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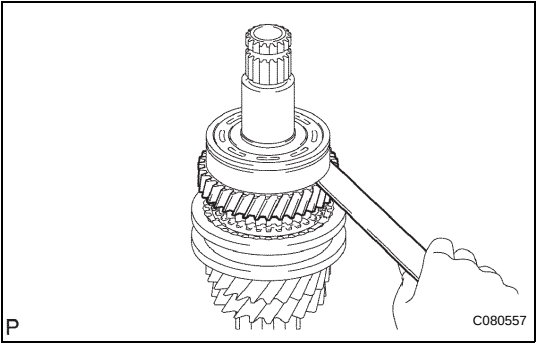
INSPECTION

1. INSPECT 4TH GEAR THRUST CLEARANCE

- (a) Using a feeler gauge, measure the 4th gear thrust clearance.

4th gear thrust clearance

| Standard clearance: mm (in.)    | Maximum clearance: mm (in.) |
|---------------------------------|-----------------------------|
| 0.10 to 0.55 (0.0039 to 0.0217) | 0.55 (0.0217)               |

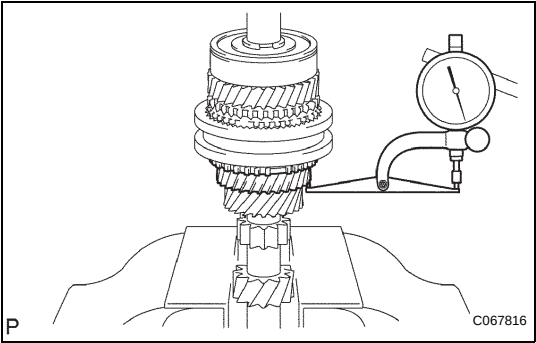


2. INSPECT 3RD GEAR THRUST CLEARANCE

- (a) Using a dial indicator, measure the 3rd gear thrust clearance.

3rd gear thrust clearance

| Standard clearance: mm (in.)    | Maximum clearance: mm (in.) |
|---------------------------------|-----------------------------|
| 0.10 to 0.35 (0.0039 to 0.0138) | 0.35 (0.0138)               |

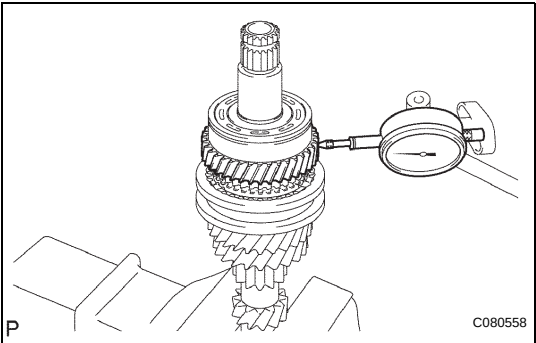


3. INSPECT 4TH GEAR RADIAL CLEARANCE

- (a) Using a dial indicator, measure the 4th gear radial clearance.

4th gear radial clearance

|           | Standard clearance: mm (in.)      | Maximum clearance: mm (in.) |
|-----------|-----------------------------------|-----------------------------|
| KOYO made | 0.015 to 0.058 (0.0006 to 0.0023) | 0.058 (0.0023)              |
| NSK made  | 0.015 to 0.056 (0.0006 to 0.0022) | 0.056 (0.0022)              |



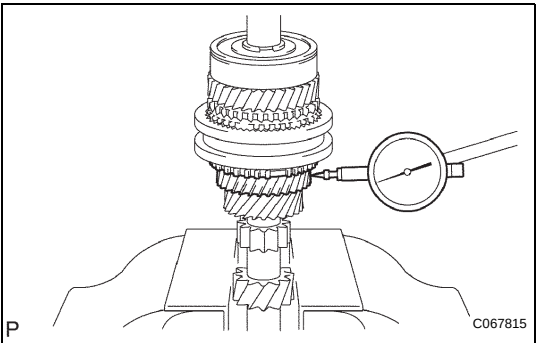
If the clearance exceeds the maximum, replace the gear, needle roller bearing or shaft.

