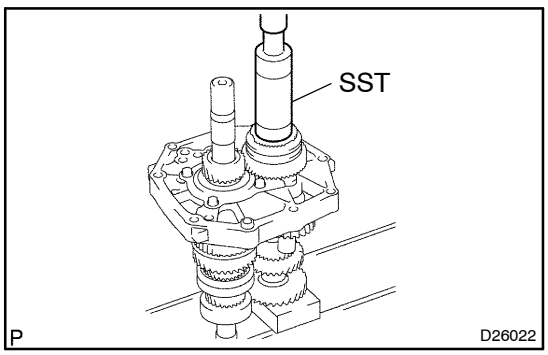


67. INSTALL SYNCHRONIZER RING OUTER NO.3

(a) Apply gear oil to the synchronizer ring outer No.3, and install it to the counter gear.

NOTICE:

Install the synchronizer ring outer No.3 so that its groove fits into the synchromesh shifting key No.3.



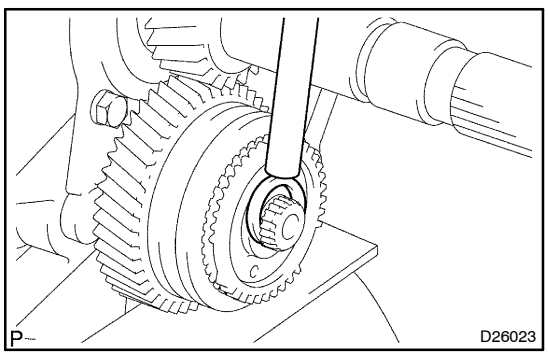
68. INSTALL GEAR SPLINE PIECE NO.5

(a) Using SST and a press, install the gear spline piece No.5 to the counter gear.

NOTICE:

Check that the gear rotate lightly.

SST 09316–60011 (09316–00011)

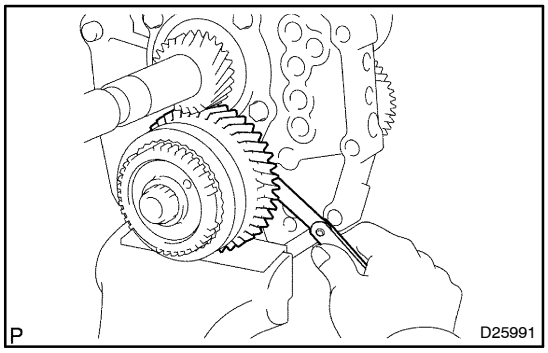


69. INSTALL COUNTER GEAR REAR SHAFT SNAP RING

(a) Select the counter gear rear shaft snap ring so that the thrust gap between gear spline piece No.5 and the counter gear rear shaft snap ring to be within the specification, and using a brass bar and a hammer, install it to the counter gear.

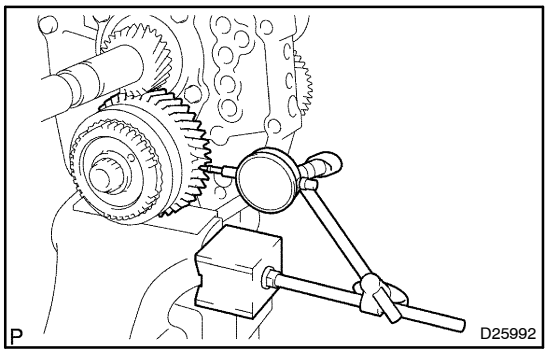
Standard clearance: 0.1 mm (0.0039 in.) or less

Mark	Thickness mm (in.)
A	2.80 – 2.85 (0.1102 – 0.1122)
B	2.85 – 2.90 (0.1122 – 0.1141)
C	2.90 – 2.95 (0.1141 – 0.1160)
D	2.95 – 3.00 (0.1160 – 0.1181)
E	3.00 – 3.05 (0.1181 – 0.1200)
F	3.05 – 3.10 (0.1200 – 0.1220)
G	3.10 – 3.15 (0.1220 – 0.1240)



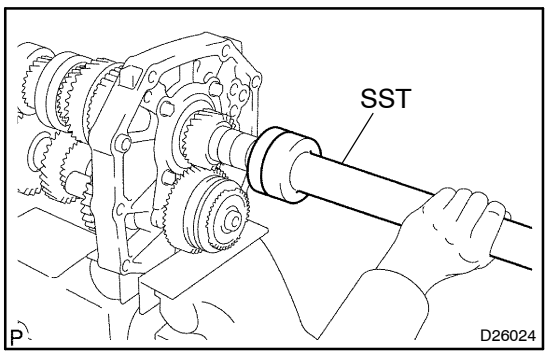
70. INSPECT COUNTER SHAFT 5TH GEAR THRUST CLEARANCE

(a) Using a feeler gauge, check the thrust clearance of the counter shaft 5th gear.
Standard clearance:
0.10 – 0.35 mm (0.0039 – 0.0138 in.)



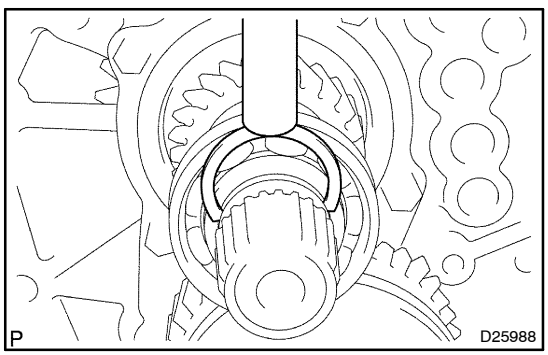
71. INSPECT COUNTER SHAFT 5TH GEAR RADIAL CLEARANCE

(a) Using a dial indicator, check the counter shaft 5th gear radial clearance.
Standard clearance:
0.015 – 0.068 mm (0.0006 – 0.0027 in.)



