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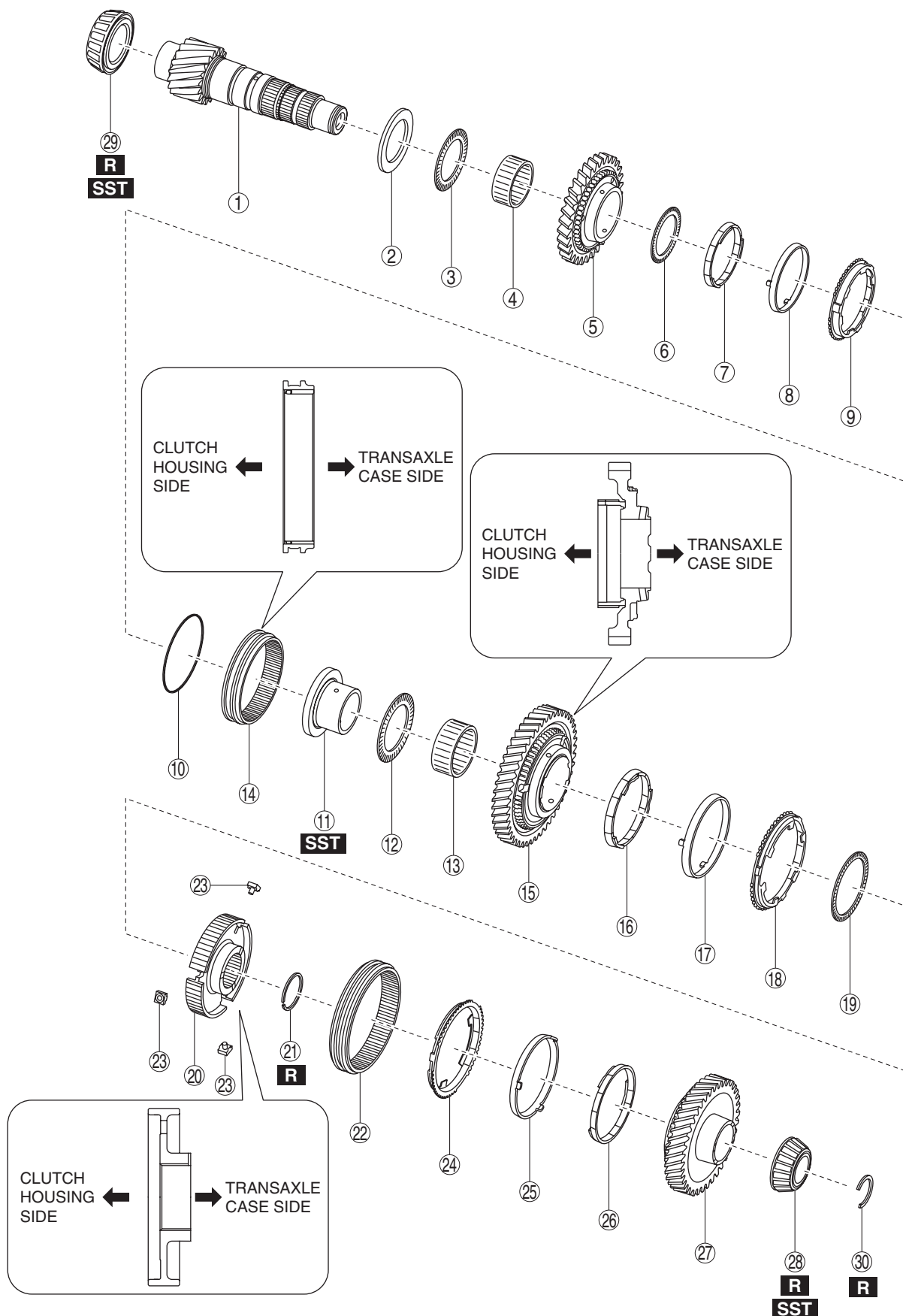
## **SECONDARY SHAFT NO.2 COMPONENT ASSEMBLY**

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1. Assemble the secondary shaft No.2 component in the order shown in the figure.