4. INSPECT 3RD GEAR RADIAL CLEARANCE

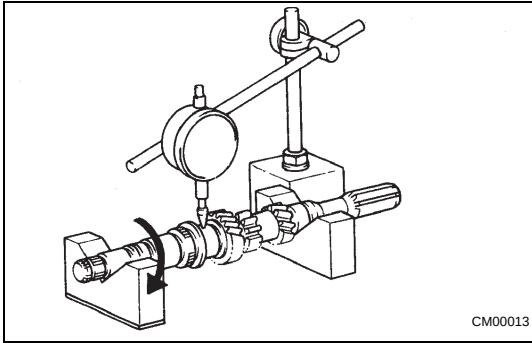
- (a) Using a dial indicator, measure the 3rd gear radial clearance.

3rd gear radial clearance

|           | Standard clearance: mm (in.)      | Maximum clearance: mm (in.) |
|-----------|-----------------------------------|-----------------------------|
| KOYO made | 0.015 to 0.058 (0.0006 to 0.0023) | 0.058 (0.0023)              |
| NSK made  | 0.015 to 0.056 (0.0006 to 0.0022) | 0.056 (0.0022)              |



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



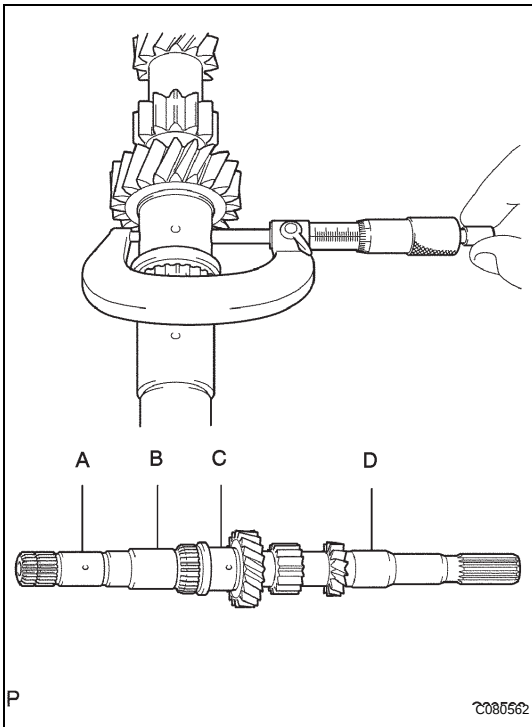
## 5. INSPECT INPUT SHAFT

- (a) Using a dial indicator, check the shaft runout.

**Maximum runout:**

**0.015 mm (0.0006 in.)**

If the runout exceeds the maximum, replace the input shaft.

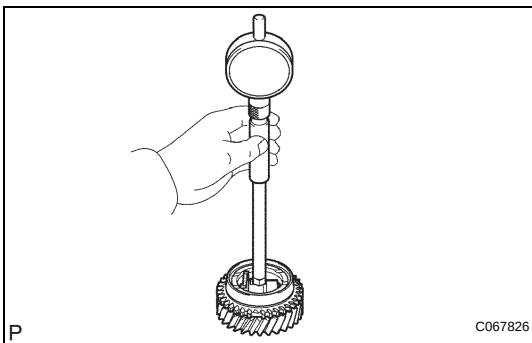


- (b) Using a micrometer, measure the outer diameter of the input shaft journal surface.

**Input shaft outer diameter**

| Part | Standard outer diameter:<br>mm (in.)   | Minimum outer diameter:<br>mm (in.) |
|------|----------------------------------------|-------------------------------------|
| A    | 24.885 to 24.900<br>(0.9797 to 0.9803) | 24.885 (0.9797)                     |
| B    | 28.985 to 29.000<br>(1.1411 to 1.1417) | 28.985 (1.1411)                     |
| C    | 30.985 to 31.000<br>(1.2198 to 1.2204) | 30.985 (1.2198)                     |
| D    | 24.985 to 25.000<br>(0.9836 to 0.9842) | 24.985 (0.9836)                     |

If the outer diameter is below the minimum, replace the input shaft.



