

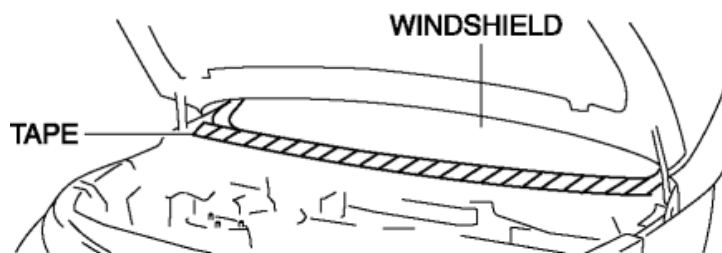
2012 - Mazda6 - Transmission/ Transaxle

AUTOMATIC TRANSAXLE REMOVAL/ INSTALLATION [AY6A-EL]

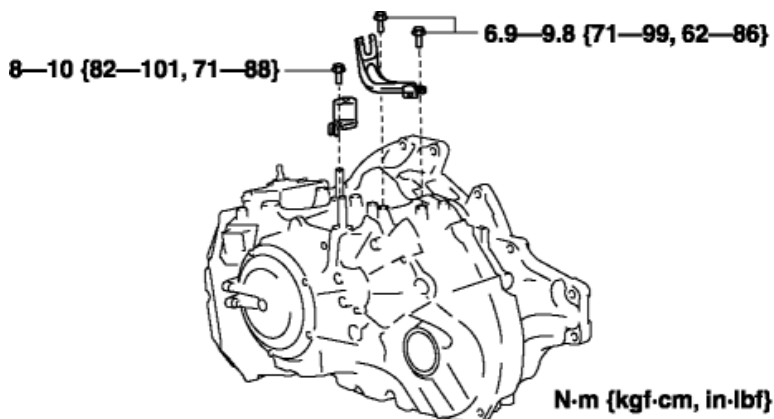
CAUTION:

- Secure the steering wheel using tape or a cable to prevent the steering shaft from rotating after disconnecting the steering shaft. If the steering wheel rotates after the steering shaft and the steering gear and linkage are disconnected, the internal parts of the clock spring could be damaged.

1. Disconnect the negative battery cable.
2. Remove the battery. (See [BATTERY REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
3. Remove the battery tray. (See [BATTERY REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
4. Remove the battery bracket. (See [STARTER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
5. Remove the fresh-air duct and air cleaner component as a single unit. (See [INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
6. Remove the air cleaner bracket. (See [INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
7. Remove the windshield wiper arm and blade. (See [WINDSHIELD WIPER ARM AND BLADE REMOVAL/ INSTALLATION](#).)
8. Remove the cowl grille. (See [COWL GRILLE REMOVAL/ INSTALLATION](#).)
9. Remove the cowl panel. (See [COWL PANEL REMOVAL/ INSTALLATION](#).)
10. Protect the windshield using tape.

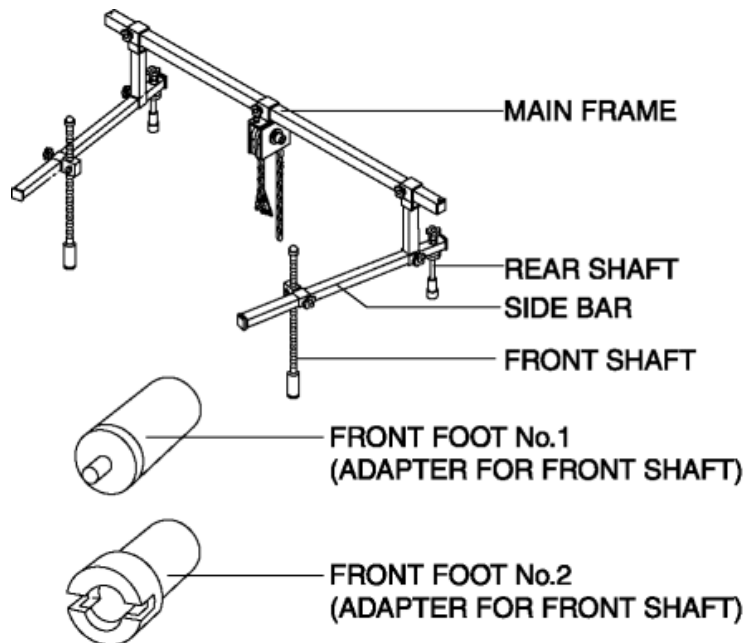


11. Disconnect the selector cable from the transaxle. (See [AUTOMATIC TRANSAXLE SHIFT MECHANISM REMOVAL/ INSTALLATION](#).)
12. Disconnect the connector and wiring harness from the transaxle.
13. Remove the breather hose component. (See [BREATHER COMPONENT REMOVAL/ INSTALLATION \[AY6A-EL\]](#).)
14. Remove the bracket from the transaxle.



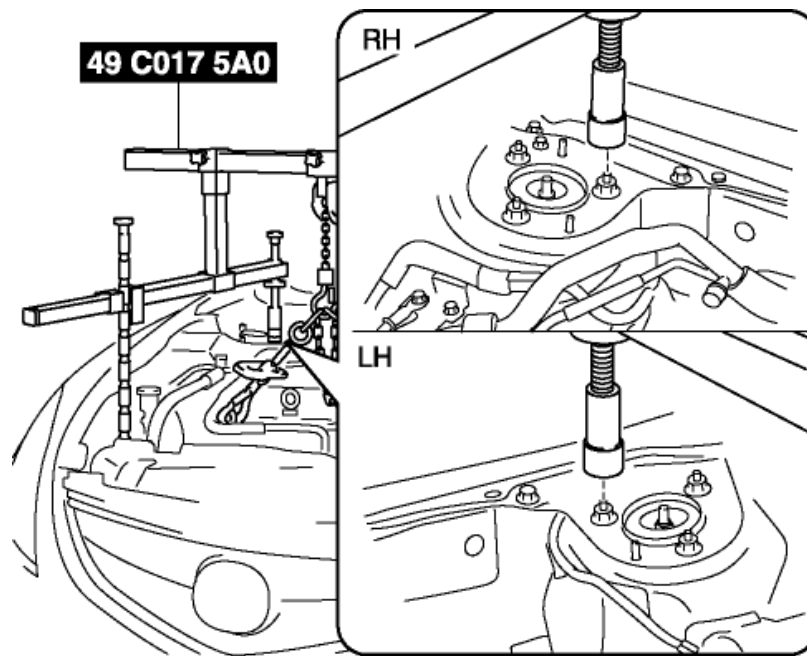
15. Disconnect the oil hose from the oil pipe component (transaxle side). (See [OIL COOLER REMOVAL/ INSTALLATION \[AY6A-EL\]](#).)

16. Remove the starter. (See [STARTER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
17. Remove the front mudguards. (See [FRONT MUDGUARD REMOVAL/ INSTALLATION](#).)
18. Remove the splash shields. (See [SPLASH SHIELD REMOVAL/ INSTALLATION](#).)
19. Remove the front wheels and tires. (See [GENERAL PROCEDURES \(FRONT AND REAR AXLES\)](#).)
20. Disconnect the ABS wheel-speed sensors from the steering knuckles. (See [FRONT ABS WHEEL-SPEED SENSOR REMOVAL/ INSTALLATION](#).)
21. Disconnect the brake hose brackets from the shock absorbers. (See [BRAKE HOSE \(FRONT\) REMOVAL/ INSTALLATION](#).)
22. Disconnect the tie-rod ends from the steering knuckles. (See [FRONT CROSSMEMBER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
23. Disconnect the front lower arms from the steering knuckles. (See [FRONT LOWER ARM REMOVAL/ INSTALLATION](#).)
24. Remove the front pipe. (See [EXHAUST SYSTEM REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
25. Disconnect the stabilizer control links from the shock absorbers. (See [FRONT STABILIZER REMOVAL/ INSTALLATION](#).)
26. Remove the front crossmember bracket. (See [FRONT CROSSMEMBER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
27. Remove the No.1 engine mount and the front crossmember as a single unit. (See [FRONT CROSSMEMBER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
28. Remove the joint shaft bracket. (See [JOINT SHAFT REMOVAL/ INSTALLATION](#).)
29. Disconnect the drive shaft (LH) from the transaxle. (See [DRIVE SHAFT REMOVAL/ INSTALLATION](#).)
30. Disconnect the drive shaft (RH) from the joint shaft. (See [DRIVE SHAFT REMOVAL/ INSTALLATION](#).)
31. Remove the joint shaft. (See [JOINT SHAFT REMOVAL/ INSTALLATION](#).)
32. Install the **SST** using the following procedure.