: APPLY SPECIFIED OIL TO INDIVIDUAL PARTS



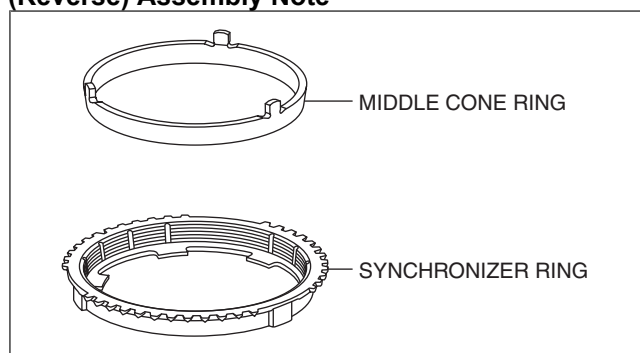
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2	Washer
3	Needle bearing
4	Needle bearing
5	Reverse idler gear
6	Needle bearing
7	Inner cone ring (reverse) (See Inner Cone Ring, Middle Cone Ring, Synchronizer Ring (Reverse) Assembly Note.)
8	Middle cone ring (reverse) (See Inner Cone Ring, Middle Cone Ring, Synchronizer Ring (Reverse) Assembly Note.)
9	Synchronizer ring (reverse) (See Inner Cone Ring, Middle Cone Ring, Synchronizer Ring (Reverse) Assembly Note.)
10	Synchronizer key spring
11	Inner race (See Inner Race Assembly Note.)
12	Needle bearing
13	Needle bearing
14	Clutch hub sleeve (See Clutch Hub Sleeve (Reverse), Secondary 1st Gear Assembly Note.)
15	Secondary 1st gear (See Clutch Hub Sleeve (Reverse), Secondary 1st Gear Assembly Note.)
16	Inner cone ring (1GR) (See Inner Cone Ring, Middle Cone Ring, Synchronizer Ring (1GR) Assembly Note.)
17	Middle cone ring (1GR) (See Inner Cone Ring, Middle Cone Ring, Synchronizer Ring (1GR) Assembly Note.)

18	Synchronizer ring (1GR) (See Inner Cone Ring, Middle Cone Ring, Synchronizer Ring (1GR) Assembly Note.)
19	Needle bearing
20	Clutch hub (See Clutch Hub Assembly Note.)
21	Clip
22	Clutch hub sleeve (See Clutch Hub Sleeve Assembly Note.)
23	Synchronizer key (See Synchronizer Key Assembly Note.)
24	Synchronizer ring (2GR) (See Synchronizer Ring, Middle Cone Ring, Inner Cone Ring (2GR) Assembly Note.)
25	Middle cone ring (2GR) (See Synchronizer Ring, Middle Cone Ring, Inner Cone Ring (2GR) Assembly Note.)
26	Inner cone ring (2GR) (See Synchronizer Ring, Middle Cone Ring, Inner Cone Ring (2GR) Assembly Note.)
27	Secondary 2nd gear (See Secondary 2nd Gear Assembly Note.)
28	Tapered roller bearing (transaxle case side) (See Tapered Roller Bearing Assembly Note.)
29	Tapered roller bearing (clutch housing side) (See Tapered Roller Bearing Assembly Note.)
30	Clip

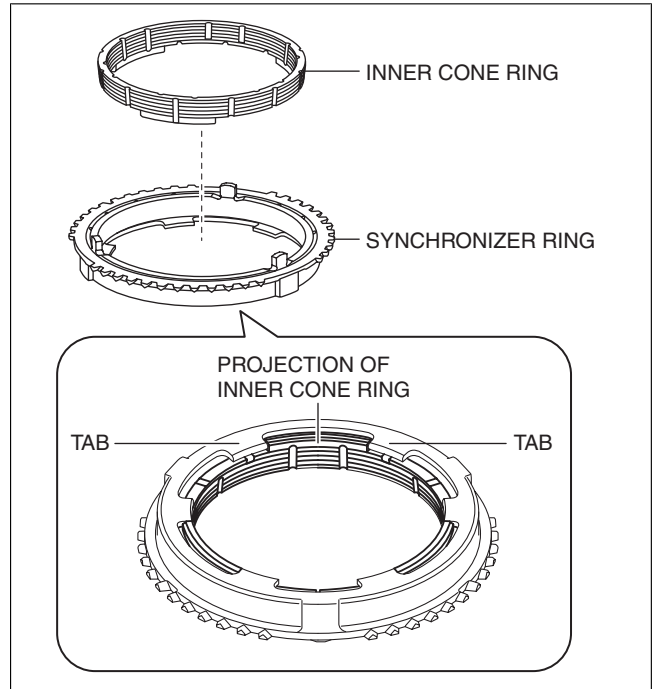
### Inner Cone Ring, Middle Cone Ring, Synchronizer Ring (Reverse) Assembly Note

