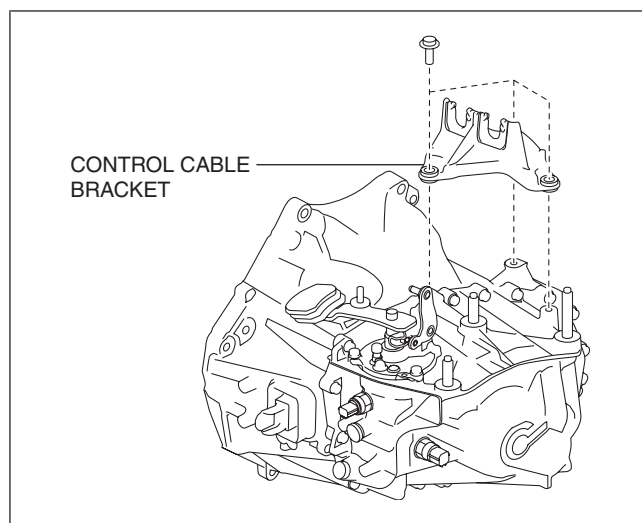


MANUAL TRANSAXLE REMOVAL/INSTALLATION [C66M-R]

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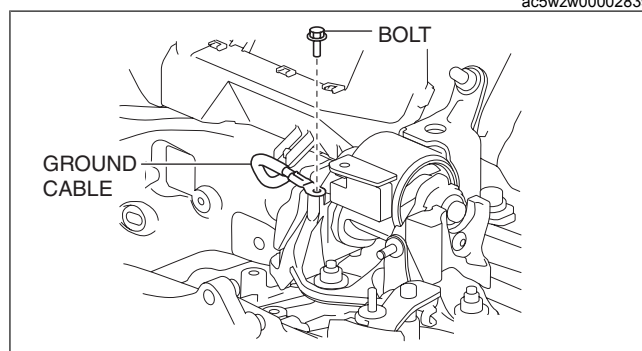
Removal

1. Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].)
2. Remove the plug hole plate. (See PLUG HOLE PLATE REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
3. Remove the front under cover No.2. (See FRONT UNDER COVER No.2 REMOVAL/INSTALLATION.)
4. Remove the front under cover No.1. (See FRONT UNDER COVER No.1 REMOVAL/INSTALLATION.)
5. Remove the splash shield. (See SPLASH SHIELD REMOVAL/INSTALLATION.)
6. Drain the manual transaxle oil. (See MANUAL TRANSAXLE OIL REPLACEMENT [C66M-R, C66MX-R].)
7. Disconnect and/or remove the following parts in the engine compartment.
 - (1) Remove the air cleaner component (air cleaner, air hose). (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
 - (2) Remove the battery component (battery, battery tray and PCM component). (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
 - (3) Disconnect the control cable from manual transaxle. (See MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [C66M-R, C66MX-R].)
 - (4) Remove the control cable bracket from manual transaxle.



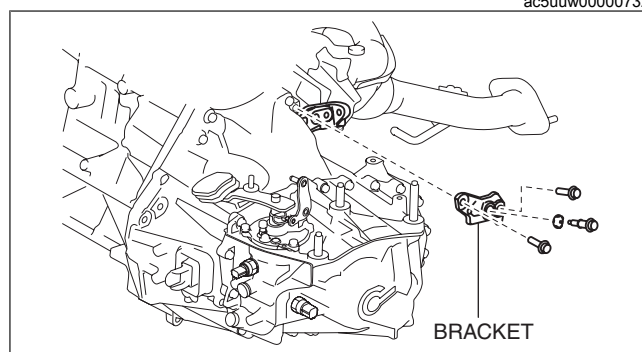
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- (5) Remove the bolt shown in the figure, and set the ground cable aside.