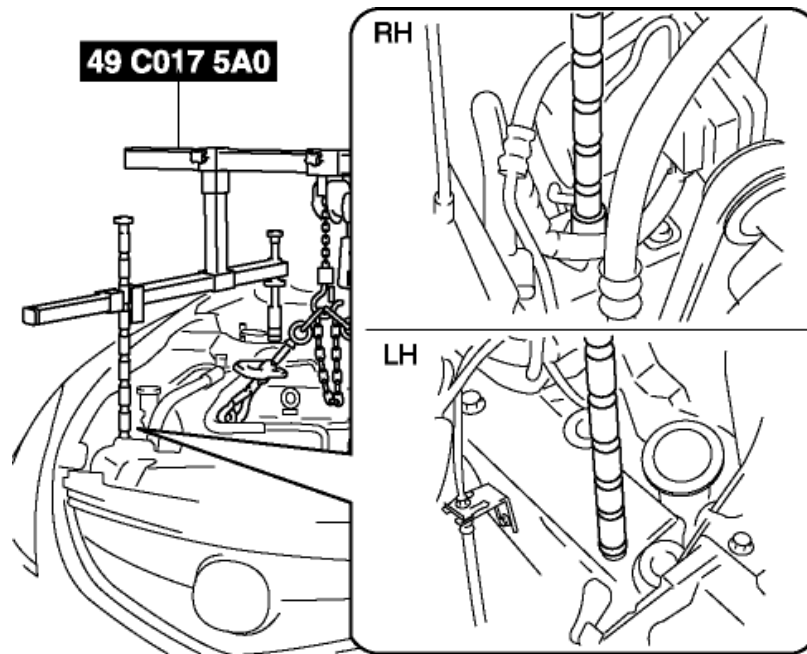


CAUTION:

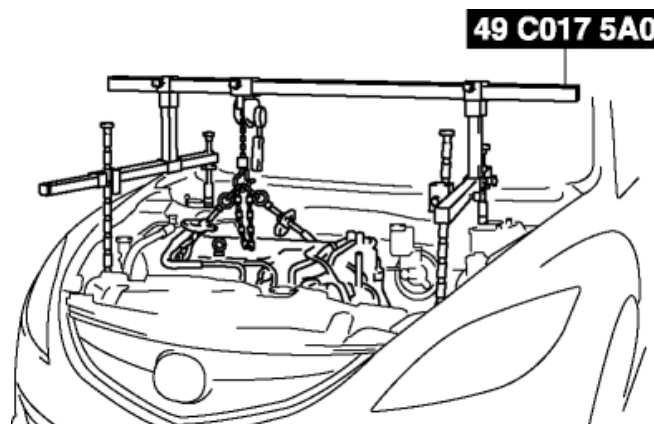
- Refer to the SST instruction manual for the basic handling procedure.
- a. Install the front foot No.1 to the left front shaft of the **SST**, and then install the front foot No.2 to the right front shaft.
- b. Remove the engine cover. (See [ENGINE COVER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
- c. As shown in the figure, set the rear shafts of the **SST** to the left and right shock absorber nuts.



d. Set the front foot No.1 and No.2 of the **SST** as shown in the figure.



e. Adjust the height of the left and right side bars of the **SST** so that they are leveled, then tighten each part.



f. Apply tension to the chain to secure the engine.

33. Remove in the order shown in the figure.

WARNING:

- Improperly jacking a transaxle is dangerous. It can slip off the jack and may cause serious injury.

CAUTION:

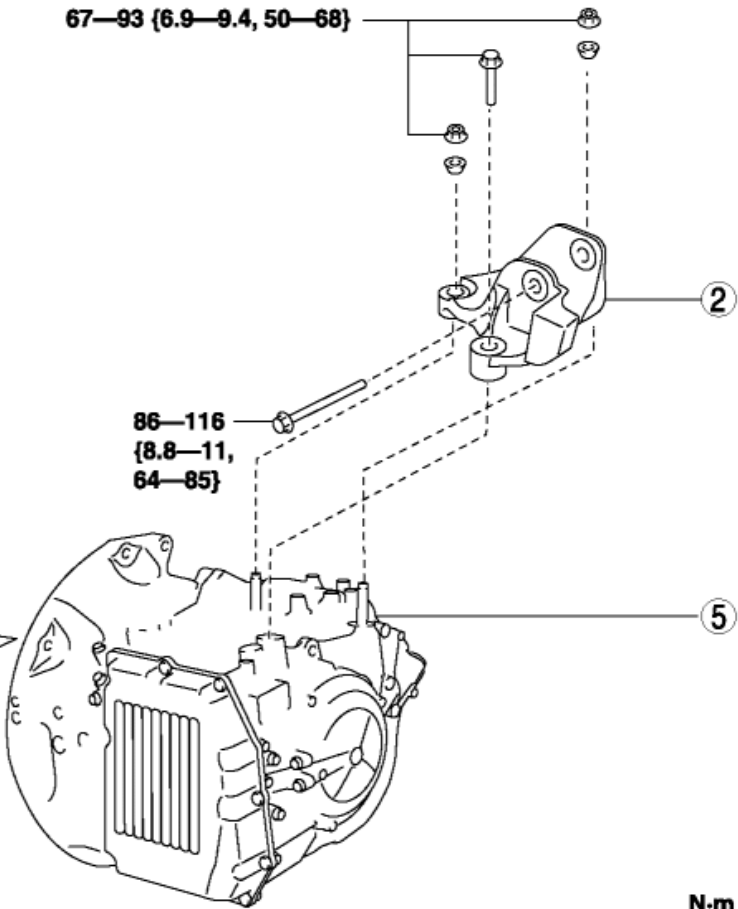
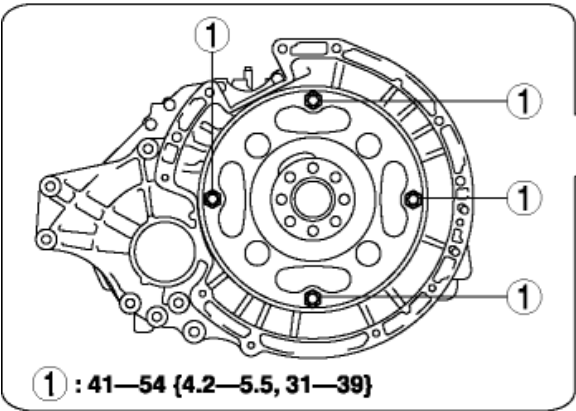
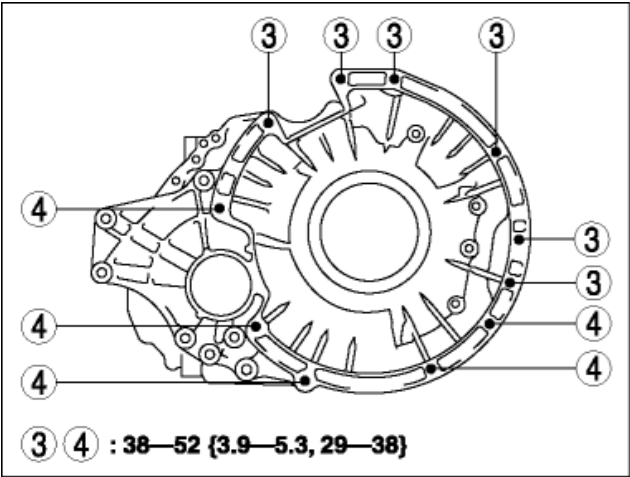
- To prevent the torque converter and transaxle from separating, remove the transaxle without tilting it toward the torque converter.