1. Assemble the middle cone ring to the synchronizer ring.



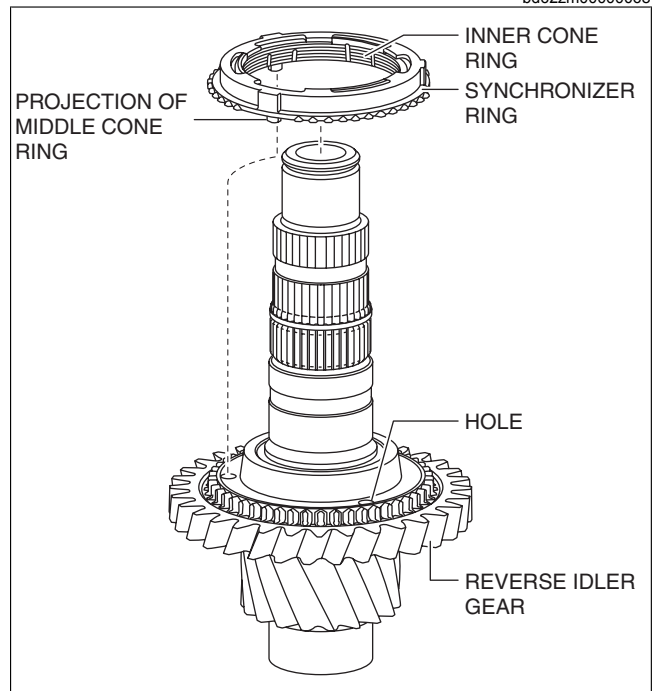
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2. Assemble the inner cone ring to the synchronizer ring with the projections of the inner cone ring fit between the tabs of the synchronizer ring as shown in the figure.



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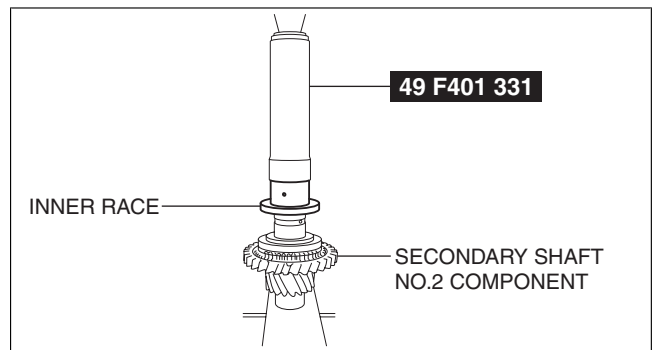
3. Assemble the synchronizer ring, middle cone ring, and inner cone ring as a single unit to the secondary shaft No.2 component with the projections of the middle cone ring fit to the holes of the reverse idler gear.
4. Verify that the ends of the inner cone ring, middle cone ring, and synchronizer ring are arranged in a flat plane.



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#### Inner Race Assembly Note

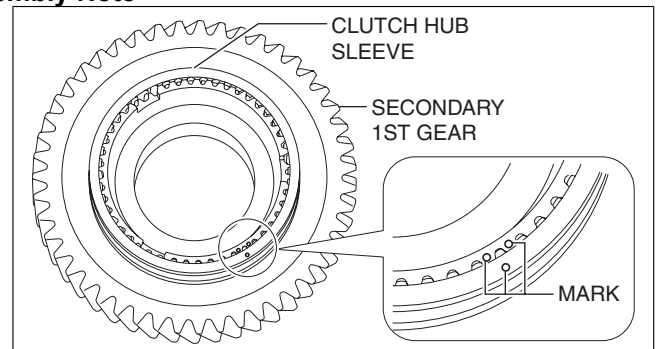
1. Set the secondary shaft No.2 component and inner race in a press as shown in the figure.
2. Assemble the inner race using the press.



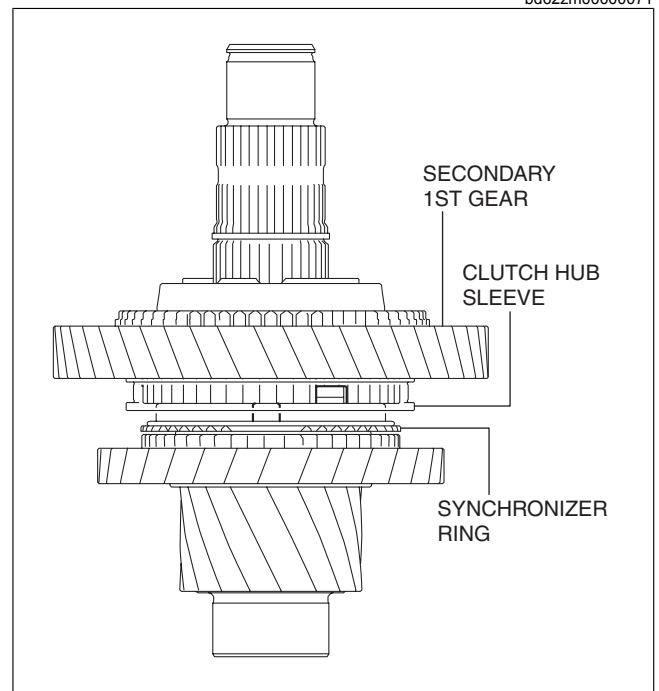
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### Clutch Hub Sleeve (Reverse), Secondary 1st Gear Assembly Note

1. Assemble the clutch hub sleeve to the secondary 1st gear with the marks on the clutch hub sleeve and the secondary 1st gear aligned as shown in the figure.



