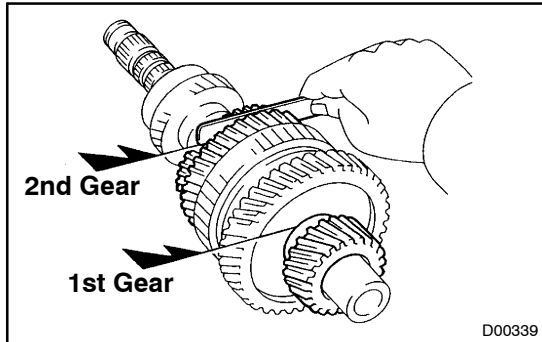




DISASSEMBLY

1. INSPECT 1ST AND 2ND GEARS THRUST CLEARANCE

Using a feeler gauge, measure the thrust clearance.

Standard clearance:

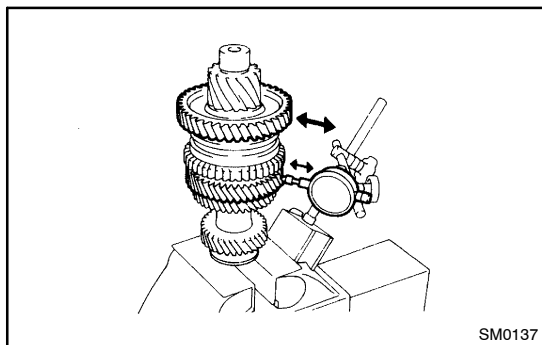
1st gear: 0.10 – 0.40 mm (0.0039 – 0.0157 in.)

2nd gear: 0.10 – 0.55 mm (0.0039 – 0.0217 in.)

Maximum clearance:

1st gear: 0.40 mm (0.0157 in.)

2nd gear: 0.55 mm (0.0217 in.)



2. INSPECT 1ST AND 2ND GEARS RADIAL CLEARANCE

Using a dial indicator, measure the radial clearance between the gear and shaft.

Standard clearance:

KOYO made:

0.015 – 0.058 mm (0.0006 – 0.0023 in.)

NSK made:

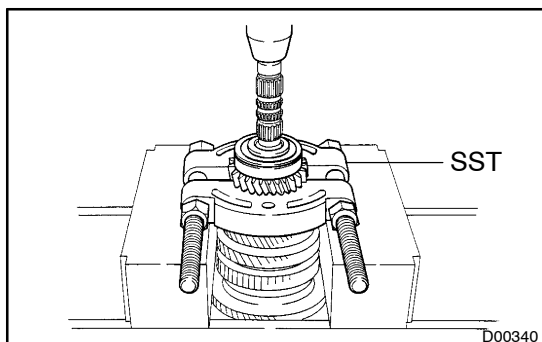
0.015 – 0.056 mm (0.0006 – 0.0022 in.)

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.



3. REMOVE CENTER RADIAL BALL BEARING, 4TH DRIVEN GEAR AND OUTPUT GEAR SPACER FROM OUTPUT SHAFT

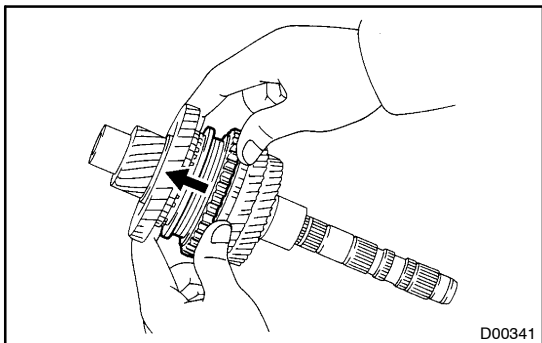
- (a) Using SST and a press, remove the center radial ball bearing and 4th driven gear.

SST 09950-00020

HINT:

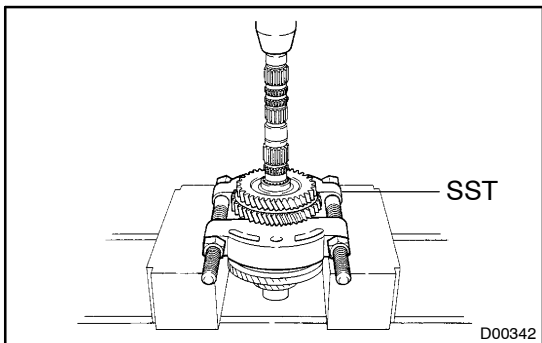
Support the output shaft assembly by hand so that it will not be dropped off.