72. INSTALL OUTPUT SHAFT REAR BEARING

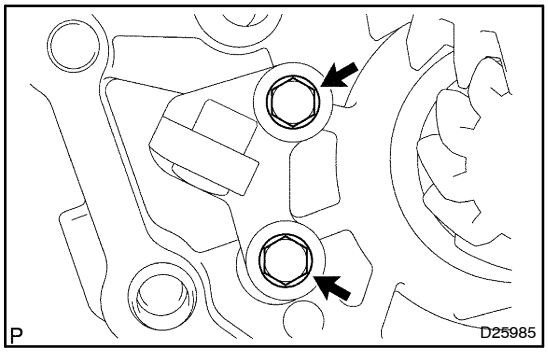
(a) Using SST and a press, install the new output shaft rear bearing and the spacer to the output shaft.
SST 09309–35010



73. INSTALL OUTPUT SHAFT BEARING SHAFT SNAP RING

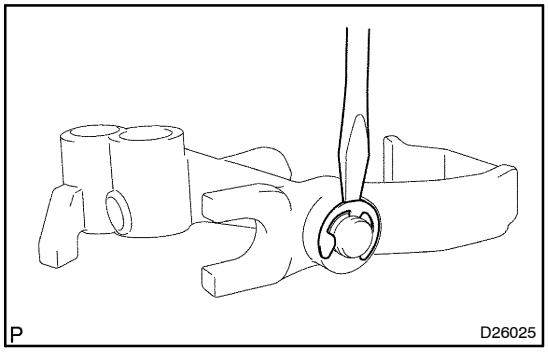
(a) Select the output shaft bearing shaft snap ring so that the thrust gap between output shaft bearing shaft snap ring to be within the specification, and using a brass bar and a hammer, install it to the output shaft.
Standard clearance: 0.1 mm (0.0039 in.) or less

Mark	Thickness mm (in.)
A	2.65 – 2.70 (0.1043 – 0.1063)
B	2.70 – 2.75 (0.1063 – 0.1083)
C	2.75 – 2.80 (0.1083 – 0.1102)
D	2.80 – 2.85 (0.1102 – 0.1122)
E	2.85 – 2.90 (0.1122 – 0.1141)
F	2.90 – 2.95 (0.1141 – 0.1160)
G	2.95 – 3.00 (0.1160 – 0.1181)
H	3.00 – 3.05 (0.1181 – 0.1200)
J	3.05 – 3.10 (0.1200 – 0.1220)
K	3.10 – 3.15 (0.1220 – 0.1240)
L	3.15 – 3.20 (0.1240 – 0.1260)
M	3.20 – 3.25 (0.1260 – 0.1280)
N	3.25 – 3.30 (0.1280 – 0.1299)
P	3.30 – 3.35 (0.1299 – 0.1319)
Q	3.35 – 3.40 (0.1319 – 0.1339)
R	3.40 – 3.45 (0.1339 – 0.1358)
S	3.45 – 3.50 (0.1358 – 0.1378)



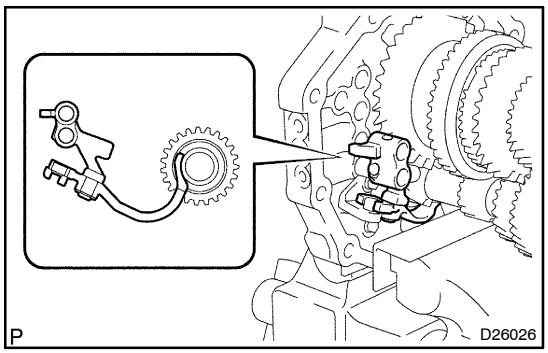
74. INSTALL REVERSE SHIFT ARM BRACKET

(a) Install the reverse shift arm bracket on the intermediate plate with the 2 bolts.
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)

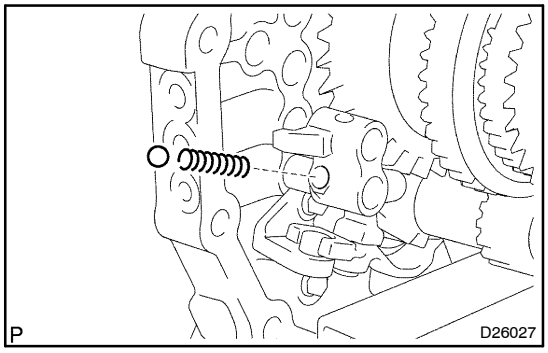


75. INSTALL REVERSE SHIFT FORK

(a) Install the reverse shift arm to the reverse shift fork. Using a screwdriver and a hammer, install the new reverse shift arm end shaft ring.

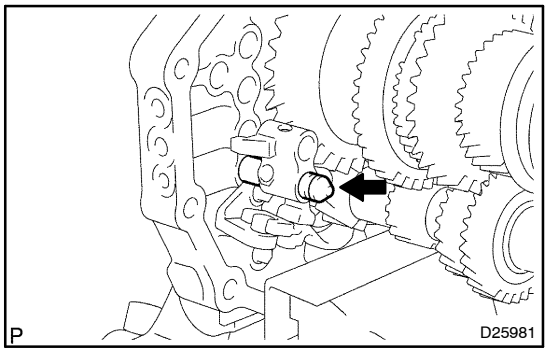


(b) Install the tip of the reverse shift arm to the reverse idler gear. Align the cut end of the reverse shift arm with the reverse shift arm bracket pin, and install them.



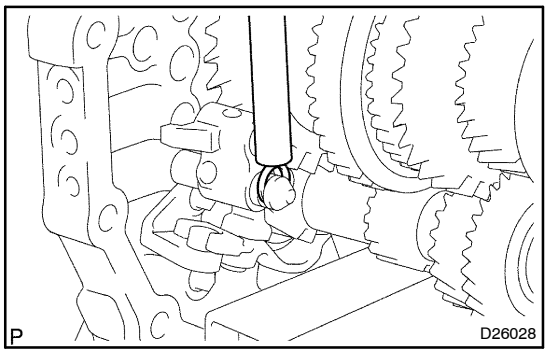
76. INSTALL GEAR SHIFT FORK SHAFT NO.4

(a) Install the reverse shift fork return compression spring and the reverse shift fork ball to the reverse shift fork.

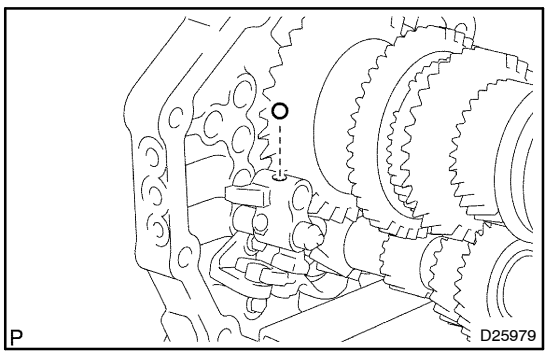


(b) Apply gear oil to the sliding part of the gear shift fork shaft No.4.

(c) Using a screwdriver, install the gear shift fork shaft No.4 by pussing the reverse shift fork ball lightly.

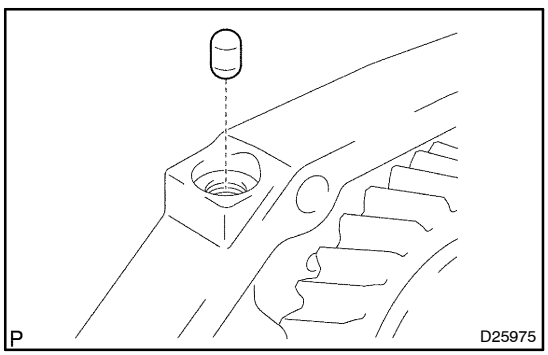


(d) Using a brass bar and a hammer, install the shift fork shaft shaft snap ring to the gear shift fork shaft No.4.