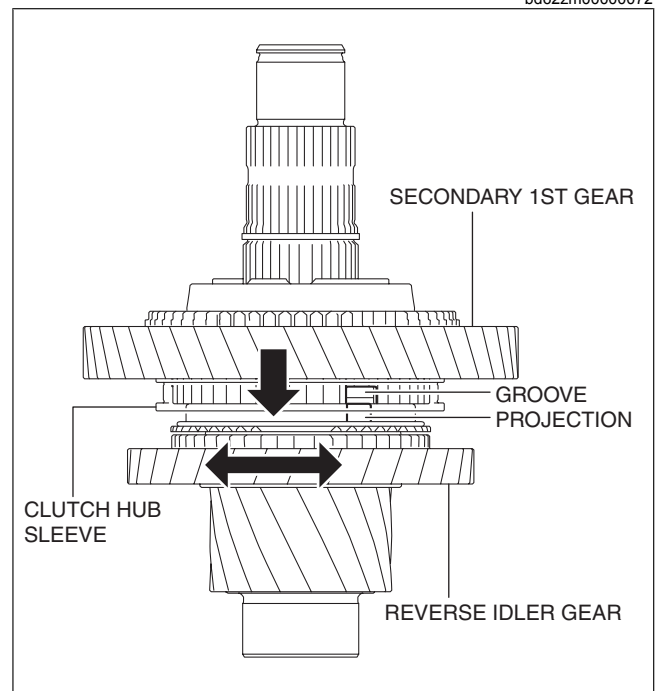
2. Put the secondary 1st gear on the synchronizer ring.



3. By rotating the reverse idler gear in the drive direction, align the key groove of the secondary 1st gear with the projection of the synchronizer ring and assemble the secondary 1st gear and the clutch hub sleeve as a single unit.

#### Note

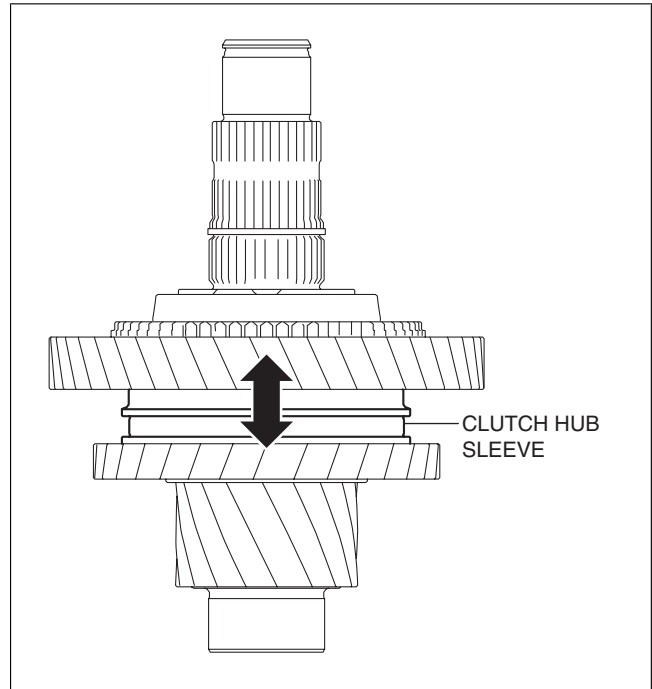
- When the reverse idler gear is rotated, the synchronizer ring is also rotated by the friction force.
- When the key groove of the secondary 1st gear and the projection of the synchronizer ring are aligned, the secondary 1st gear drops by its own weight and engages with the synchronizer ring.



4. Verify that the clutch hub sleeve can be slid until it contacts the reverse idler gear.

**Note**

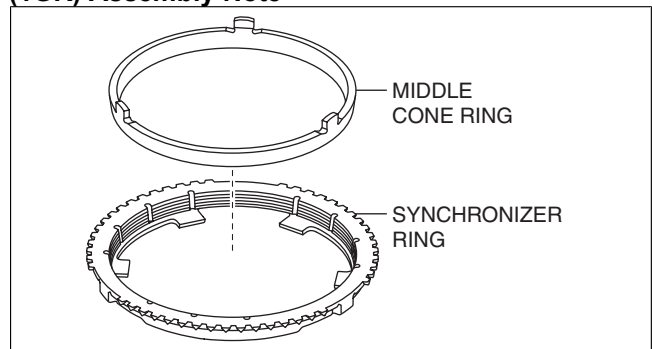
- The clutch hub sleeve cannot be slid until it contacts the reverse idler gear if the assembly position of the secondary 1st gear, clutch hub sleeve, and the synchronizer ring is not correct.



