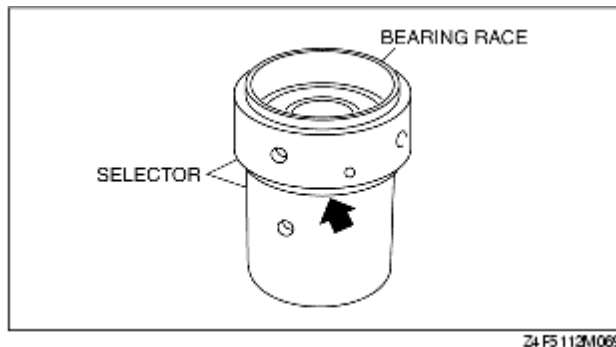


## BEARING PRELOAD ADJUSTMENT

B3E051501029M08

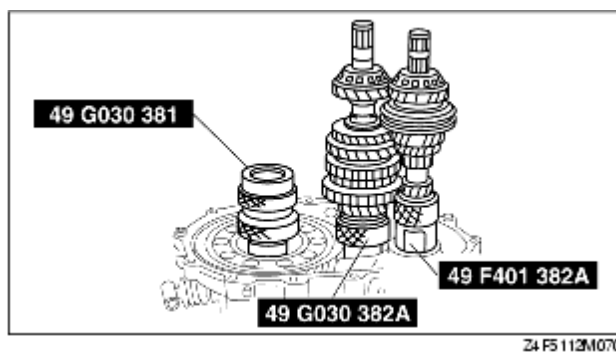
1. Install the primary and secondary shaft bearing races into the transaxle case (shims removed).
2. Mount the clutch housing onto the transaxle hanger, and set the differential bearing race into the clutch housing. Position a piece of pipe against the bearing race and tap it in until it contacts the clutch housing.
3. Set the bearing races into the **SSTs (selector)** as shown in the figure.



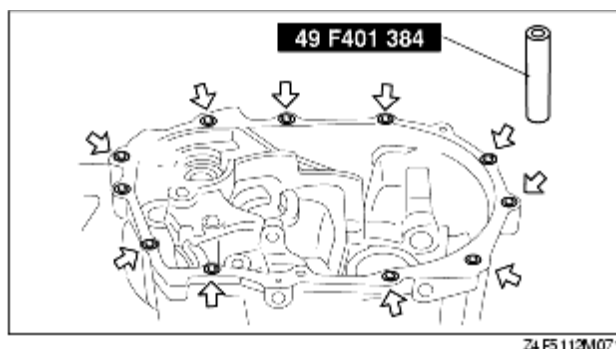
### Note

- Turn the selector to eliminate the gap indicated by the arrow in the figure.

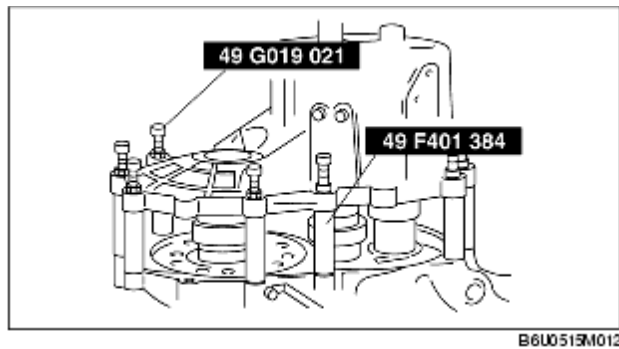
4. Set the differential component into the clutch housing, and set the bearing race and the **SST (selector)** on the differential. Set the **SSTs (selector)** for the primary and secondary shaft in the clutch housing. Mount the shaft gear assemblies as shown in the figure.



5. Set the **SST (collars)** in the positions shown in the figure.



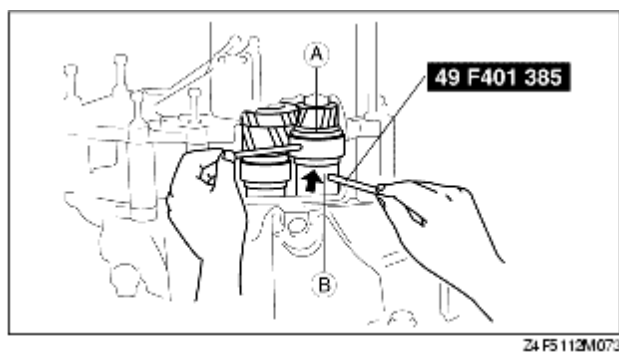
6. Install the transaxle case and tighten the **SST (bolts)** to the specified torque.