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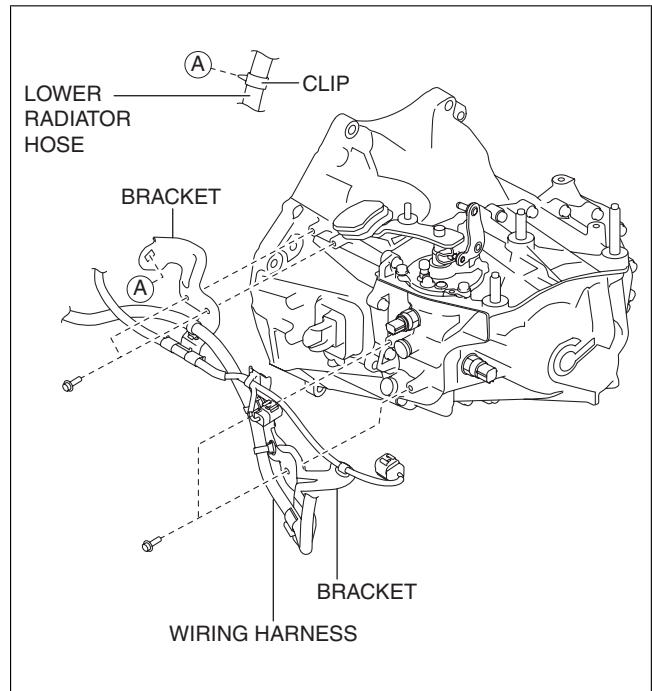
- (6) Remove the bracket from the manual transaxle and the exhaust manifold.
- (7) Disconnect the neutral switch connector from manual transaxle. (See NEUTRAL SWITCH REMOVAL/INSTALLATION [C66M-R, C66MX-R].)
- (8) Disconnect the back-up light switch connector from manual transaxle. (See BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION [C66M-R, C66MX-R].)



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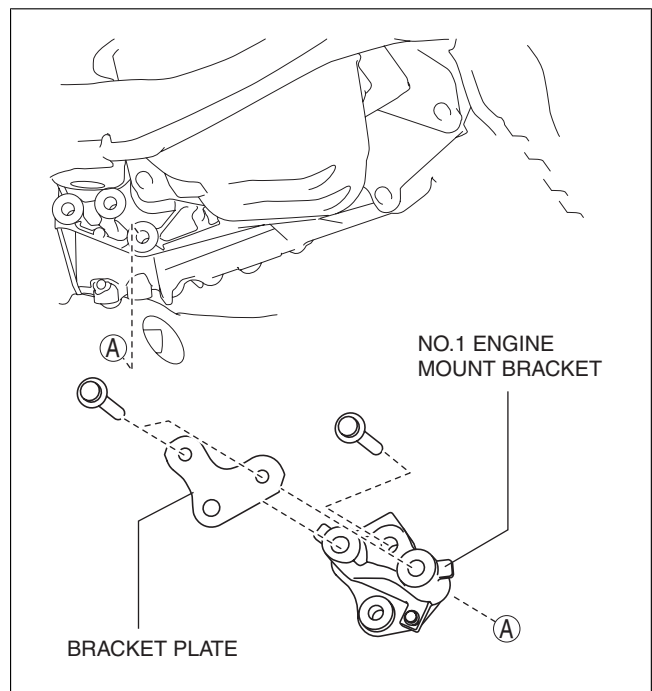
- (9) Disconnect the lower radiator hose clip and the brackets from the manual transaxle, and set the wiring harness aside.
8. Disconnect and/or remove the following parts related to the suspension and axle.

- (1) Remove the front tires. (See GENERAL PROCEDURES (FRONT AND REAR AXLES).)
- (2) Disconnect the clip securing the brake hose from the shock absorber. (See BRAKE HOSE (FRONT) REMOVAL/INSTALLATION.)
- (3) Disconnect the ABS wheel-speed sensors from the steering knuckles. (See FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION.)
- (4) Disconnect the tie-rod end ball joints from the steering knuckles. (See FRONT CROSSMEMBER REMOVAL/INSTALLATION.)
- (5) Disconnect the stabilizer control links from the stabilizer. (See FRONT STABILIZER REMOVAL/INSTALLATION.)
- (6) Disconnect the front lower arms from the steering knuckles. (See FRONT CROSSMEMBER REMOVAL/INSTALLATION.)