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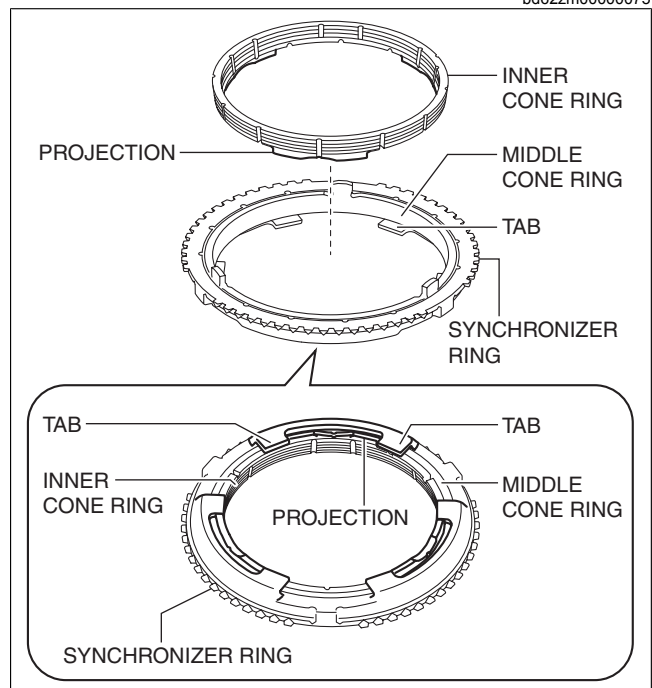
**Inner Cone Ring, Middle Cone Ring, Synchronizer Ring (1GR) Assembly Note**

1. Assemble the middle cone ring to the synchronizer ring.



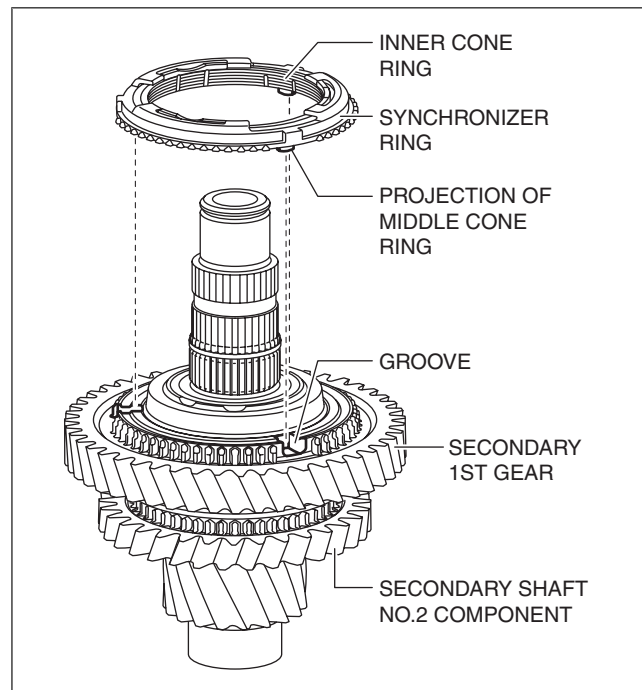
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2. Assemble the inner cone ring to the synchronizer ring with the projections of the inner cone ring fit between the tabs of the synchronizer ring as shown in the figure.



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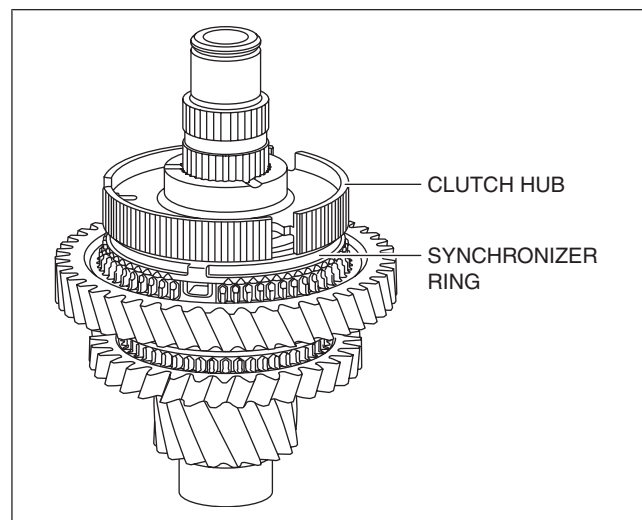
3. Assemble the synchronizer ring, middle cone ring, and inner cone ring as a single unit to the secondary shaft No.2 component with the projections of the middle cone ring fit to the holes of the secondary 1st gear.
4. Verify that the ends of the inner cone ring, middle cone ring, and synchronizer ring are arranged in a flat plane.