34. Install in the reverse order of removal.

35. Perform the following test according to the service item. (See **MECHANICAL SYSTEM TEST [AY6A-EL]**.) (See **ROAD TEST [AY6A-EL]**.)

Service item	Test item			
	Line pressure test	Stall test	Time lag test	Road test
Transaxle replacement	X			
Transaxle overhaul	X	X	X	X
Torque converter replacement	X	X		
Control valve body component replacement	X			X

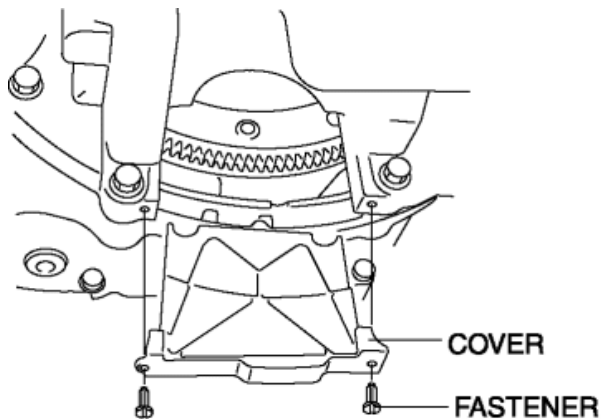
X
Test to be performed after the service work



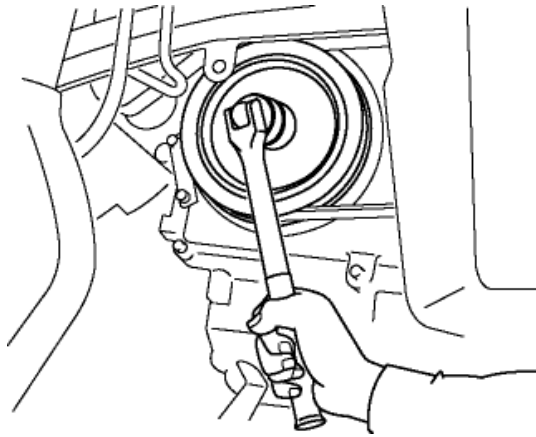
1	Torque converter installation nuts (See Torque Converter Installation Nuts Removal Note.) (See Torque Converter Installation Nuts Installation Note.)
2	No.4 engine mount bracket (See No.4 Engine Mount Bracket Installation Note.)
3	Transaxle mounting bolt (upper side) (See Transaxle Removal Note.) (See Transaxle Installation Note.)
4	Transaxle mounting bolt (lower side) (See Transaxle Removal Note.) (See Transaxle Installation Note.)
5	Transaxle (See Transaxle Removal Note.) (See Transaxle Installation Note.)

Torque Converter Installation Nuts Removal Note

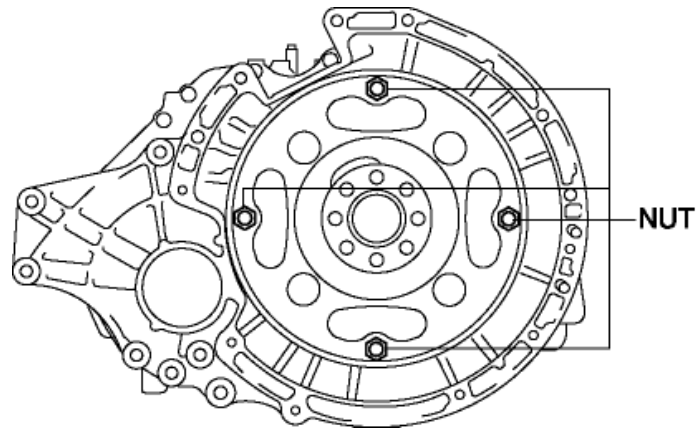
1. Remove the cover as shown in the figure.



2. Hold the crankshaft pulley to prevent drive plate from rotating.

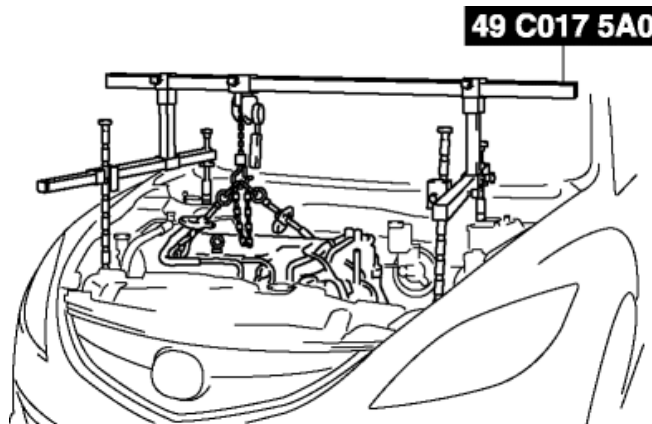


3. Remove the torque converter installation nuts.

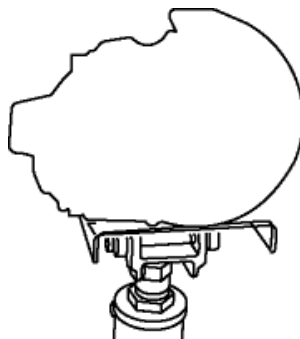


Transaxle Removal Note

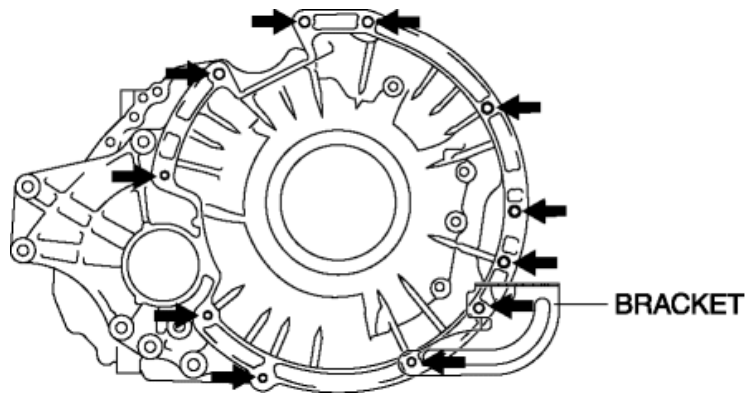
1. Adjust the **SST** to tilt the engine to the transaxle side.



2. Support the transaxle on a jack.



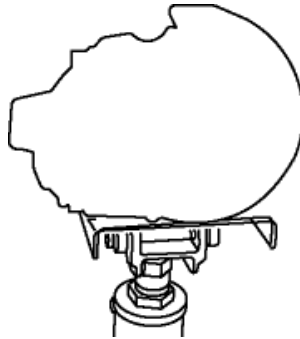
3. Remove the transaxle mounting bolts and bracket.