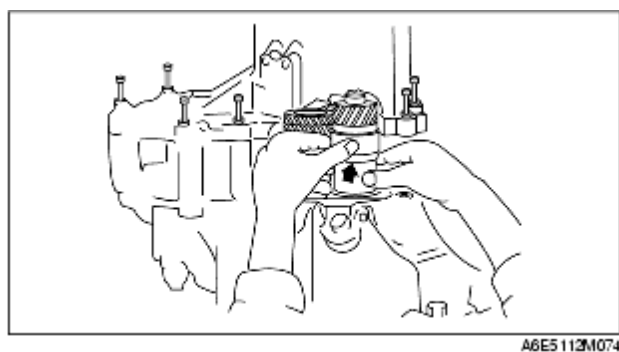
**Tightening torque**

**37.3-52.0 N·m {3.9-5.3 kgf·m, 28.2-38.3 ft·lbf}**

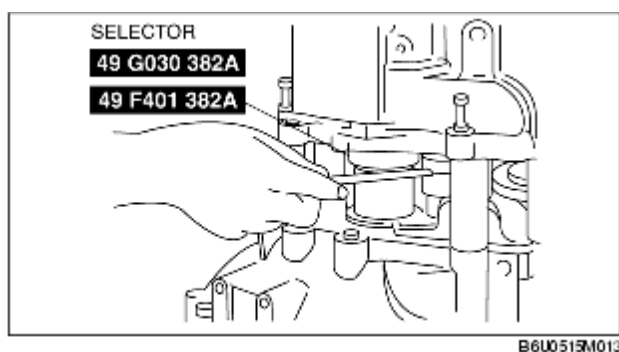
7. To seat the bearings, mount the **SST (bars)** on parts A and B of the selectors, and turn the selectors so the gaps are widened. Then turn the **SST** in the reverse direction until the gaps are eliminated.



8. Manually expand the selector until it no longer turns by hand.



9. Use a feeler gauge to measure the gap in the **SST (selector)**.



## Caution

- Measure the gap around the entire circumference of the selector.

10. Take the maximum reading and determine the shim to used as follows.

### Primary shaft adjustment shim

- Select the thinnest allowable shim from the table to obtain standard clearance.

#### Standard clearance

0-0.05 mm {0-0.002 in}

#### Example

Reading from step 9: 0.57 mm {0.022 in}

#### Shim selecting range

$(0.57 \text{ mm } \{0.022 \text{ in}\} - 0.05 \text{ mm } \{0.002 \text{ in}\}) - (0.57 \text{ mm } \{0.022 \text{ in}\} - 0 \text{ mm } \{0 \text{ in}\}) = 0.52 \text{ mm } \{0.020 \text{ in}\} - 0.57 \text{ mm } \{0.022 \text{ in}\}$

#### Shim

0.55 mm {0.022 in}

### Secondary shaft adjustment shim

- Select the thinnest allowable shim from the table to obtain standard clearance.

#### Tightening amount

0.03-0.08 mm {0.001-0.003 in}

#### Example

Reading from step 9: 0.57 mm {0.022 in}

#### Shim selecting range

$(0.57 \text{ mm } \{0.022 \text{ in}\} + 0.03 \text{ mm } \{0.001 \text{ in}\}) - (0.57 \text{ mm } \{0.022 \text{ in}\} + 0.08 \text{ mm } \{0.003 \text{ in}\}) = 0.60 \text{ mm } \{0.024 \text{ in}\} - 0.65 \text{ mm } \{0.026 \text{ in}\}$