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#### Clutch Hub Assembly Note

1. Put the clutch hub on the synchronizer ring.

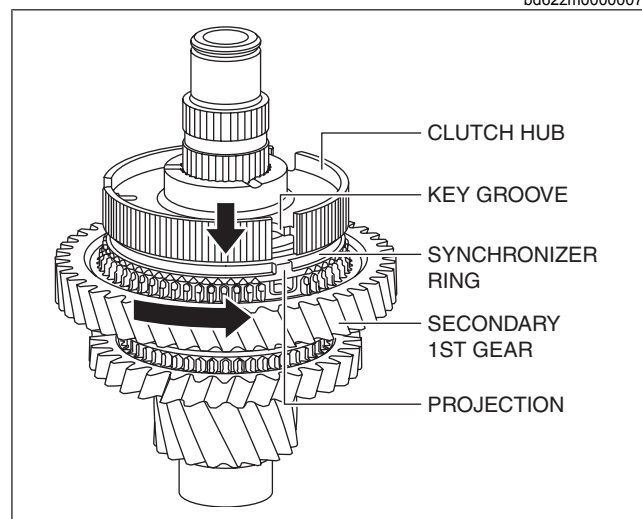


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2. By rotating the secondary 1st gear in the drive direction, align the key groove of the clutch hub with the projection of the synchronizer ring and assemble the clutch hub.

#### Note

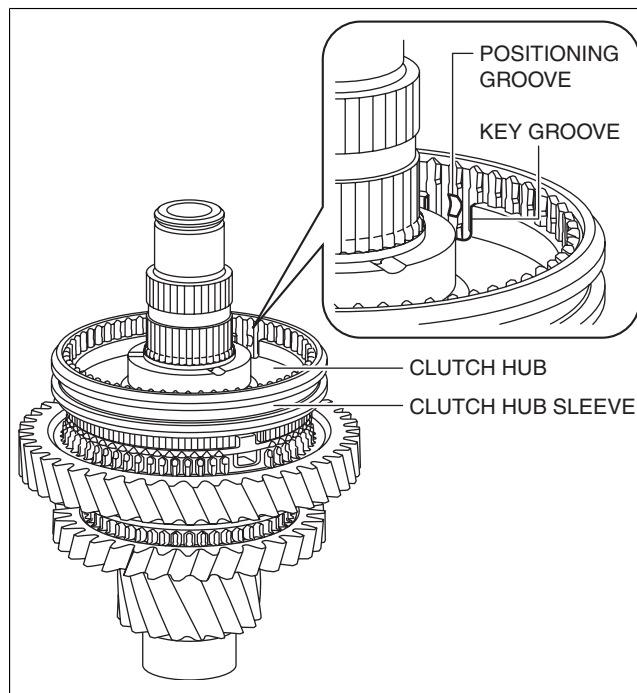
- When the secondary 1st gear is rotated, the synchronizer ring is also rotated by the friction force.
- When the key groove of the clutch hub and the projection of the synchronizer ring are aligned, the clutch hub drops by its own weight and engages with the synchronizer ring.



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### Clutch Hub Sleeve Assembly Note

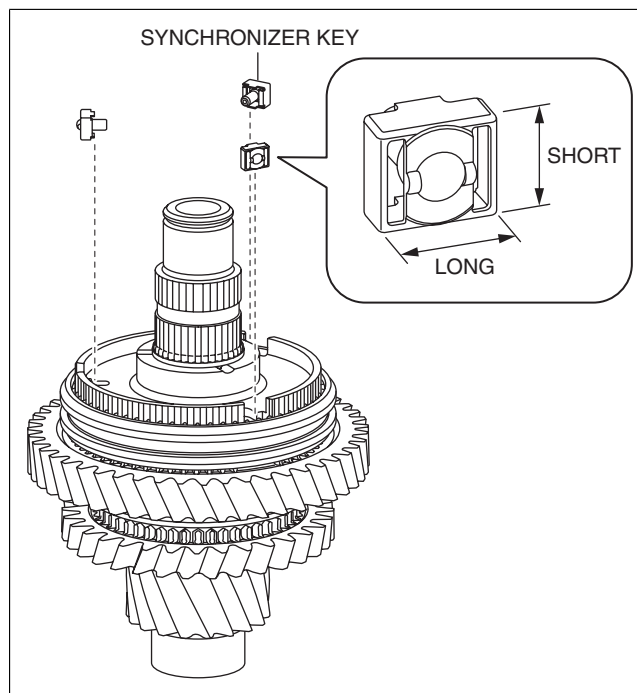
1. Align the positioning groove of the clutch hub sleeve so that it is lined up with the center of the key groove of the clutch hub, and assemble the clutch hub sleeve.



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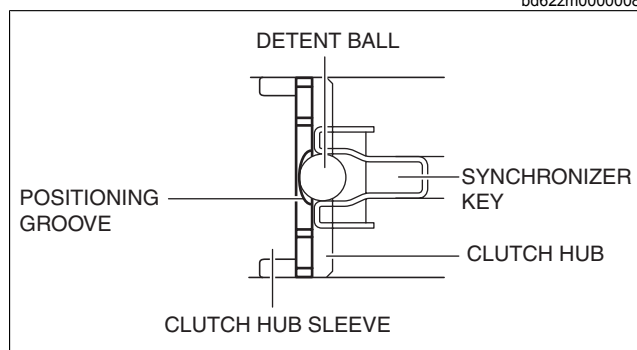
### Synchronizer Key Assembly Note

1. Align with the direction of the synchronizer key as shown in the figure, and assemble the clutch hub.



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2. After the synchronizer key is assembled, verify that the detent ball of the synchronizer key is engaged with the positioning groove of the clutch hub sleeve.