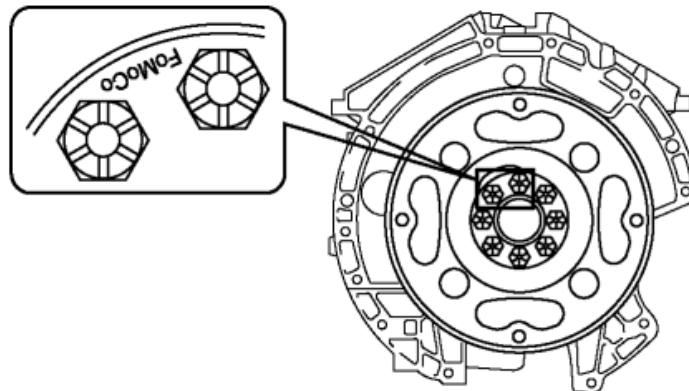
4. Remove the transaxle.

Transaxle Installation Note

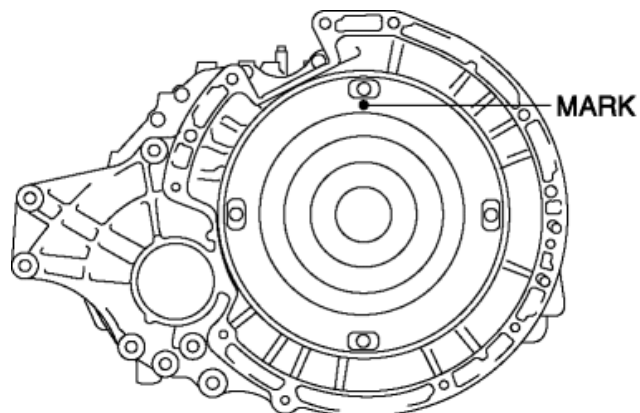
1. Set the transaxle on a jack and lift it.



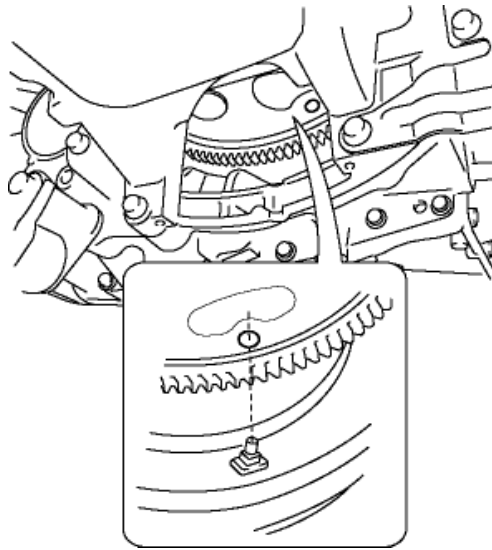
2. Rotate the drive plate so that the logo mark faces upward.



3. Rotate the torque converter so that the mark faces upward.



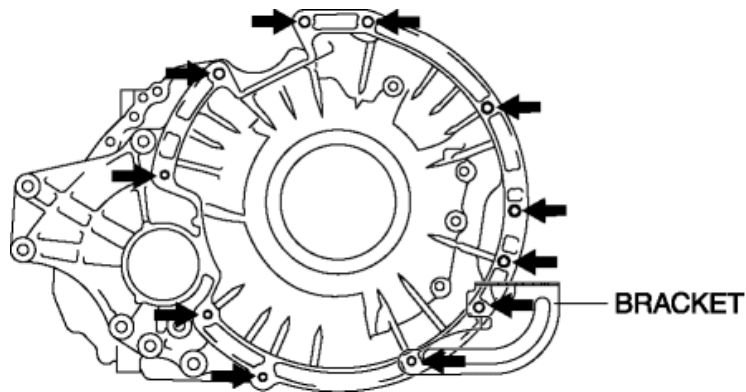
4. Verify that the torque converter stud bolts are inserted into the drive plate bolt holes from the service hole.



CAUTION:

- Verify that the torque converter stud bolts are inserted into the drive plate bolt holes, and install the transaxle installation bolts. Otherwise, the drive plate could be damaged.

5. Install the transaxle mounting bolts and bracket.

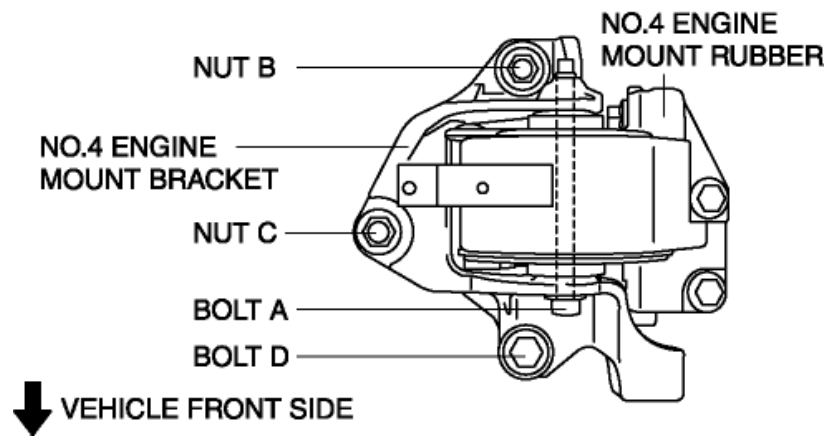


Tightening torque

- 38—52 N·m {3.9—5.3 kgf·m, 29—38 ft·lbf}

No.4 Engine Mount Bracket Installation Note

1. Install the No.4 engine mount bracket to the transaxle.
2. Temporarily tighten bolt A.



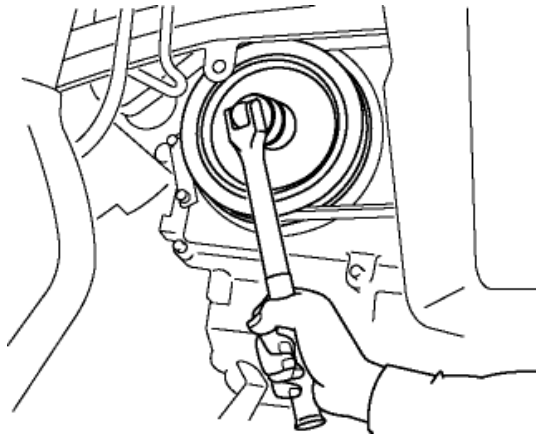
3. Temporarily tighten nuts B, C and bolt D.
4. Tighten nuts and bolt in the order of C→B→D.
5. Tighten bolt A.

Tightening torque

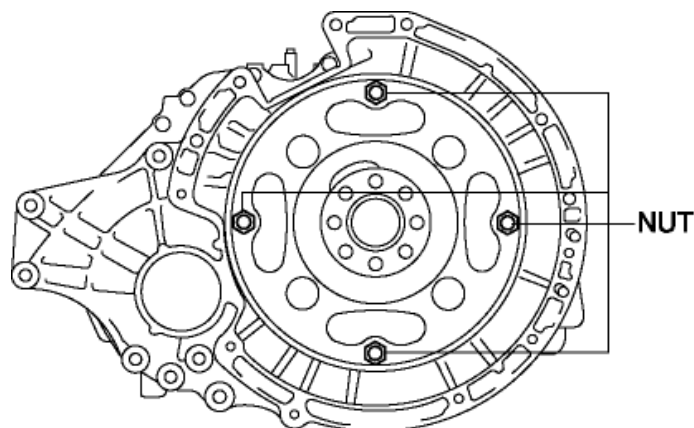
- Bolt A: 86—116 N·m {8.8—11 kgf·m, 64—85 ft·lbf}
- Nut B, C, Bolt D: 67—93 N·m {6.9—9.4 kgf·m, 50—68 ft·lbf}

Torque Converter Installation Nuts Installation Note

1. Hold the crankshaft pulley to prevent drive plate from rotating.



2. Tighten the torque converter installation nuts.



CAUTION:

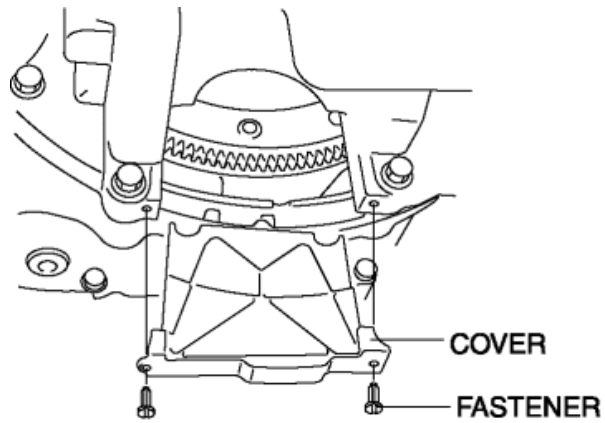
- Loosely and equally tighten the torque converter nuts, then further tighten them to the specified

tightening torque.