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- (7) Disconnect the drive shaft (LH) from the manual transaxle. (See FRONT DRIVE SHAFT REMOVAL/INSTALLATION.)
- (8) Disconnect the drive shaft (RH) from the manual transaxle. (See FRONT DRIVE SHAFT REMOVAL/INSTALLATION.)
9. Disconnect and/or remove the following parts from the underside of the vehicle.
- (1) Remove the clutch release cylinder with the clutch pipe still connected and set it out of the way. (See CLUTCH RELEASE CYLINDER REMOVAL/INSTALLATION [C66M-R, C66MX-R].)
- (2) Remove the starter. (See STARTER REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
- (3) Remove the front crossmember component and No.1 engine mount rubber as a single unit. (See FRONT CROSSMEMBER REMOVAL/INSTALLATION.)
- (4) Remove the bracket plate and No.1 engine mount bracket from the manual transaxle.



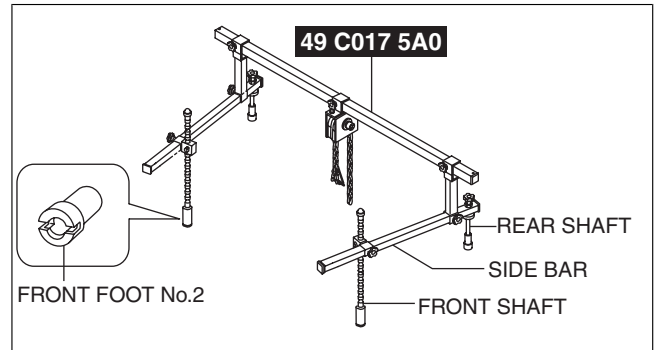
ac5uuw00000735

10. Install the **SST** using the following procedure.

Caution

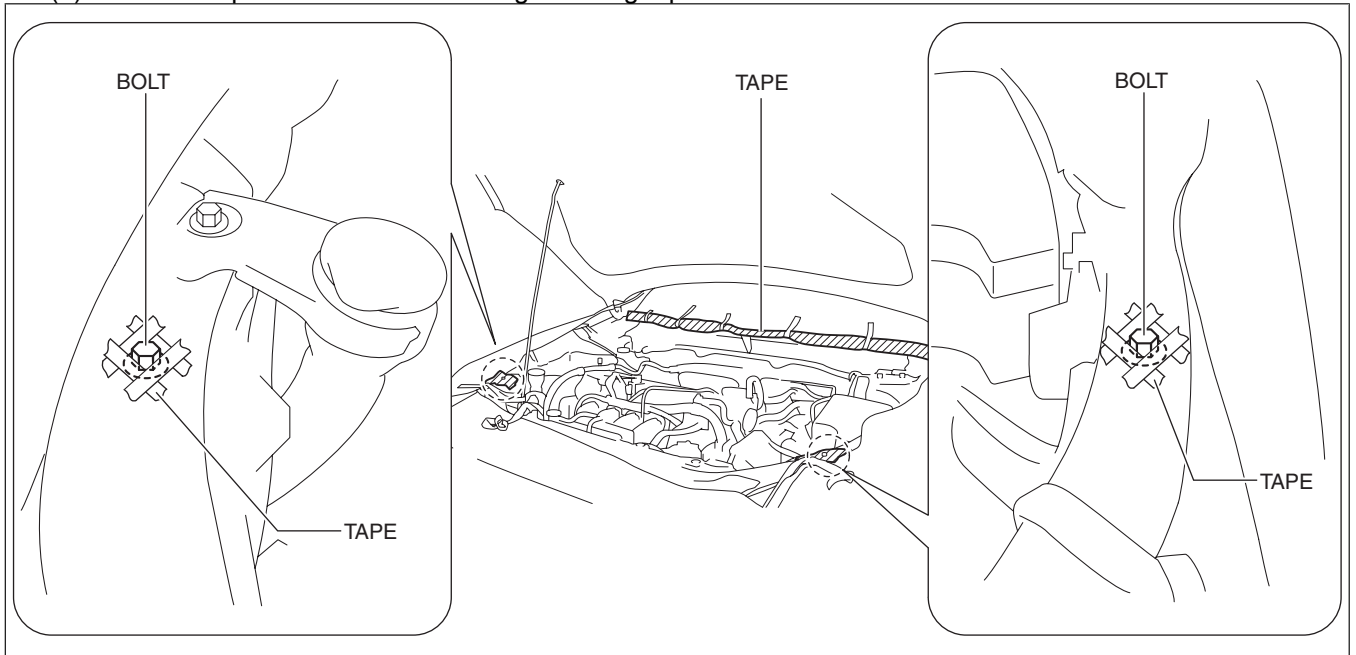
- Refer to the SST instruction manual for the basic handling procedure.