#### Shim

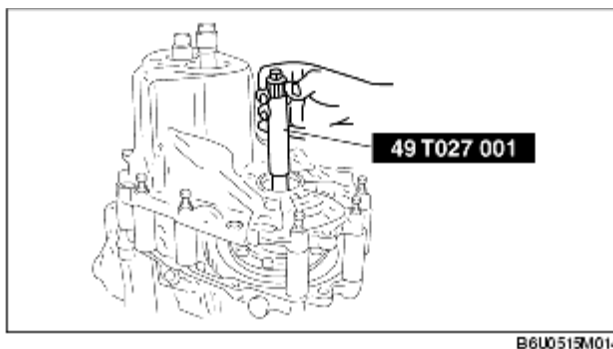
0.60 mm {0.024 in}

#### Thickness of shim

mm {in}

0.20 {0.008}	0.25 {0.010}	0.30 {0.012}	0.35 {0.014}
0.40 {0.016}	0.45 {0.018}	0.50 {0.020}	0.55 {0.022}
0.60 {0.024}	0.65 {0.026}	0.70 {0.028}	-

11. Install the **SST** and a pull scale or torque wrench.



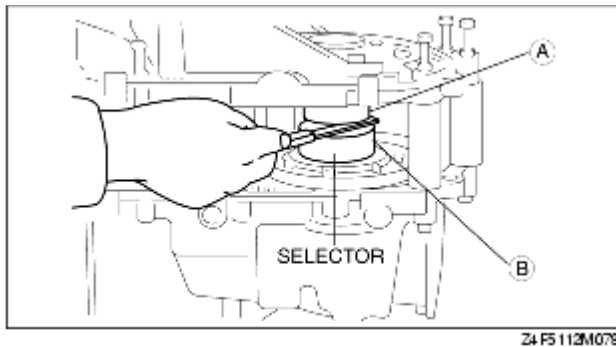
12. Adjust the clearance of the **SST (selector)** to obtain the specified preload/pull scale reading.

**Note**

- Read the preload when the differential starts to turn.
- Measure several times and calculate the average value.

**Preload****0.5 N·m {5.0 kgf·cm, 4.3 in·lbf}**

13. Use a feeler gauge to measure the gap in the selector for the differential.



14. Add **0.15 mm {0.006 in}** to the measured clearance and select the combination of shims closest in value to that measurement.

**Example****0.32 mm {0.013 in}****0.32 mm {0.013 in} + 0.15 mm {0.006 in} = 0.47 mm {0.019 in}****Nearest shim (on thick side) to 0.47 mm {0.019 in} is 0.50 mm {0.020 in}****Thickness of shim**

mm {in}

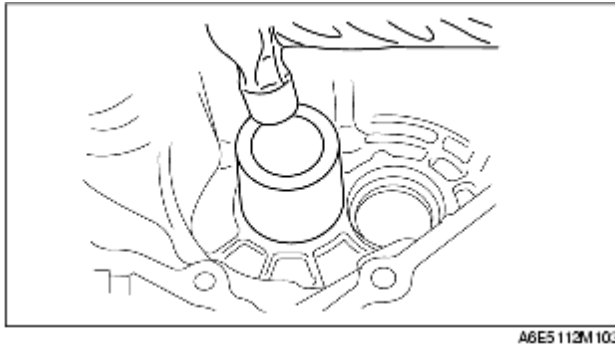
0.1 {0.004}	0.20 {0.008}	0.25 {0.010}	0.30 {0.012}
0.35 {0.014}	0.40 {0.016}	0.45 {0.018}	0.50 {0.020}
0.55 {0.022}	0.60 {0.024}	0.65 {0.026}	0.70 {0.028}
0.75 {0.030}	0.80 {0.031}	0.85 {0.033}	0.90 {0.035}
0.95 {0.037}	1.0 {0.039}	1.05 {0.041}	1.10 {0.043}
1.15 {0.045}	1.20 {0.047}	-	-

15. Remove the transaxle case and the **SST**.
16. Remove the selectors, the primary shaft component, and the differential.
17. Remove the bearing races.
18. Install the adjustment shim(s) and install the bearing race using a suitable pipe.