Tightening torque

- 41—54 N·m {4.2—5.5 kgf·m, 31—39 ft·lbf}

3. Install the cover as shown in the figure.



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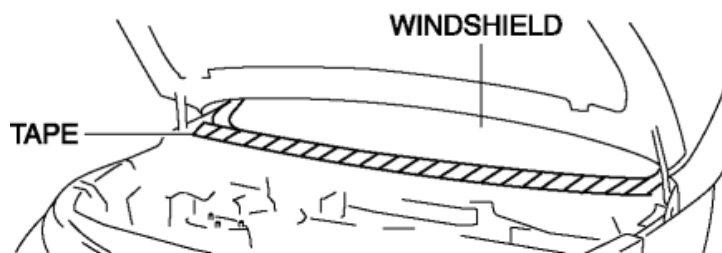
2012 - Mazda6 - Transmission/ Transaxle

AUTOMATIC TRANSAXLE REMOVAL/ INSTALLATION [AY6A-EL]

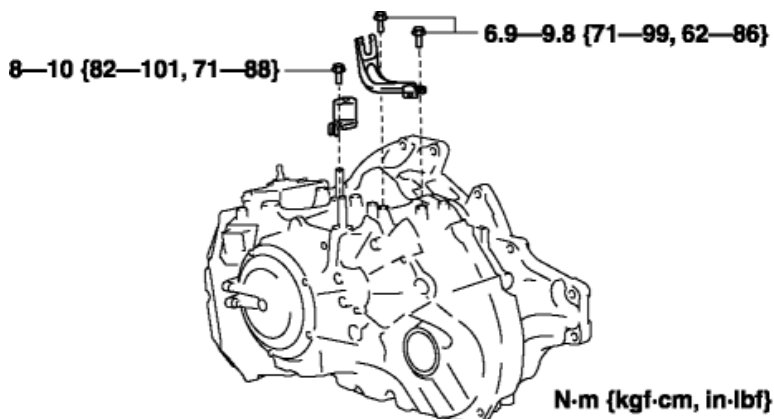
CAUTION:

- Secure the steering wheel using tape or a cable to prevent the steering shaft from rotating after disconnecting the steering shaft. If the steering wheel rotates after the steering shaft and the steering gear and linkage are disconnected, the internal parts of the clock spring could be damaged.

1. Disconnect the negative battery cable.
2. Remove the battery. (See [BATTERY REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
3. Remove the battery tray. (See [BATTERY REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
4. Remove the battery bracket. (See [STARTER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
5. Remove the fresh-air duct and air cleaner component as a single unit. (See [INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
6. Remove the air cleaner bracket. (See [INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
7. Remove the windshield wiper arm and blade. (See [WINDSHIELD WIPER ARM AND BLADE REMOVAL/ INSTALLATION](#).)
8. Remove the cowl grille. (See [COWL GRILLE REMOVAL/ INSTALLATION](#).)
9. Remove the cowl panel. (See [COWL PANEL REMOVAL/ INSTALLATION](#).)
10. Protect the windshield using tape.

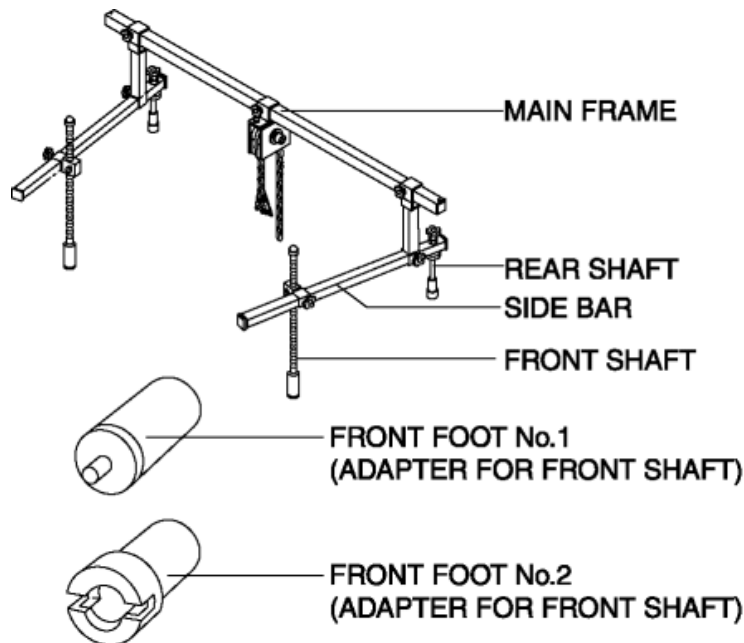


11. Disconnect the selector cable from the transaxle. (See [AUTOMATIC TRANSAXLE SHIFT MECHANISM REMOVAL/ INSTALLATION](#).)
12. Disconnect the connector and wiring harness from the transaxle.
13. Remove the breather hose component. (See [BREATHER COMPONENT REMOVAL/ INSTALLATION \[AY6A-EL\]](#).)
14. Remove the bracket from the transaxle.



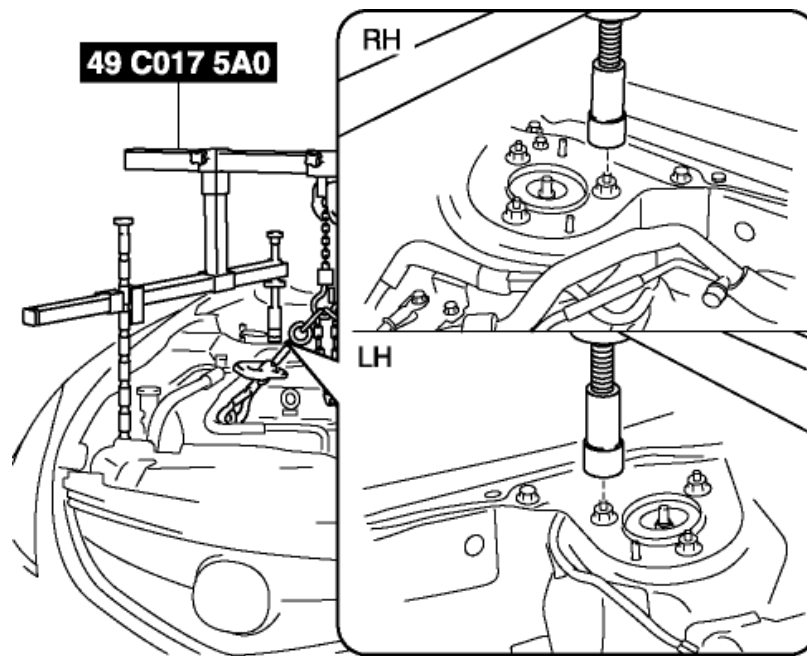
15. Disconnect the oil hose from the oil pipe component (transaxle side). (See [OIL COOLER REMOVAL/ INSTALLATION \[AY6A-EL\]](#).)