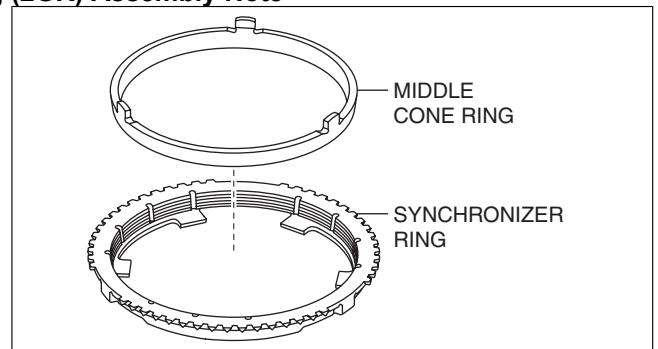


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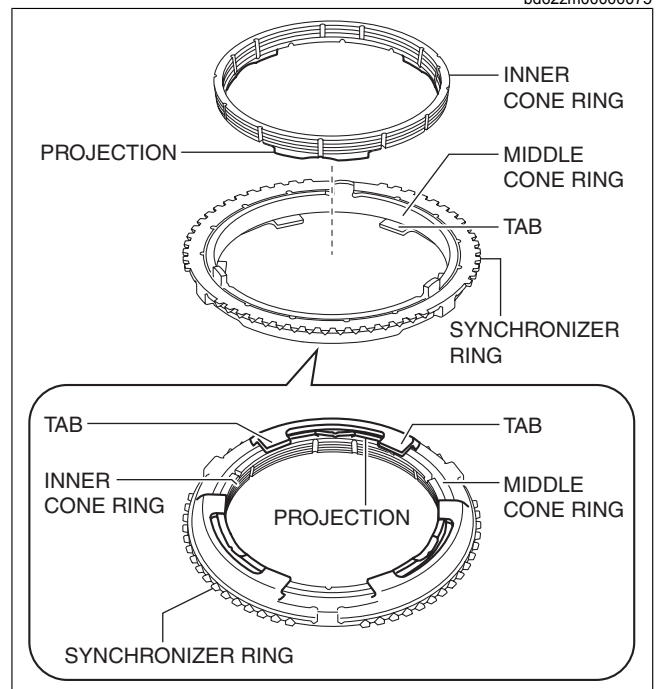
### Synchronizer Ring, Middle Cone Ring, Inner Cone Ring (2GR) Assembly Note

1. Assemble the middle cone ring to the synchronizer ring.



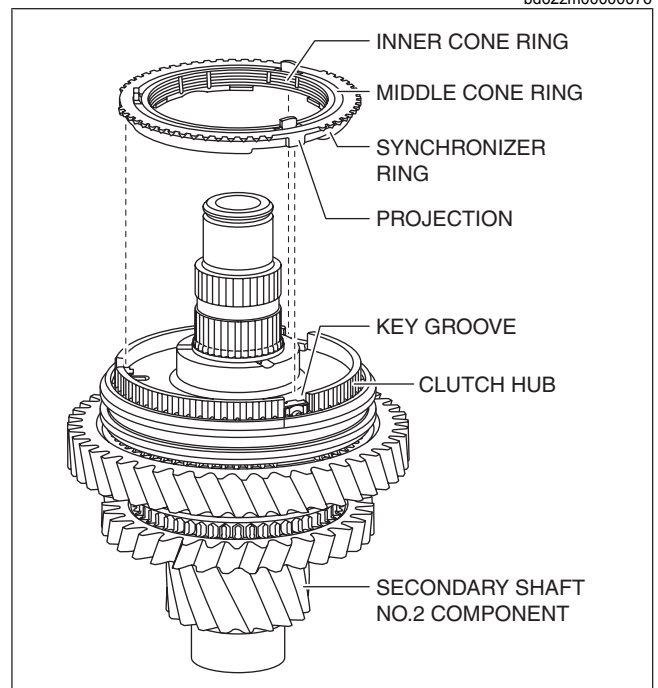
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2. Assemble the inner cone ring to the synchronizer ring with the projections of the inner cone ring fit between the tabs of the synchronizer ring as shown in the figure.