**Caution**

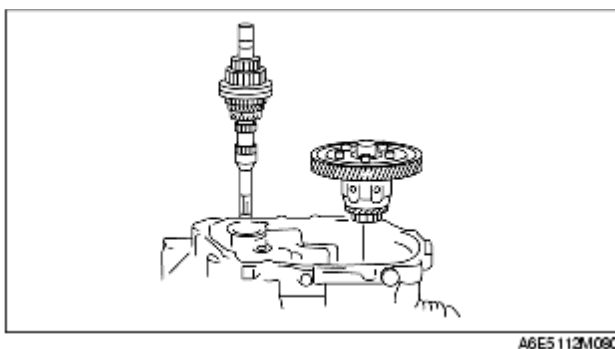
- Use the adjustment shim(s) selected during bearing preload adjustment.

19. Install the adjustment shim(s) and install the bearing race using a suitable pipe.

**Caution**

- Use the adjustment shim(s) selected during bearing preload adjustment.

20. Set the primary shaft gear component and the differential into the clutch housing.

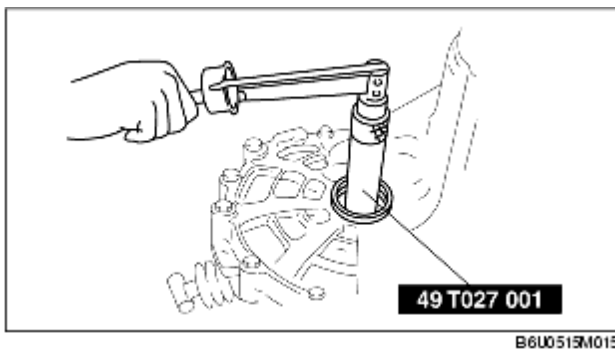


21. Install the transaxle case, and tighten to the specified torque.

**Tightening torque**

**37.3-52.0 N·m {3.8-5.3 kgf·m, 27.5-38.3 ft·lbf}**

22. Install the **SST** and a pull scale or torque wrench.



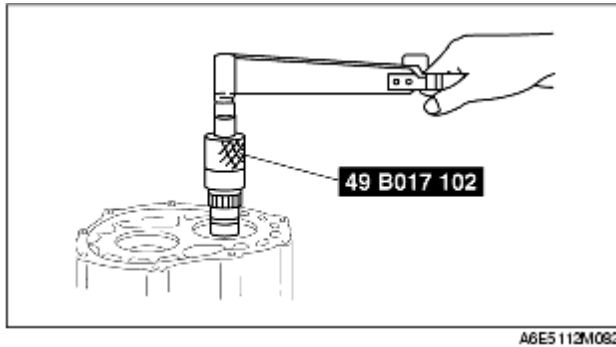
23. Verify that the preload is within the specification.

- If not as specified, return to Step 1.

**Preload****1.4-1.9 Nm {14-20 kgf·cm, 13-17 in·lbf}**

24. Remove the **SST**.

25. With the transaxle facing in the direction shown in the figure, install the **SST** to the primary shaft gear component.



26. Verify that the preload is within the specification.

- If not as specified, return to Step 1.

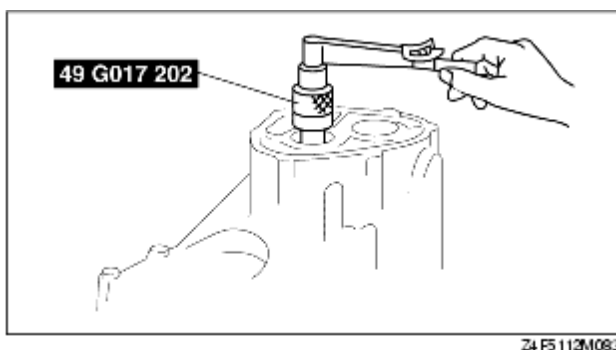
**Preload****0.12-0.39 N·m {1.2-4.0 kgf·cm, 1.05-3.47 in·lbf}**

27. Remove the **SST**, transaxle case, primary shaft gear component and differential.

28. Install the secondary shaft gear component and transaxle case, then tighten to the specified torque.

**Tightening torque****37.3-52.0 N·m {3.8-5.3 kgf·m, 27.5-38.3 ft·lbf}**

29. Install the **SST** and a pull scale or torque wrench.



30. Verify that the preload is within the specification.

- If not as specification, return to Step 1.

**Preload****0.2-0.3 N·m {2.0-4.0 kgf·cm, 1.8-3.4 in·lbf}**

31. Remove the **SST** and transaxle case.