16. Remove the starter. (See [STARTER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
17. Remove the front mudguards. (See [FRONT MUDGUARD REMOVAL/ INSTALLATION](#).)
18. Remove the splash shields. (See [SPLASH SHIELD REMOVAL/ INSTALLATION](#).)
19. Remove the front wheels and tires. (See [GENERAL PROCEDURES \(FRONT AND REAR AXLES\)](#).)
20. Disconnect the ABS wheel-speed sensors from the steering knuckles. (See [FRONT ABS WHEEL-SPEED SENSOR REMOVAL/ INSTALLATION](#).)
21. Disconnect the brake hose brackets from the shock absorbers. (See [BRAKE HOSE \(FRONT\) REMOVAL/ INSTALLATION](#).)
22. Disconnect the tie-rod ends from the steering knuckles. (See [FRONT CROSSMEMBER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
23. Disconnect the front lower arms from the steering knuckles. (See [FRONT LOWER ARM REMOVAL/ INSTALLATION](#).)
24. Remove the front pipe. (See [EXHAUST SYSTEM REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
25. Disconnect the stabilizer control links from the shock absorbers. (See [FRONT STABILIZER REMOVAL/ INSTALLATION](#).)
26. Remove the front crossmember bracket. (See [FRONT CROSSMEMBER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
27. Remove the No.1 engine mount and the front crossmember as a single unit. (See [FRONT CROSSMEMBER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
28. Remove the joint shaft bracket. (See [JOINT SHAFT REMOVAL/ INSTALLATION](#).)
29. Disconnect the drive shaft (LH) from the transaxle. (See [DRIVE SHAFT REMOVAL/ INSTALLATION](#).)
30. Disconnect the drive shaft (RH) from the joint shaft. (See [DRIVE SHAFT REMOVAL/ INSTALLATION](#).)
31. Remove the joint shaft. (See [JOINT SHAFT REMOVAL/ INSTALLATION](#).)
32. Install the **SST** using the following procedure.

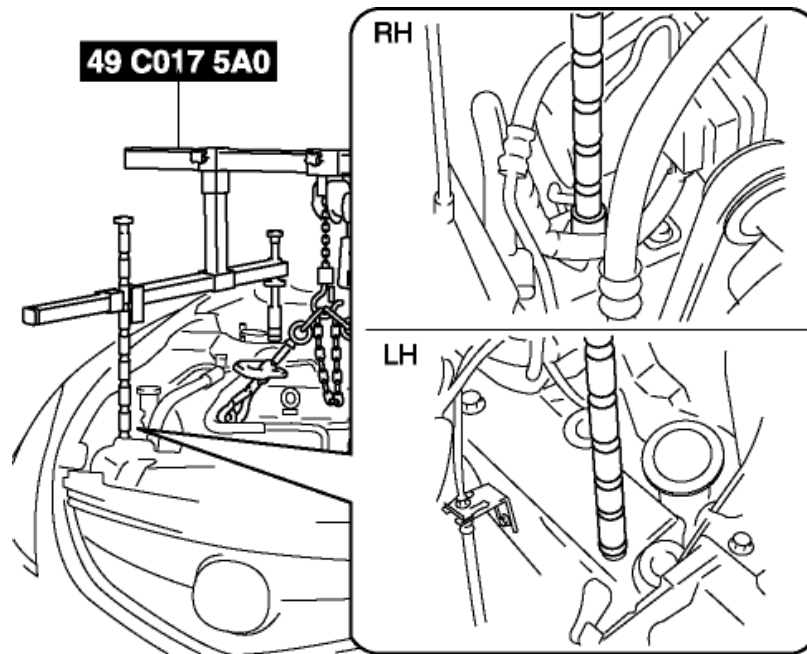


CAUTION:

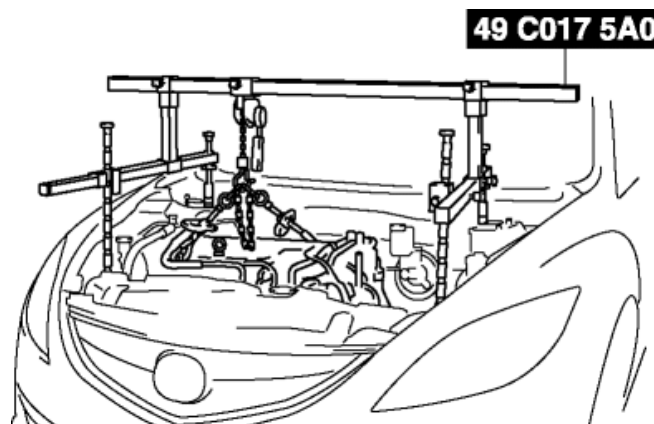
- Refer to the SST instruction manual for the basic handling procedure.
- a. Install the front foot No.1 to the left front shaft of the **SST**, and then install the front foot No.2 to the right front shaft.
- b. Remove the engine cover. (See [ENGINE COVER REMOVAL/ INSTALLATION \[MZI 3.7 V6\]](#).)
- c. As shown in the figure, set the rear shafts of the **SST** to the left and right shock absorber nuts.



d. Set the front foot No.1 and No.2 of the **SST** as shown in the figure.



e. Adjust the height of the left and right side bars of the **SST** so that they are leveled, then tighten each part.



f. Apply tension to the chain to secure the engine.

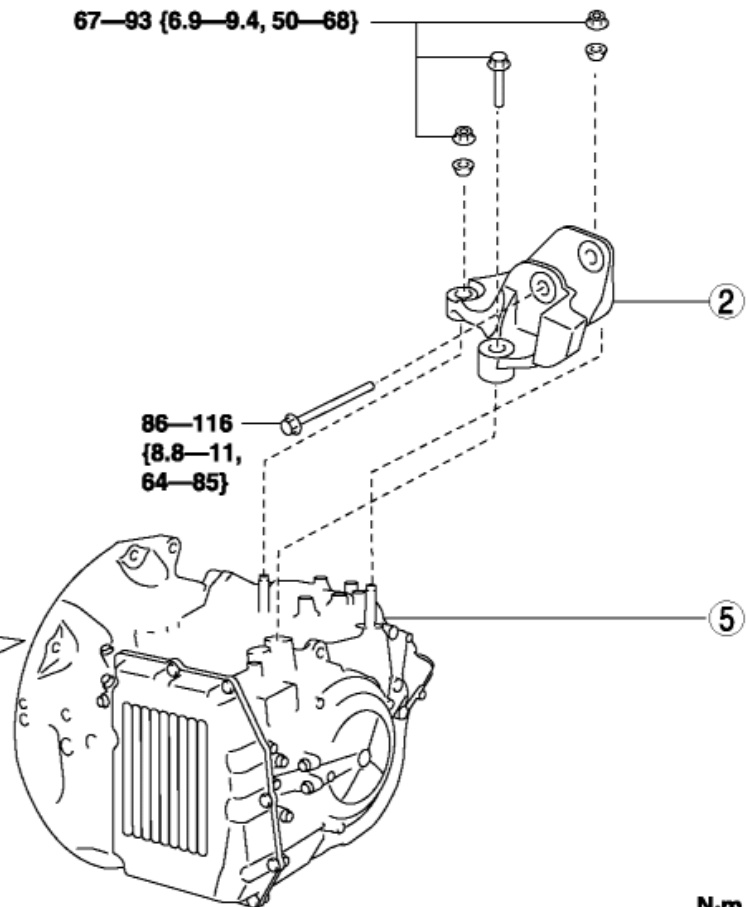
WARNING:

- CAUTION:**

34. Install in the reverse order of removal.

Service item	Test item			
	Line pressure test	Stall test	Time lag test	Road test
Transaxle replacement	X			
Transaxle overhaul	X	X	X	X
Torque converter replacement	X	X		
Control valve body component replacement	X			X