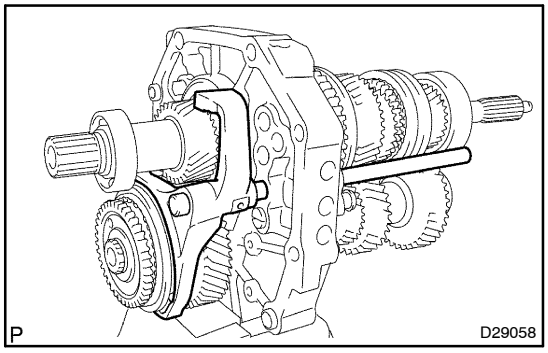


77. INSTALL REVERSE SHIFT FORK SHAFT

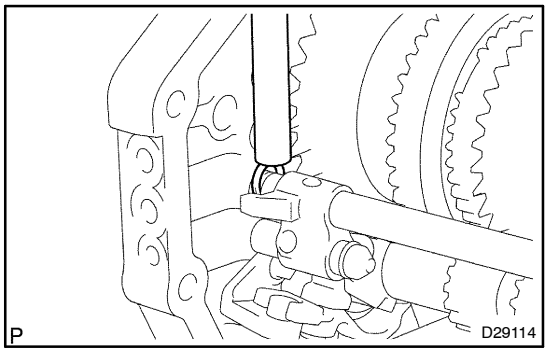
(a) Install the reverse shift fork ball to the reverse shift fork.



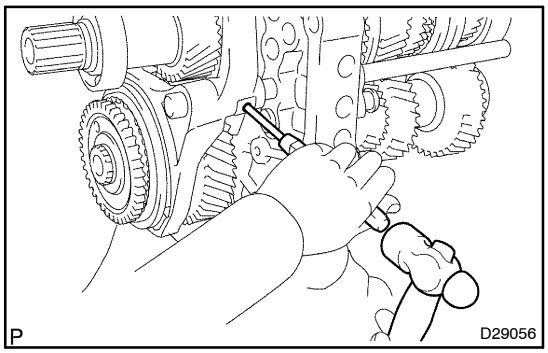
(b) Install the shift interlock No.1 roller to the intermediate plate.



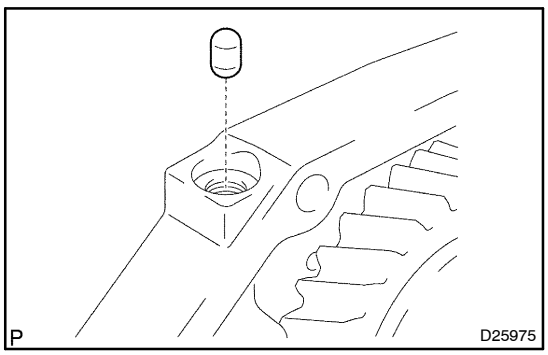
(c) Install the gear shift fork No.3 to the transmission hub sleeve No.3 and the reverse shift fork shaft to the intermediate plate from the rear side.



(d) Using a brass bar and a hammer, install the shift fork shaft shaft snap ring to the reverse shift fork shaft.

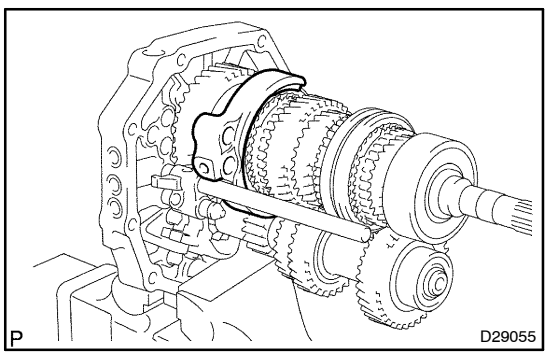


(e) Using a pinpunch (5 mm) and a hammer, install the shift fork set slotted spring pin to the gear shift fork No.3.

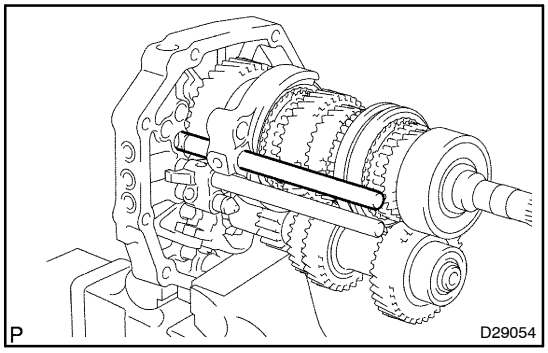


78. INSTALL GEAR SHIFT FORK SHAFT NO.1

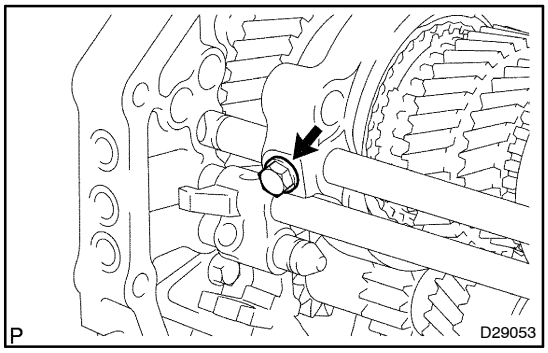
(a) Install the shift interlock No.1 roller to the intermediate plate.



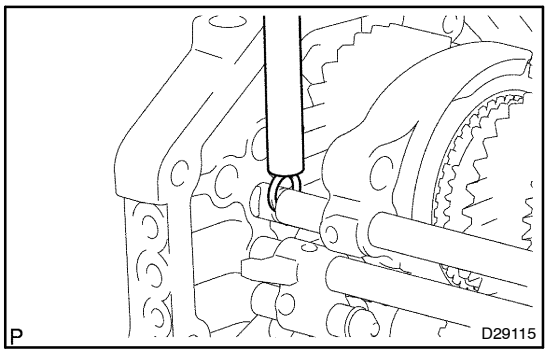
(b) Install the gear shift fork No.1 to the reverse gear.