- (b) Remove the output gear spacer.



4. REMOVE 3RD DRIVEN GEAR, 2ND GEAR, NEEDLE ROLLER BEARING, SPACER AND NO. 2 SYNCHRONIZER RING

- (a) Shift the reverse gear into the 1st gear.



- (b) Using SST and a press, remove the 3rd driven gear and 2nd gear.

SST 09950-00020

HINT:

Support the output shaft assembly by hand so that it will not be dropped off.

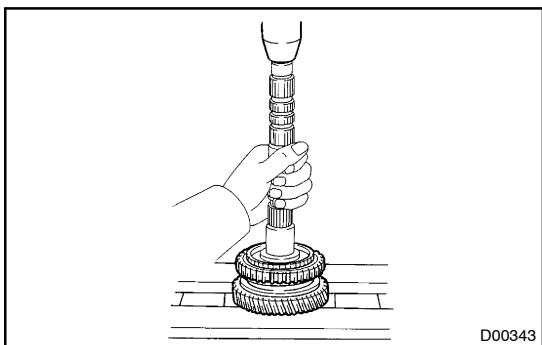
- (c) Remove the needle roller bearing, spacer and No. 2 synchronizer rings.

5. REMOVE SNAP RING

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

HINT:

Take care not to damage the journal surface of the output shaft.



6. REMOVE REVERSE GEAR ASSEMBLY, 1ST GEAR, NO. 1 SYNCHRONIZER RING, NEEDLE ROLLER BEARING, 1ST GEAR THRUST WASHER AND BALL

- (a) Using a press, remove the reverse gear assembly, 1st gear and No. 1 synchronizer ring.

HINT:

Support the output shaft assembly by hand so that it will not be dropped off.

- (b) Remove the needle roller bearing and 1st gear thrust washer.

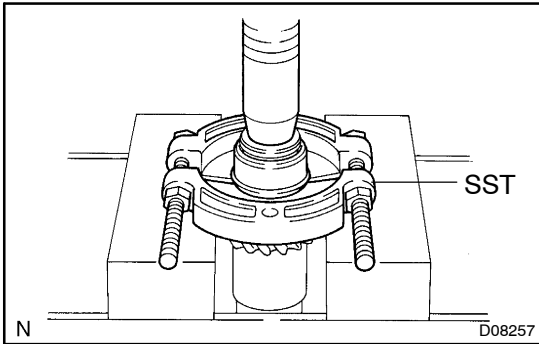
- (c) Using a magnetic finger, remove the ball.

7. REMOVE SNAP RING

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

HINT:

Take care not to damage the journal surface of the output shaft.

**8. REMOVE FRONT BEARING INNER RACE**

Using SST and a press, remove the front bearing inner race.

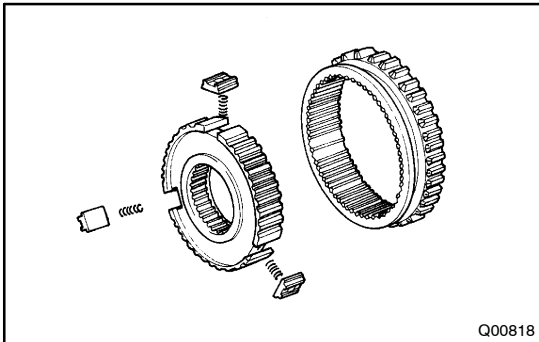
SST 09950-00020

NOTICE:

When replacing the front bearing inner race, replace the output shaft front bearing along with it.

HINT:

Support the output shaft by hand so that it will not be dropped off.

**9. DISASSEMBLE REVERSE GEAR ASSEMBLY**

- (a) Remove the reverse gear from the No. 1 clutch hub.
- (b) Remove the 3 No. 1 shifting keys and No. 1 shifting key springs from the No. 1 clutch hub.