Test to be performed after the service work

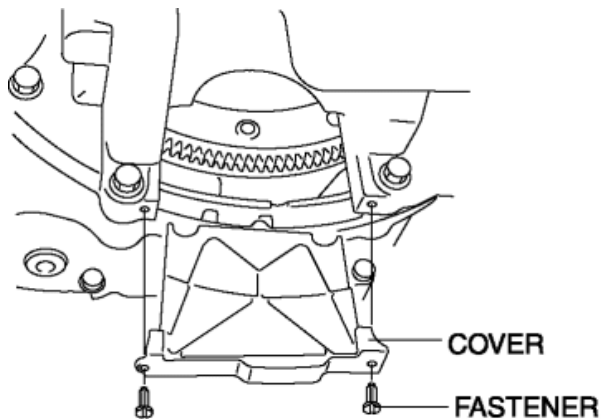


N·m {kgf·m, ft·lbf}

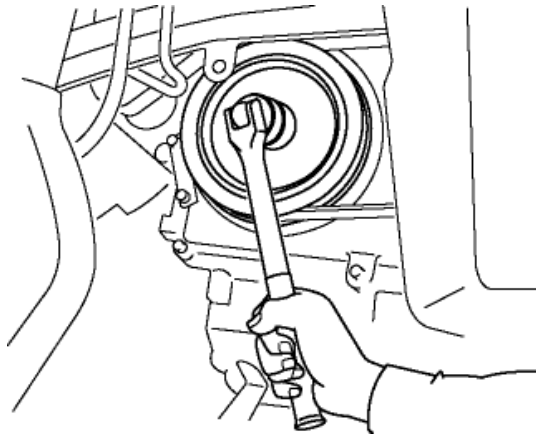
1	Torque converter installation nuts (See Torque Converter Installation Nuts Removal Note.) (See Torque Converter Installation Nuts Installation Note.)
2	No.4 engine mount bracket (See No.4 Engine Mount Bracket Installation Note.)
3	Transaxle mounting bolt (upper side) (See Transaxle Removal Note.) (See Transaxle Installation Note.)
4	Transaxle mounting bolt (lower side) (See Transaxle Removal Note.) (See Transaxle Installation Note.)
5	Transaxle (See Transaxle Removal Note.) (See Transaxle Installation Note.)

Torque Converter Installation Nuts Removal Note

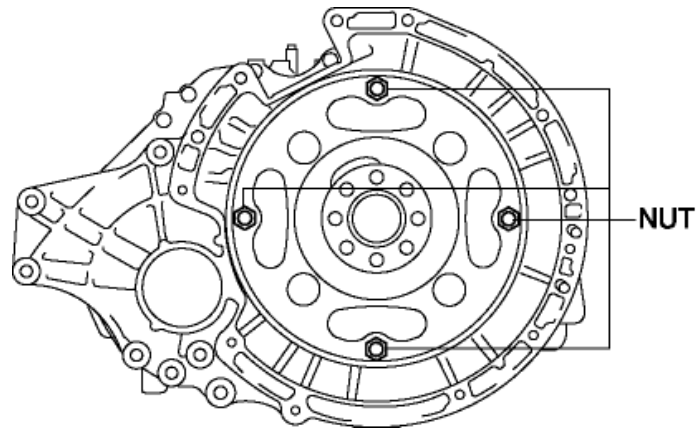
1. Remove the cover as shown in the figure.



2. Hold the crankshaft pulley to prevent drive plate from rotating.

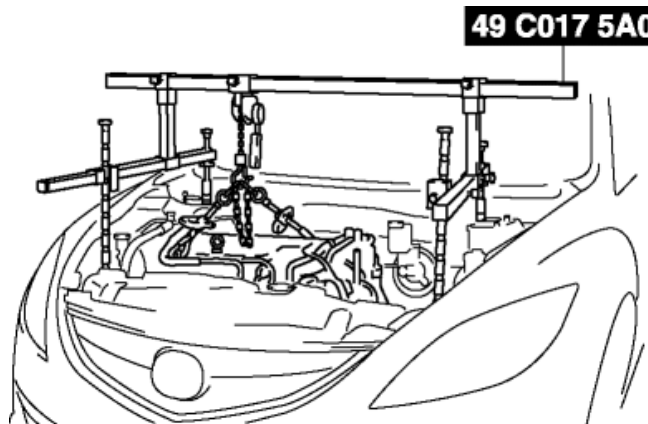


3. Remove the torque converter installation nuts.

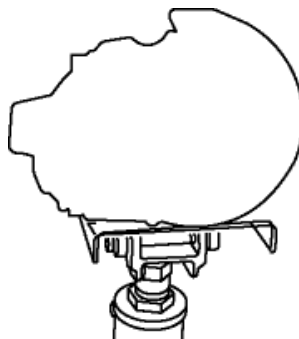


Transaxle Removal Note

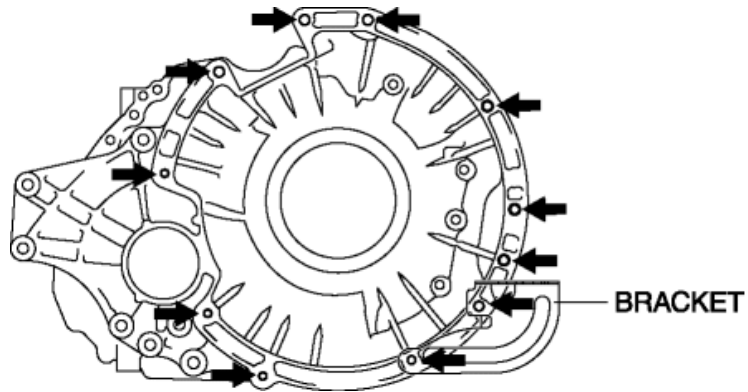
1. Adjust the **SST** to tilt the engine to the transaxle side.



2. Support the transaxle on a jack.



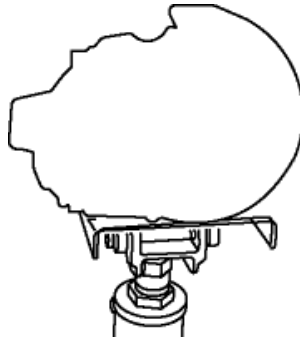
3. Remove the transaxle mounting bolts and bracket.



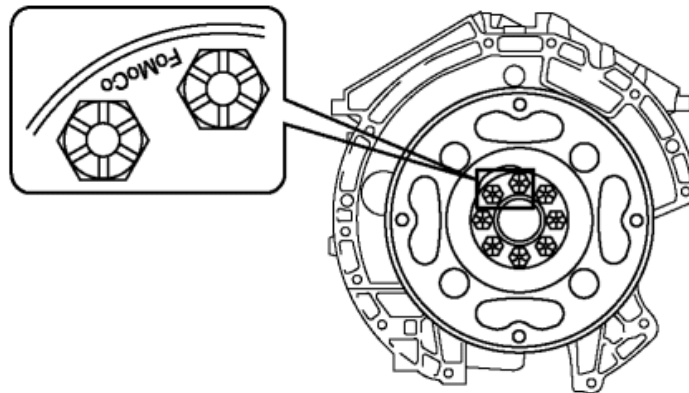
4. Remove the transaxle.