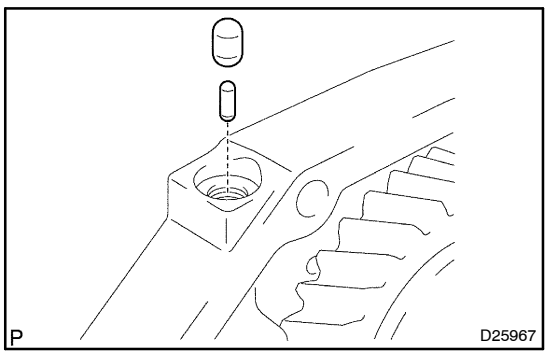
(c) Install the gear shift fork shaft No.1 to the intermediate plate from the rear side.



(d) Install the shift fork set bolt to the gear shift fork No.1.
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

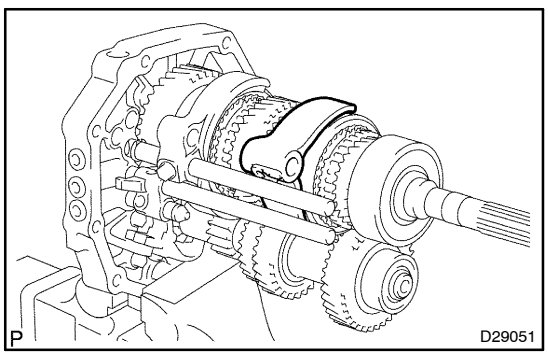


(e) Using a brass bar and a hammer, install the shift fork shaft shaft snap ring to the gear shift fork shaft No.1.

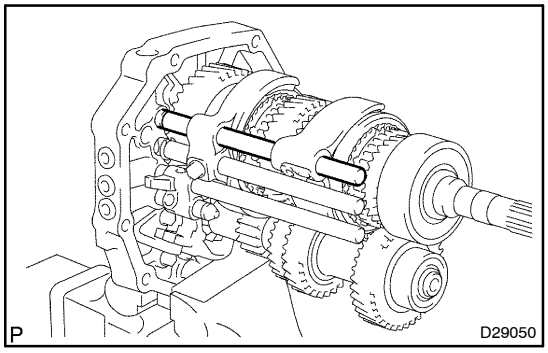


79. INSTALL GEAR SHIFT FORK SHAFT NO.2

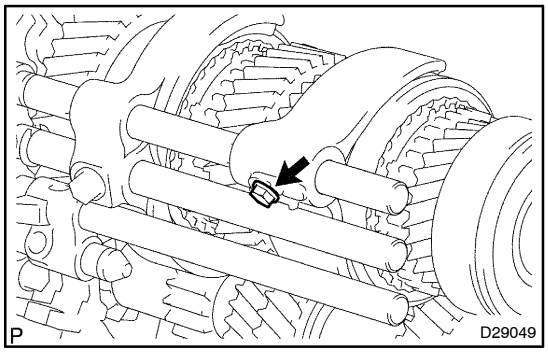
(a) Install the shift interlock No.1 roller and the shift interlock pin(ball) to the intermediate plate.



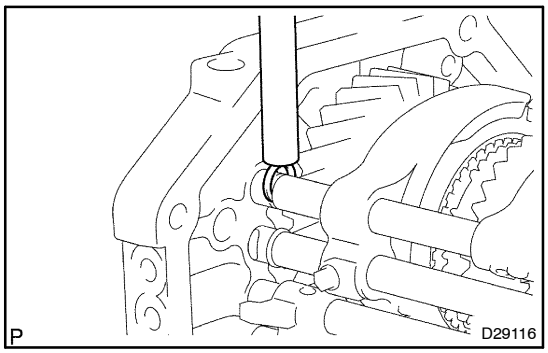
(b) Install the gear shift fork No.2 to the transmission hub sleeve No.2.



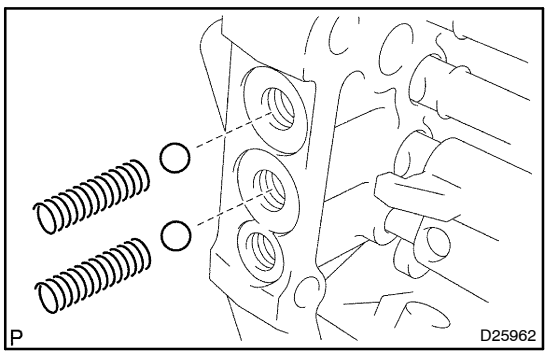
(c) Apply gear oil to the gear shift fork shaft No.2, and install it to the intermediate plate from the rear side.



(d) Install the shift fork set bolt to the gear shift fork No.2.
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

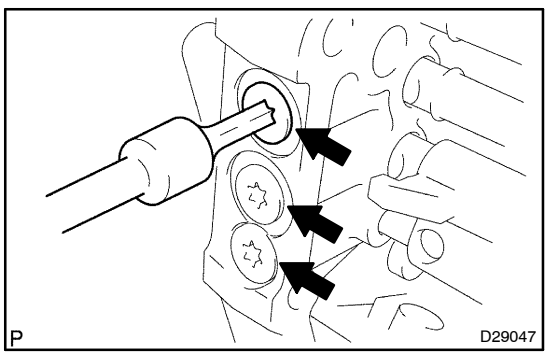


(e) Using a brass bar and a hammer, install the shift fork shaft shaft snap ring to the gear shift fork shaft No.2.

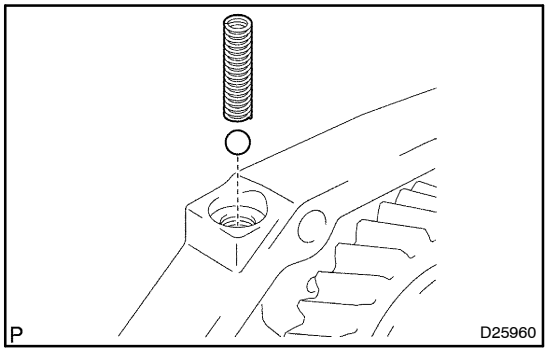


80. INSTALL SHIFT DETENT BALL SPRING SEAT NO.1

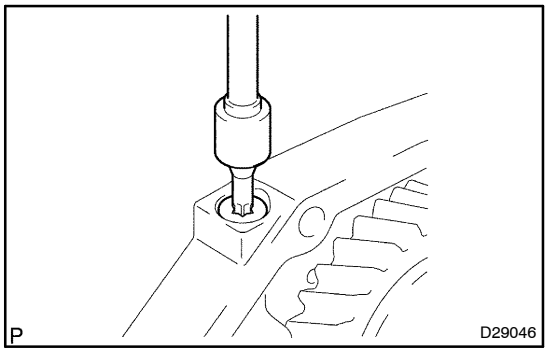
(a) Install the 2 shift detent ball low side compression springs and the 2 shift detent balls to the intermediate plate.