## 6. INSPECT 4TH GEAR

- (a) Using a cylinder gauge, measure the inside diameter of the 4th gear.

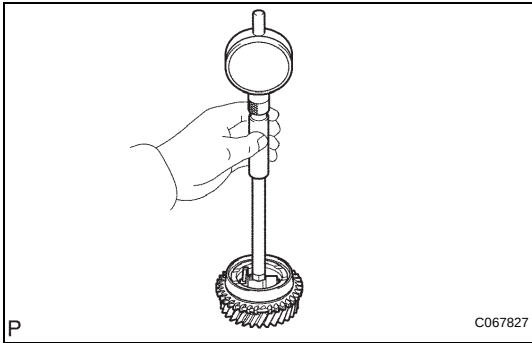
**Standard inside diameter:**

**34.015 to 34.031 mm (1.3392 to 1.3398 in.)**

**Maximum inside diameter:**

**34.031 mm (1.3398 in.)**

If the inside diameter exceeds the maximum, replace the 4th gear.



## 7. INSPECT 3RD GEAR

- (a) Using a cylinder gauge, measure the inside diameter of the 3rd gear.

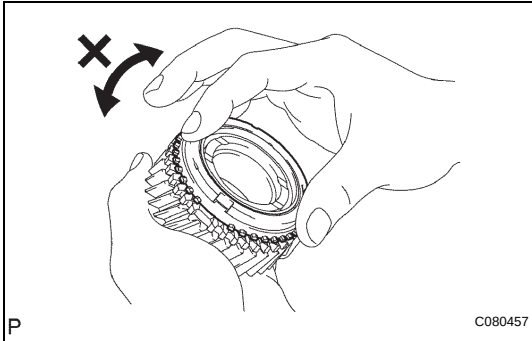
**Standard inside diameter:**

**36.015 to 36.031 mm (1.4179 to 1.4185 in.)**

**Maximum inside diameter:**

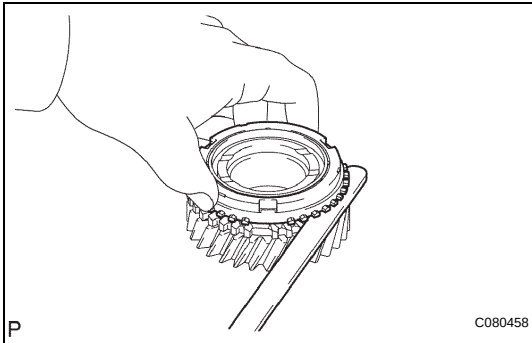
**36.031 mm (1.4185 in.)**

If the inside diameter exceeds the maximum, replace the 3rd gear.



## 8. INSPECT 4TH GEAR SYNCHRONIZER RING

- (a) Check for wear or damage.
- (b) Coat the 4th gear cone with gear oil. Turn the synchronizer ring in one direction while pushing it against the 4th gear cone. Check that the ring locks. If the synchronizer outer ring does not lock, replace the ring or the 4th gear.



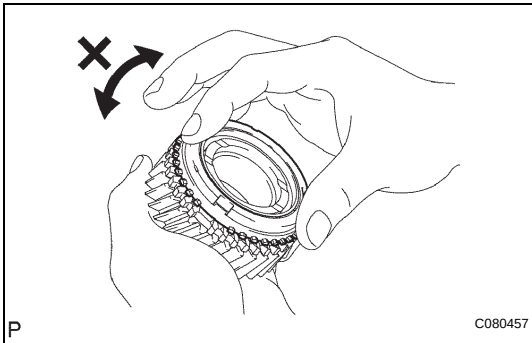
- (c) Using a feeler gauge, measure the clearance between the 4th gear synchronizer ring back and 4th gear spline end.