- (1) Install one front foot No.2 to each of the left and right front shafts of the **SST**.
- (2) Remove the windshield wiper arm and blade. (See WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
- (3) Remove the cowl grille. (See COWL GRILLE REMOVAL/INSTALLATION.)
- (4) Remove the cowl panel. (See COWL PANEL REMOVAL/INSTALLATION.)



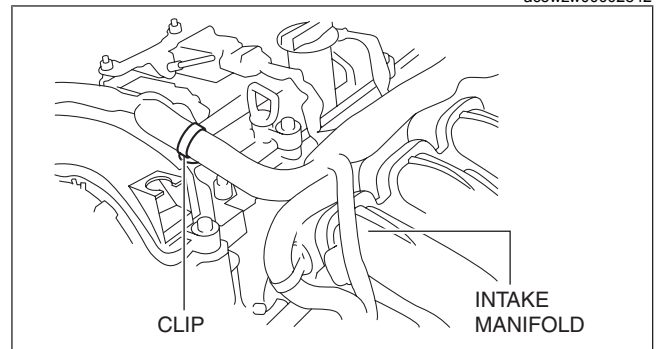
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- (5) Protect the positions shown in the figure using tape.



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- (6) To enable to install the **SST**, disconnect the clip shown in the figure and set the wiring harness aside.



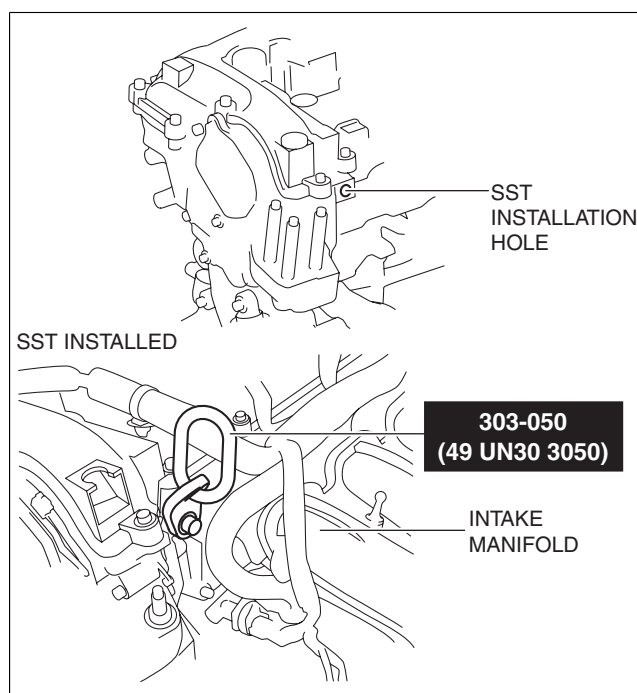
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- (7) Install the **SST** using part number 99794 1025 or an M10 × 1.25, length 25 mm {0.98 in} bolt as shown in the figure.