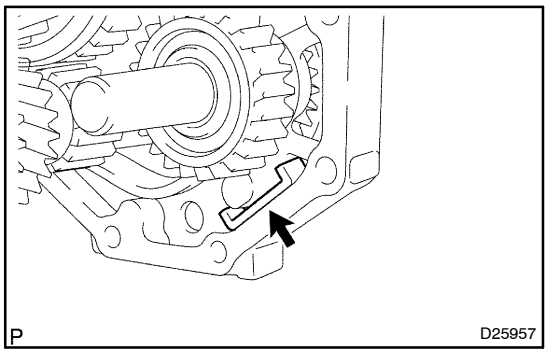
(b) Using a torx socket wrench T40, install the 3 shift detent ball spring seat No.1 to the intermediate plate.
Torque: 19 N·m (190 kgf·cm, 14 ft·lbf)



(c) Install the shift detent ball low side compression spring and the shift detent ball to the intermediate plate.

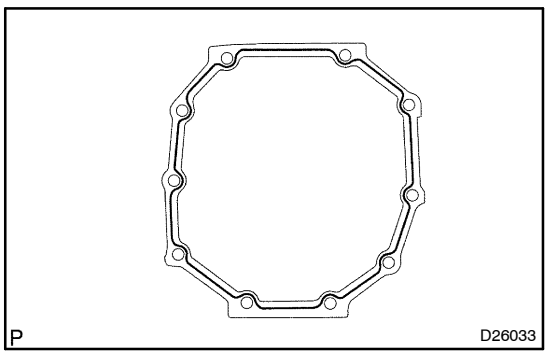


(d) Using a torx socket wrench T40, install the shift detent ball spring seat No.1 to the intermediate plate.
Torque: 19 N·m (190 kgf·cm, 14 ft·lbf)



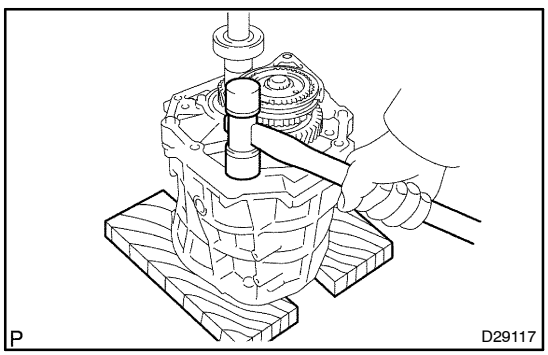
81. INSTALL TRANSMISSION MAGNET

(a) Clean the transmission magnet, and install it to the intermediate plate.

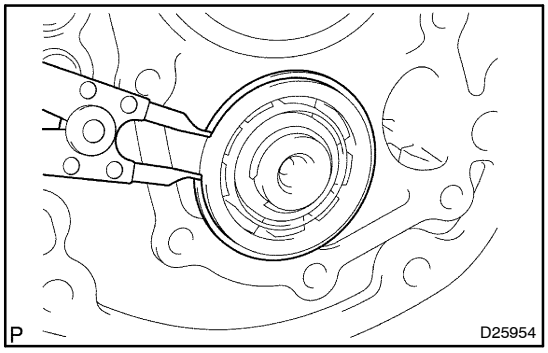


82. INSTALL MANUAL TRANSMISSION CASE

(a) Apply seal packing to the manual transmission case as shown in the illustration.
Seal packing: Part No.08826 – 00090, THREE BOND 1281 or equivalent.

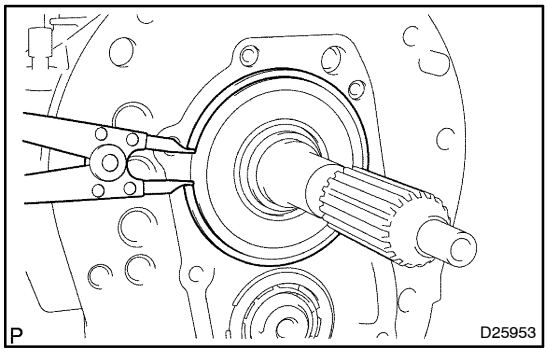


(b) Using a plastic hammer, tap the manual transmission case to attach it to the intermediate plate.



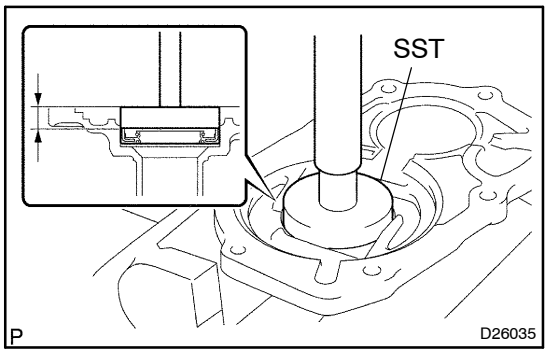
83. INSTALL COUNTER GEAR FRONT BEARING SNAP RING NO.1

(a) Using a snap ring expander, install the counter gear front bearing snap ring No.1 to the transmission case.



84. INSTALL FRONT BEARING SHAFT SNAP RING

(a) Using a snap ring expander, install the front bearing shaft snap ring to the transmission case.



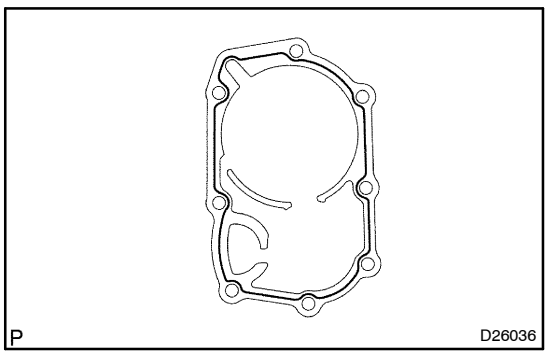
85. INSTALL TRANSMISSION FRONT BEARING RETAINER OIL SEAL

(a) Using SST and a hammer, install the new transmission front bearing retainer oil seal to the transmission front bearing retainer.

SST 09950–60010 (09951–00300, 09951–00520, 09952–06010), 09950–70010 (09951–07100)

Standard clearance:
11.2 – 12.2 mm (0.4409 – 0.4803 in.)

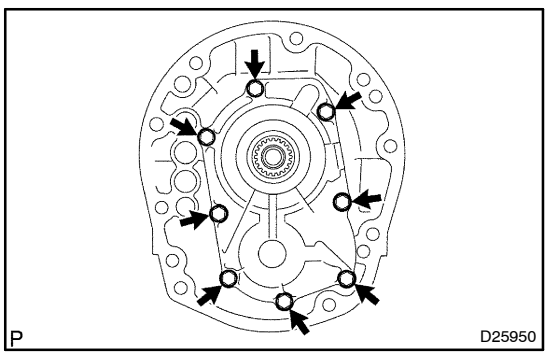
(b) Lightly apply MP grease to the tip of the oil seal.