Transaxle Installation Note

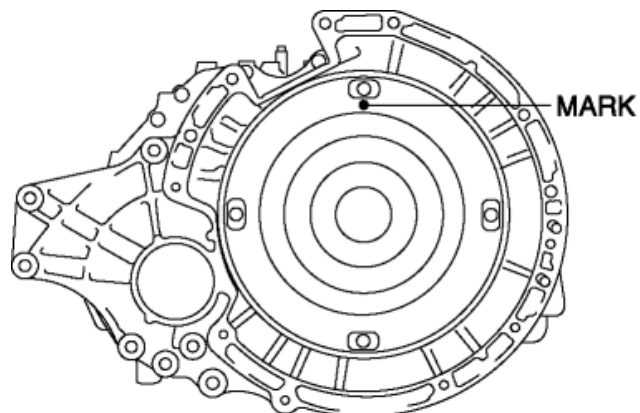
1. Set the transaxle on a jack and lift it.



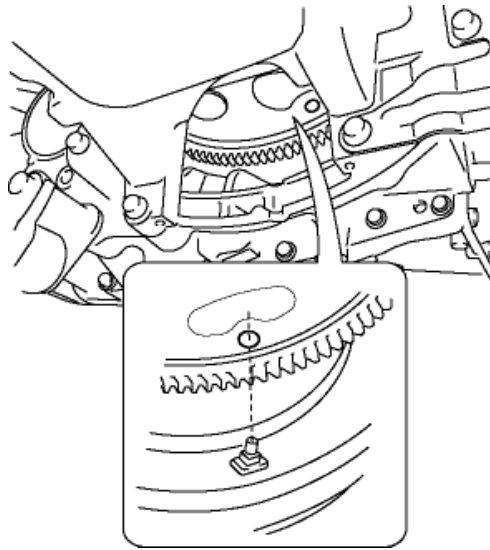
2. Rotate the drive plate so that the logo mark faces upward.



3. Rotate the torque converter so that the mark faces upward.



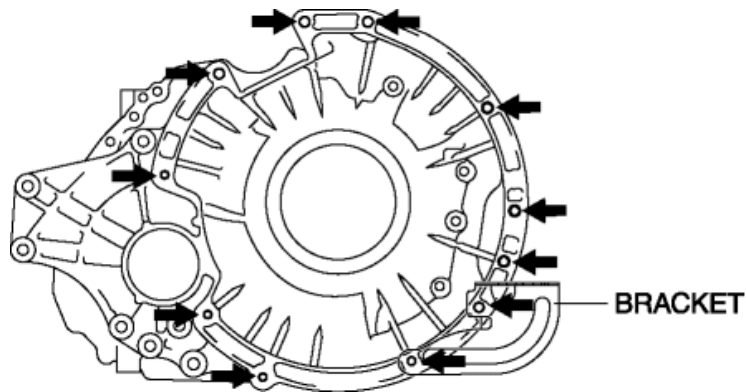
4. Verify that the torque converter stud bolts are inserted into the drive plate bolt holes from the service hole.



CAUTION:

- Verify that the torque converter stud bolts are inserted into the drive plate bolt holes, and install the transaxle installation bolts. Otherwise, the drive plate could be damaged.

5. Install the transaxle mounting bolts and bracket.

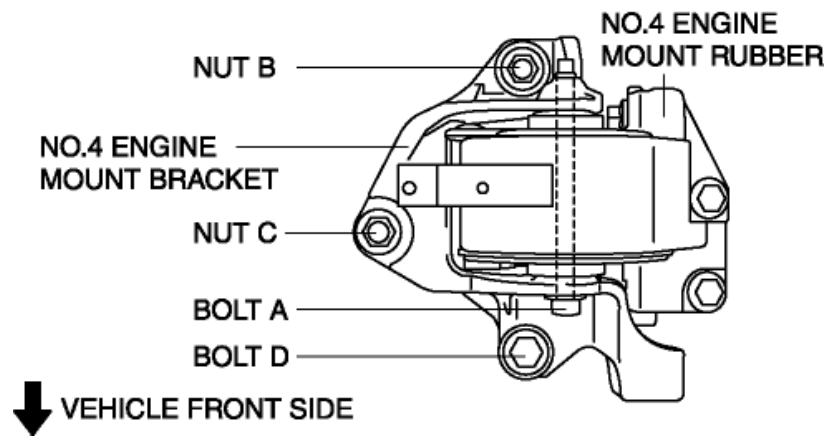


Tightening torque

- 38—52 N·m {3.9—5.3 kgf·m, 29—38 ft·lbf}

No.4 Engine Mount Bracket Installation Note

1. Install the No.4 engine mount bracket to the transaxle.
2. Temporarily tighten bolt A.



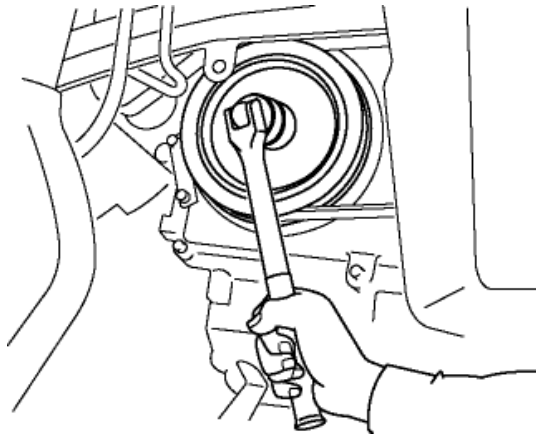
3. Temporarily tighten nuts B, C and bolt D.
4. Tighten nuts and bolt in the order of C→B→D.
5. Tighten bolt A.

Tightening torque

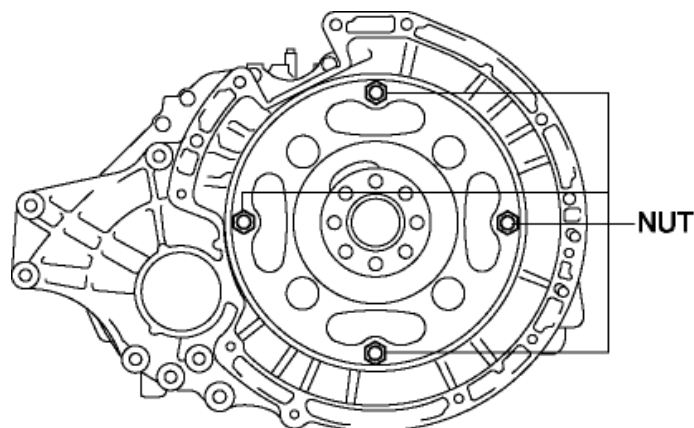
- Bolt A: 86—116 N·m {8.8—11 kgf·m, 64—85 ft·lbf}
- Nut B, C, Bolt D: 67—93 N·m {6.9—9.4 kgf·m, 50—68 ft·lbf}

Torque Converter Installation Nuts Installation Note

1. Hold the crankshaft pulley to prevent drive plate from rotating.



2. Tighten the torque converter installation nuts.



CAUTION:

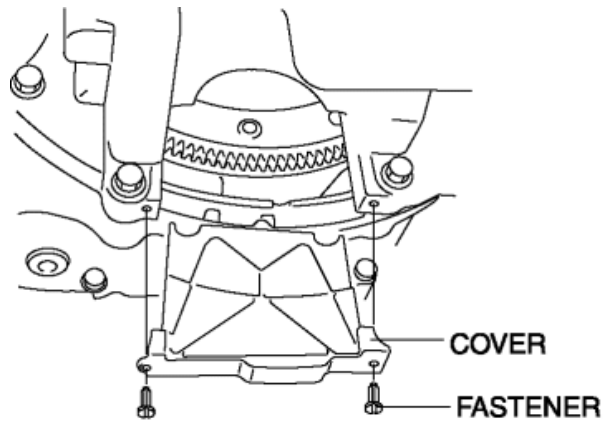
- Loosely and equally tighten the torque converter nuts, then further tighten them to the specified

tightening torque.

Tightening torque

- 41—54 N·m {4.2—5.5 kgf·m, 31—39 ft·lbf}

3. Install the cover as shown in the figure.



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