Engine front side

Tightening torque

38—51 N·m {3.9—5.2 kgf·m, 29—37 ft·lbf}

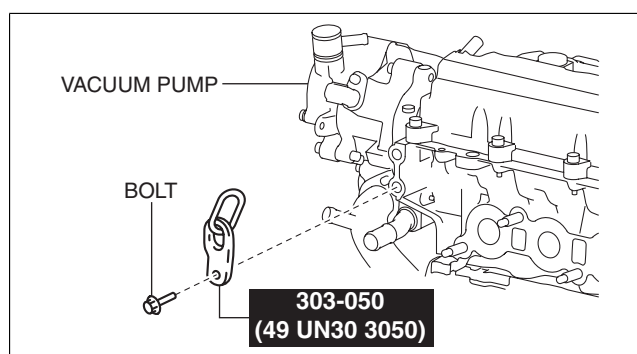


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Engine rear side

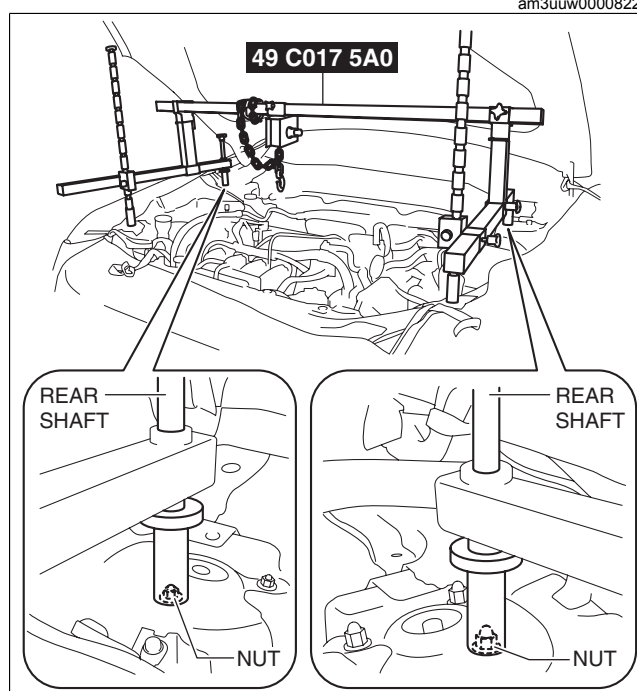
Tightening torque

38—51 N·m {3.9—5.2 kgf·m, 29—37 ft·lbf}



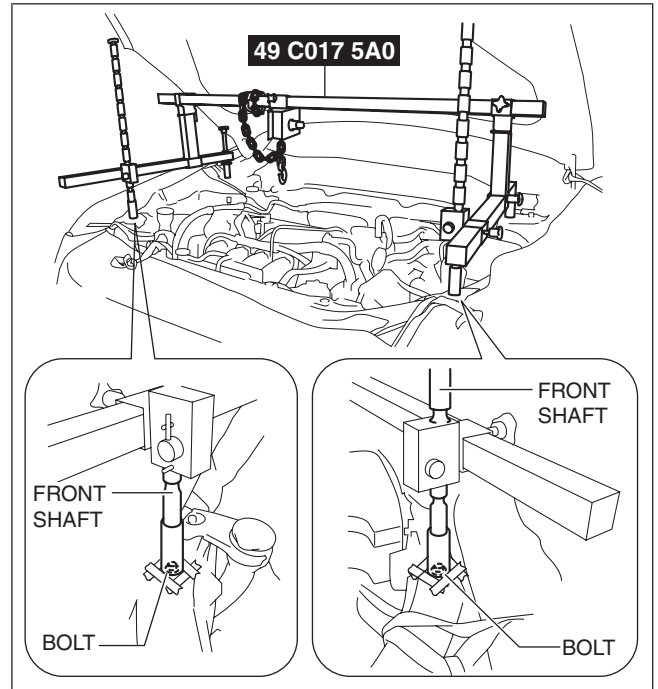
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- (8) As shown in the figure, set the rear shafts of the **SST** to the left and right shock absorber nuts.

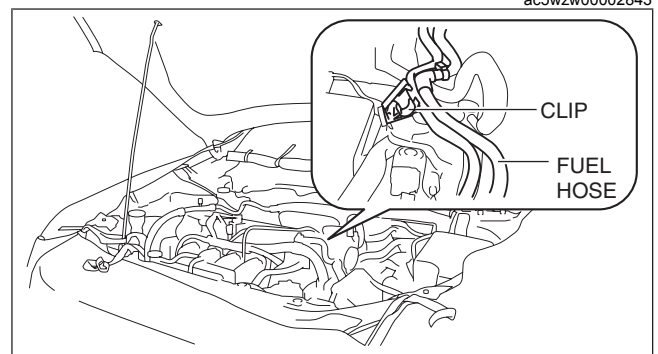


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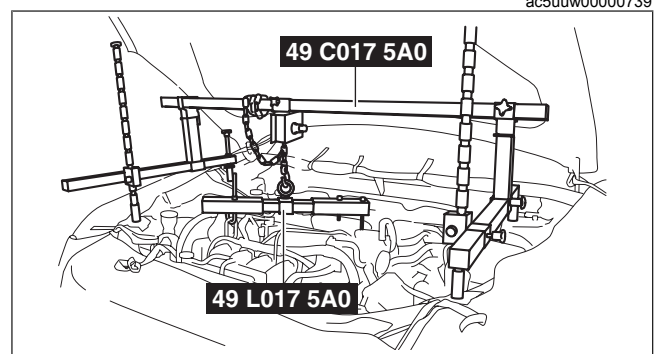
- (9) As shown in the figure, set the front shafts of the **SST** to the left and right bolts.