86. INSTALL BEARING RETAINER FRONT (MTM)

(a) Apply seal packing to the baring retainer front as shown in the illustration.

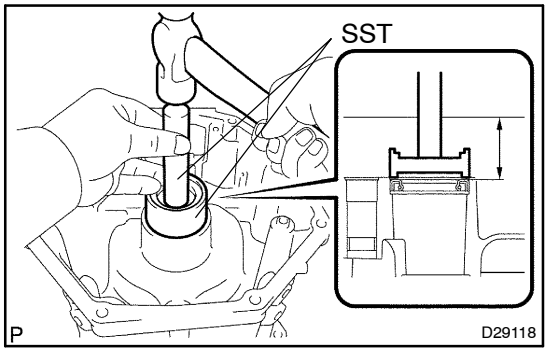
Seal packing: Part No.08826 – 00090, THREE BOND 1281 or equivalent.



(b) Install the transmission bearing retainer front to the transmission case with the 8 bolts.

Seal packing: Part No.08826 – 00090, THREE BOND 1281 or equivalent.

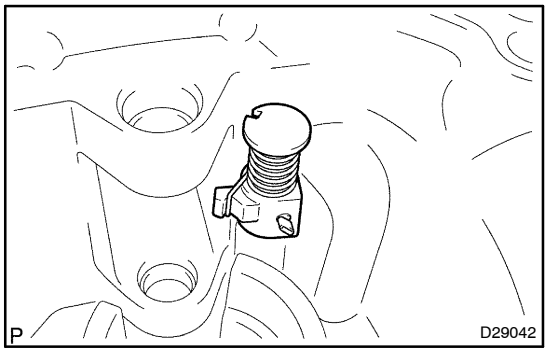
(c) Check that the input shaft and the output shaft rotate smoothly.



87. INSTALL TRANSFER ADAPTER OIL SEAL

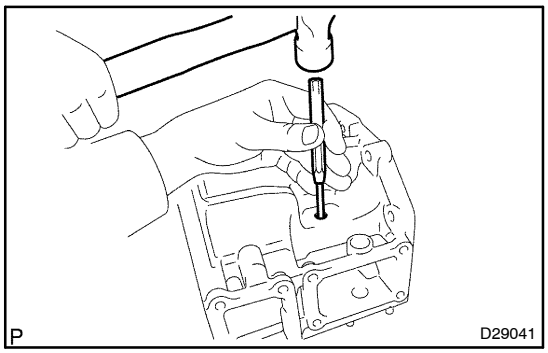
(a) Using SST and a hammer, install the new transfer adapter oil seal to the transfer adapter.
SST 09710–30050, 09950–70010 (09951–07100)

(b) Lightiy apply MP grease to the tip of the oil seal.
Drive in depth: 45.4 – 46.4 mm (1.7874 – 1.8268 in.)

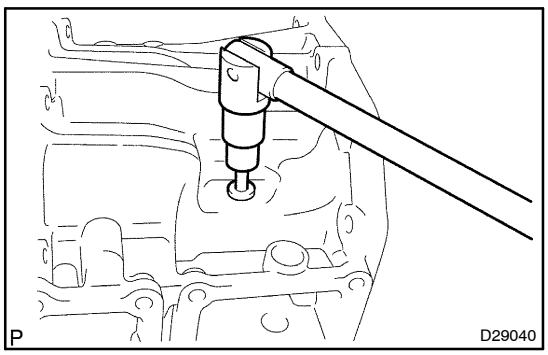


88. INSTALL REVERSE RESTRICT PIN ASSY

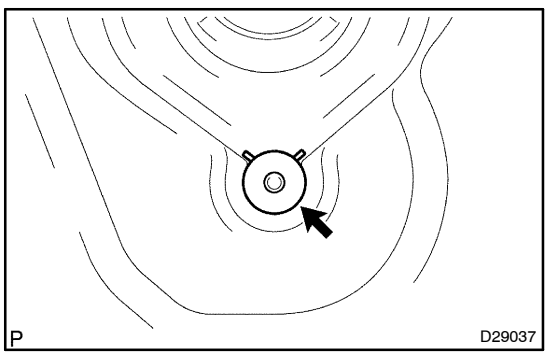
(a) Install the reverse restrict pin to the transfer adapter.



(b) Using a pin punch (5 mm) and a hammer, install the reverse restrict pin slotted pin to the transfer adapter.

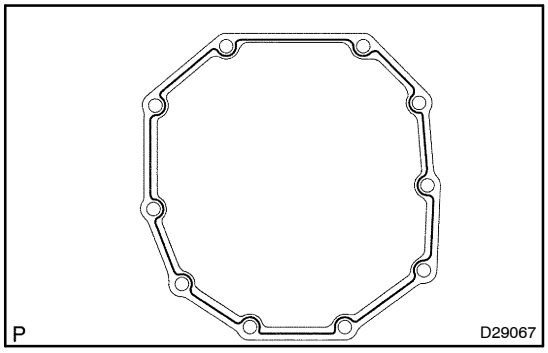


(c) Using a torx socket wrench T40, install the reverse restrict pin plug to the transfer adapter.
Torque: 19 N·m (190 kgf·cm, 14 ft·lbf)



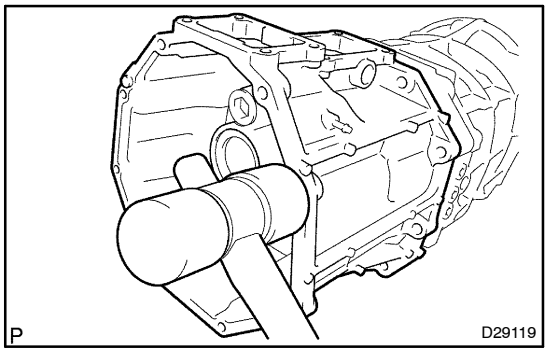
89. INSTALL TRANSFER OIL RECEIVER PIPE

(a) Install the transfer oil receiver pipe to the transfer adapter.