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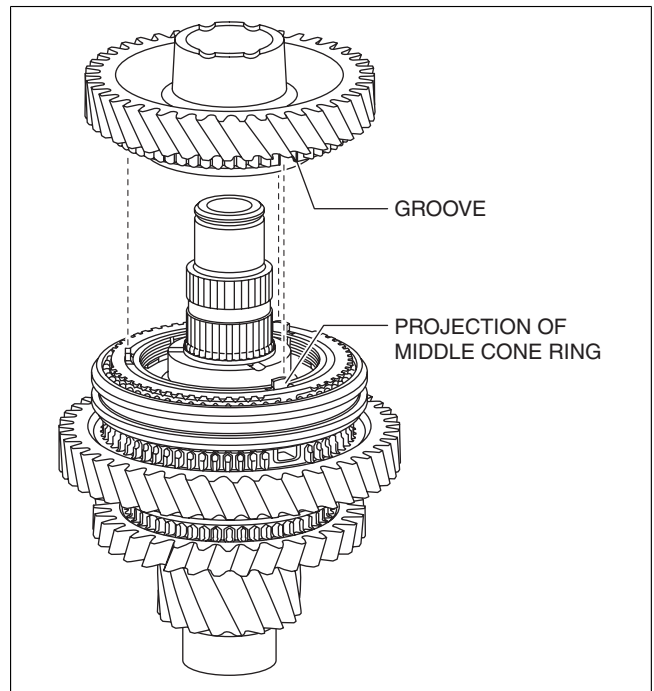
3. Assemble the synchronizer ring, middle cone ring, and inner cone ring as a single unit to the secondary shaft No.2 component with the projections of the synchronizer ring fit to the key groove of the clutch hub.
4. Verify that the ends of the inner cone ring, middle cone ring, and synchronizer ring are arranged in a flat plane.



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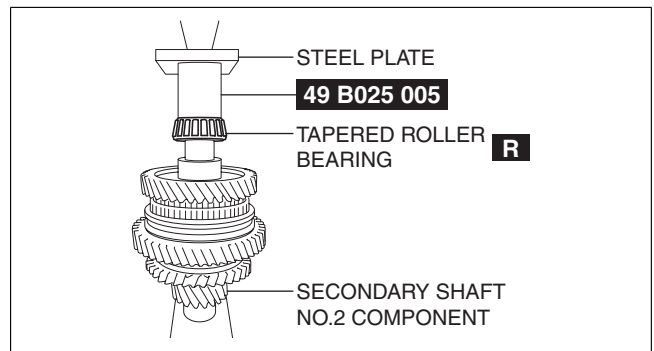
### Secondary 2nd Gear Assembly Note

1. Assemble the secondary 2nd gear so that the groove of the secondary 2nd gear and middle cone ring projection are engaged as shown in the figure.

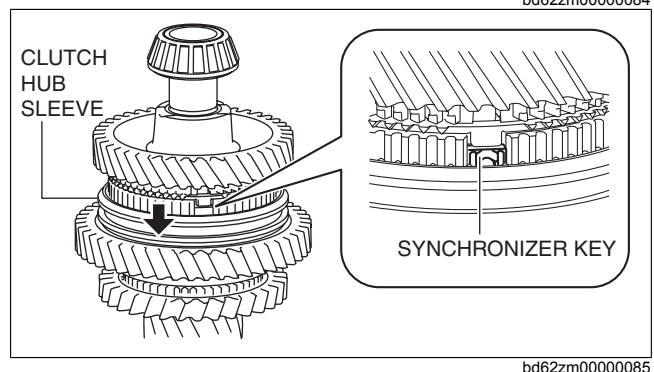


### Tapered Roller Bearing Assembly Note

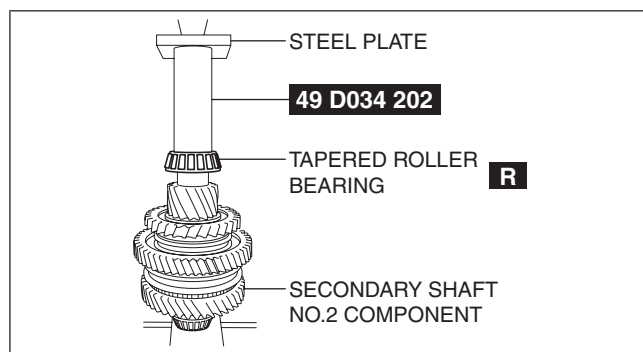
1. Set the secondary shaft No.2 component, new tapered roller bearing (transaxle case side) and **SST** in a press as shown in the figure.



2. Move the clutch hub sleeve in the axial direction while pressing the secondary 2nd gear by hand so that it does not move, and verify that the synchronizer key is assembled correctly.
3. Assemble the tapered roller bearing (transaxle case side) using the press.



4. Set the secondary shaft No.2 component, new tapered roller bearing (clutch housing side), **SST**, and an appropriate steel plate in a press as shown in the figure.
5. Assemble the tapered roller bearing (clutch housing side) using the press.



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