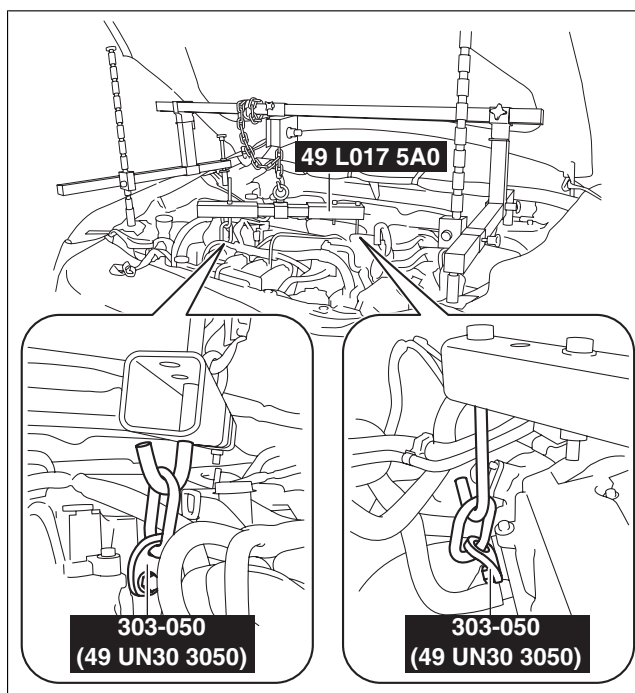
- (10) When assembling the **SST (49 L017 5A0)**, disconnect the fuel hose from the clip shown in the figure to prevent interference between the fuel hose and **SST**.



- (11) Install the **SST (49 L017 5A0)** to the **SST (49 C017 5A0)** as shown in the figure.