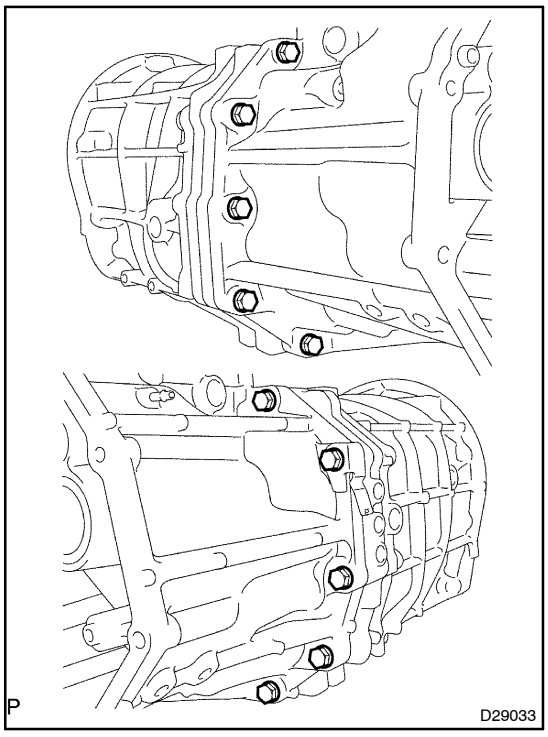


90. INSTALL TRANSFER ADAPTER

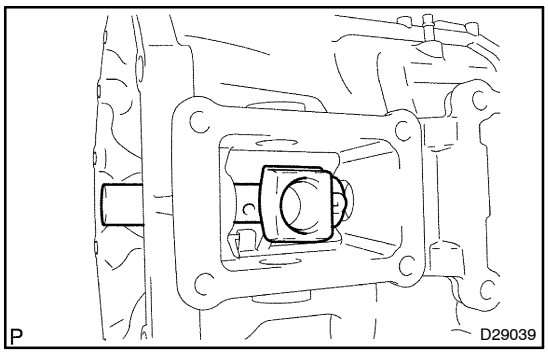
(a) Apply seal packing to the transfer adapter as shown in the illustation.
Seal packing: Part No.08826 – 00090, THREE BOND 1281 or equivalent.



(b) Using a plastic hammer, tap the transfer adapter to attach it to the transmission case.

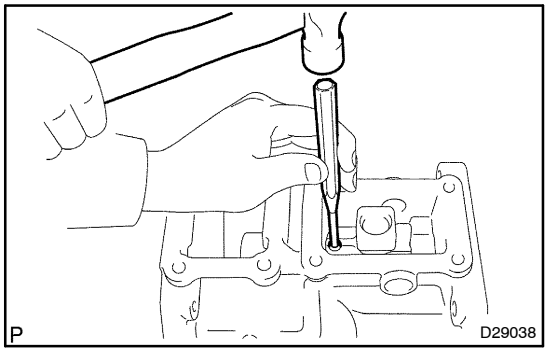


(c) Install the transfer adapter and the 10 bolts to the transmission case.
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

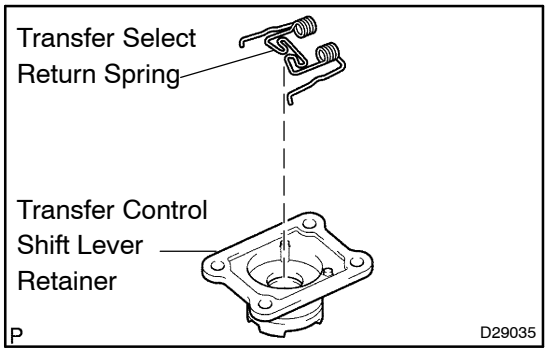


91. INSTALL SHIFT & SELECT LEVER SHAFT

(a) Install the shift & serect lever shaft and the shift lever housing to the transfer adapter.

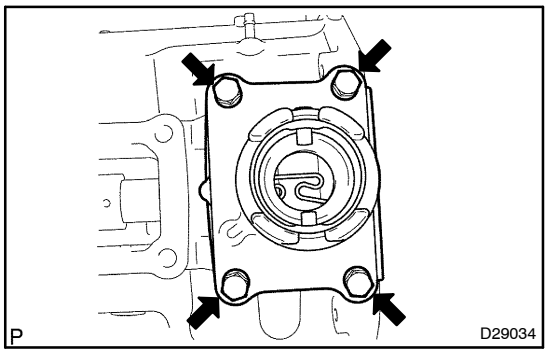


(b) Using a pin punch (5 mm) and a hammer, install the shift fork set slotted spring pin to the transfer adapter.

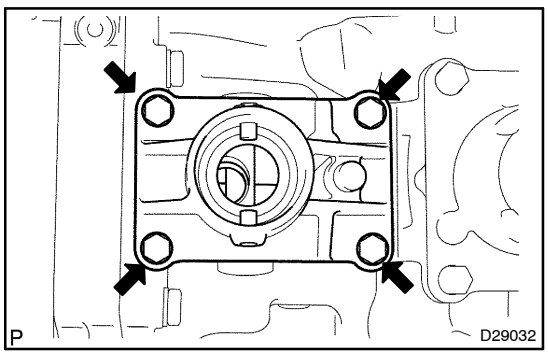


92. INSTALL TRANSFER CONTROL SHIFT LEVER RETAINER SUB–ASSY

(a) Install the transfer select return spring on the transfer control shift lever retainer.

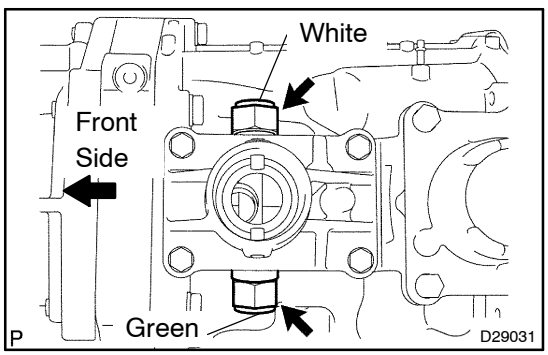


(b) Install the transfer control shift lever retainer to the transfer adapter.
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)



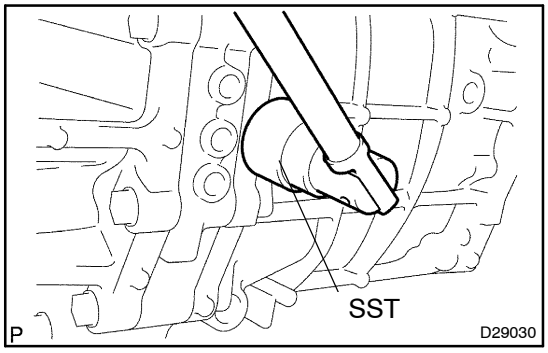
93. INSTALL FLOOR SHIFT CONTROL SHIFT LEVER RETAINER SUB–ASSY

(a) Install the floor shift control shift lever retainer and the extension housing oil deflector to the transfer adapter.
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)