**Minimum clearance:**

**0.65 mm (0.0256 in.)**

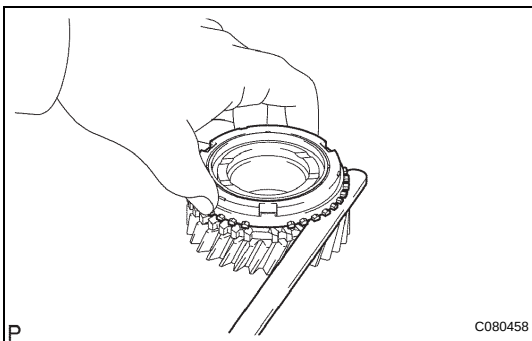
If the clearance below than the minimum, replace the 4th gear synchronizer ring.

MX



## 9. INSPECT 3RD GEAR SYNCHRONIZER RING

- (a) Check for wear or damage.
- (b) Coat the 3rd gear cone with gear oil. Turn the synchronizer ring in one direction while pushing it against the 3rd gear cone. Check that the ring locks. If the synchronizer outer ring does not locks, replace the ring or the 3rd gear.

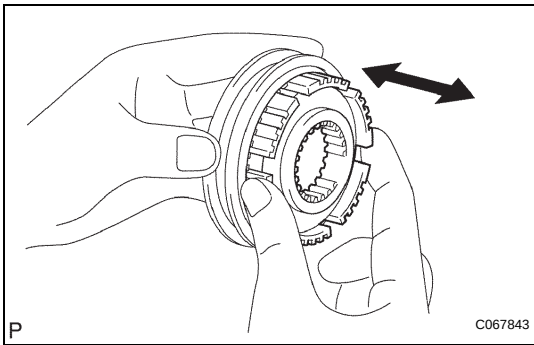


- (c) Using a feeler gauge, measure the clearance between 3rd gear synchronizer ring back and 3rd gear spline end.

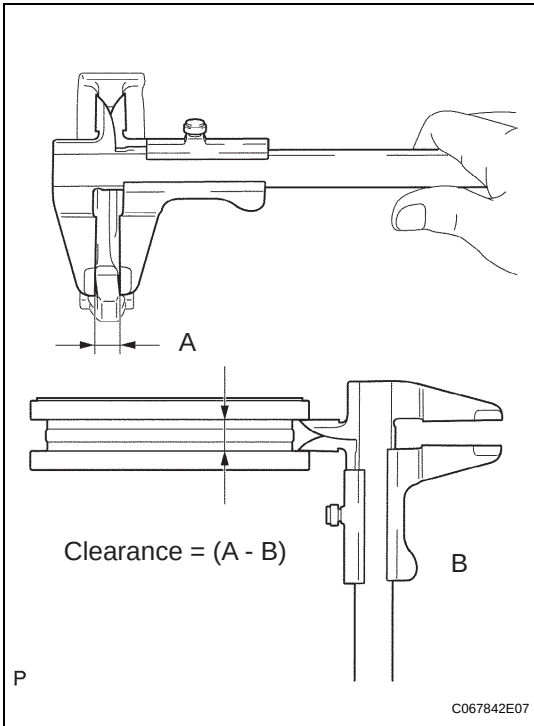
**Minimum clearance:**

**0.75 mm (0.0295 in.)**

If the clearance below than the minimum, replace the 3rd gear synchronizer ring.

**10. INSPECT TRANSMISSION HUB SLEEVE NO. 2**

- (a) Check the sliding condition between the transmission hub sleeve No. 2 and transmission clutch hub No. 2.
- (b) Check that the spline gear's edges of the transmission hub sleeve No. 2 is not worn down.



- (c) Using vernier calipers, measure the width of the transmission hub sleeve No. 2 groove (B) and the thickness of the claw part on the gear shift fork No. 2 (A), and calculate the clearance.

**Standard clearance (B - A):**

**0.15 to 0.35 mm (0.0059 to 0.0138 in.)**

If the clearance is out of specification, replace the transmission hub sleeve No. 2 and gear shift fork No.2.