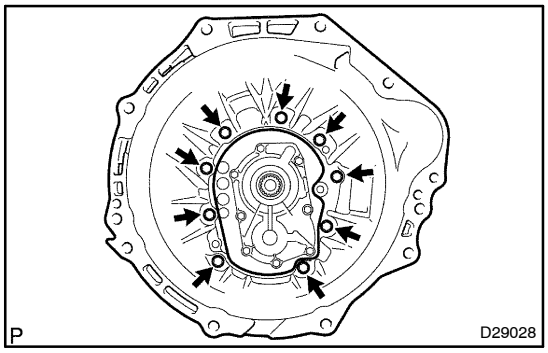
94. INSTALL REVERSE RESTRICT PIN ASSY

(a) Install the 2 reverse restrict pins to the transfer adapter.
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)



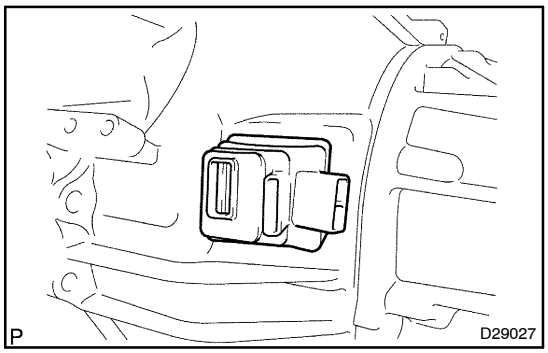
95. INSTALL BACK UP LAMP SWITCH ASSY

(a) Using SST, install the back–up lamp switch assy and the gasket to the transmission case.
SST 09817–16011
Torque: 44 N·m (450 kgf·cm, 32 ft·lbf)



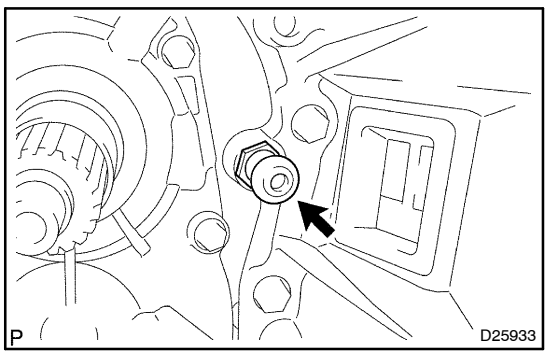
96. INSTALL CLUTCH HOUSING

(a) Install the clutch housing to the transmission case with the 9 bolts.
Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)



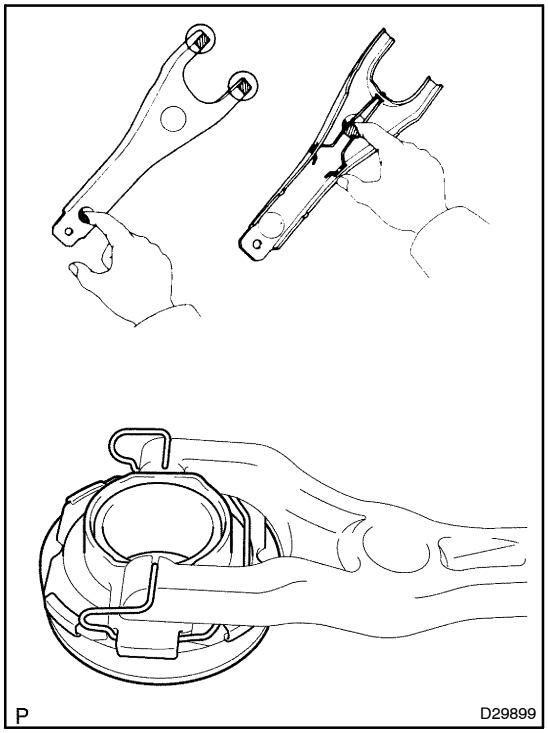
97. INSTALL CLUTCH RELEASE FORK BOOT

(a) Install the clutch release fork boot to the clutch housing.



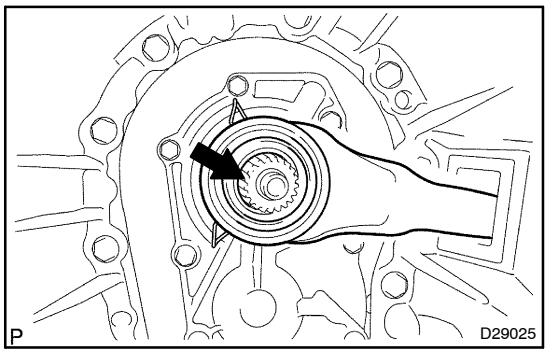
98. INSTALL RELEASE FORK SUPPORT

(a) Install the clutch release fork support to the clutch housing.
Torque: 47 N·m (480 kgf·cm, 35 ft·lbf)



99. INSTALL CLUTCH RELEASE BEARING ASSY

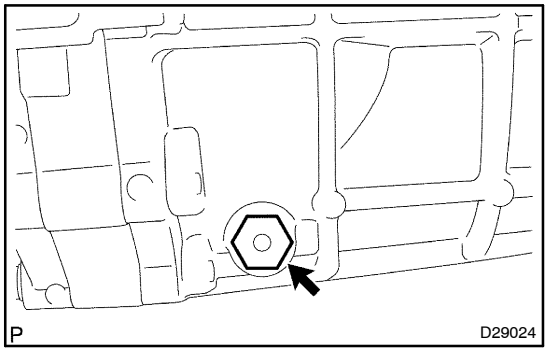
(a) Apply clutch release hub grease to the clutch release bearing, and install it to the clutch release fork.



100. INSTALL CLUTCH RELEASE FORK SUB–ASSY

(a) Install the clutch release fork.

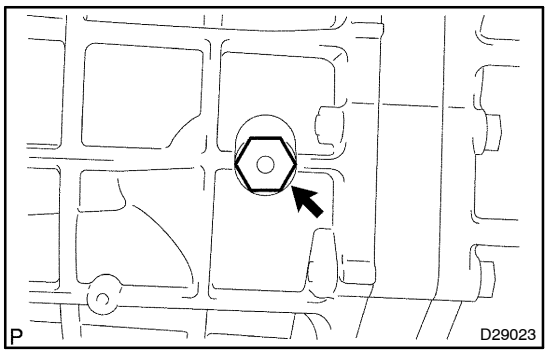
(b) Apply the clutch spline grease to the spline of the input shaft.



101. INSTALL DRAIN PLUG (MTM) GASKET

(a) Install the transmission drain plug to the transmission case through a new gasket.

Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)



102. INSTALL MANUAL TRANSMISSION FILLER PLUG

(a) Install the transmission filler plug to the transmission case through a new gasket.

Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)