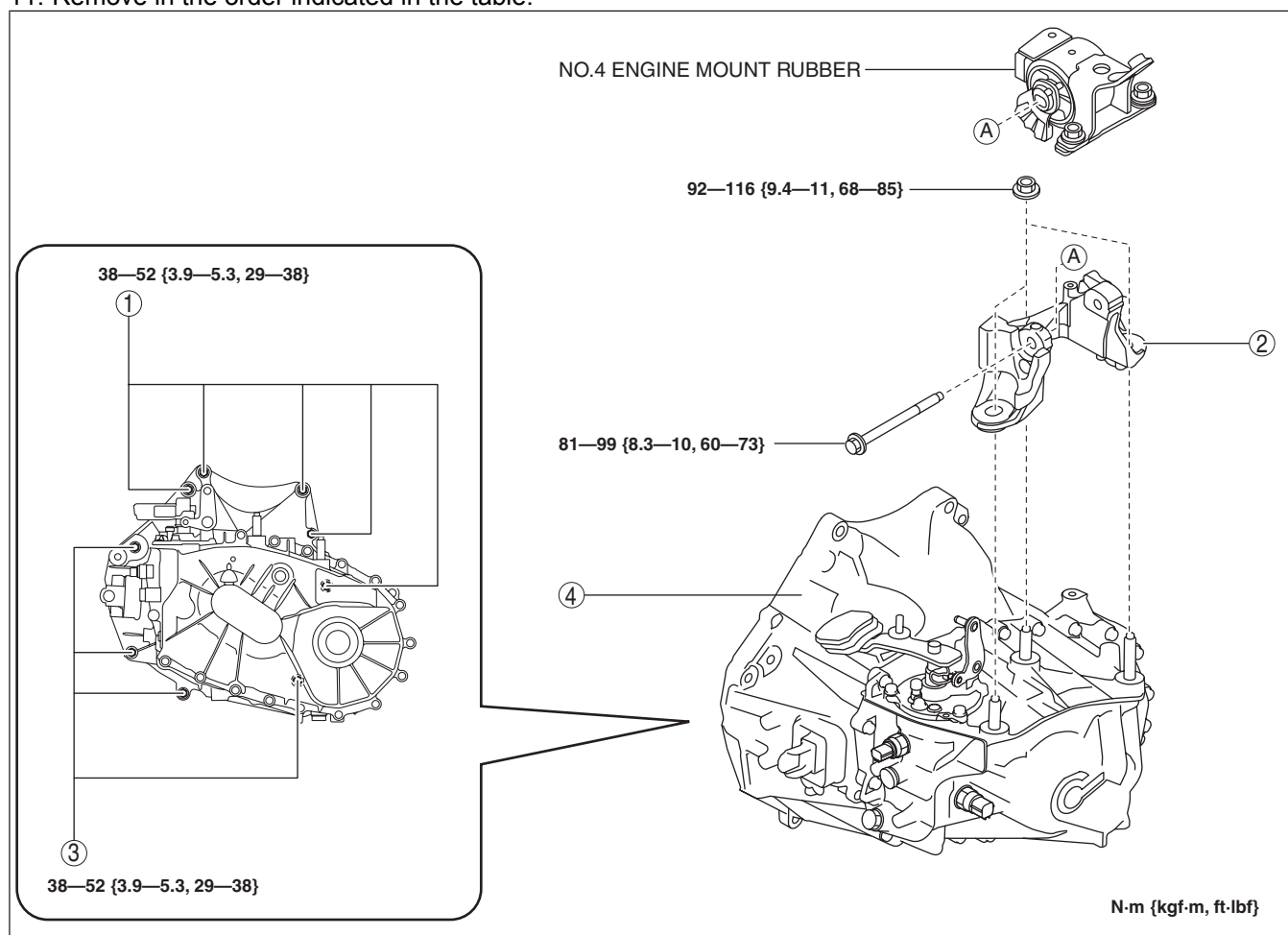


- (12) Install the **SST (49 L017 5A0)** to the **SST (49 UN30 3050)** with the hook of the **SST (49 L017 5A0)** facing outward.
- (13) Adjust the height of the left and right side bars so that they are leveled, then tighten each part of the **SST**.
- (14) Apply tension to the chain to secure the engine.



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11. Remove in the order indicated in the table.



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1	Transaxle mounting bolt (upper side)
2	No.4 engine mount bracket (See No.4 Engine mount bracket removal note.)
3	Transaxle mounting bolt (lower side) (See Transaxle mounting bolt removal note.)

No.4 Engine mount bracket removal note

Caution

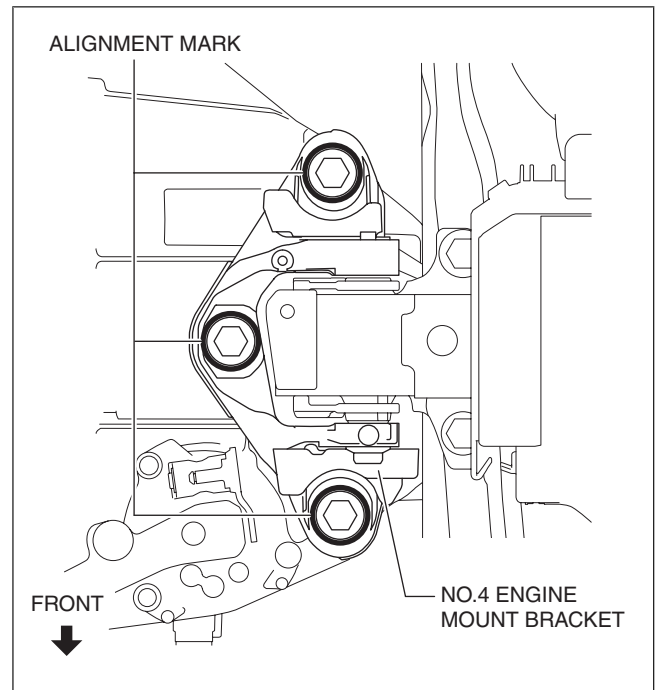
- A slot has been adopted for the No.4 engine mount bracket installation hole. If the No.4 engine mount bracket is deviated from the original position when installing the No.4 engine mount, engine noise or vibration could increase. When removing the No.4 engine mount, place alignment marks on the No.4 engine mount bracket so that they can be assembled to the same positions as before removal.

1. Place alignment marks on the locations shown in the figure so that they can be assembled to the same positions as before removal.

Note

- Paint so that the outline of the nut is framed on the bracket side.

2. Remove the No.4 engine mount bracket.



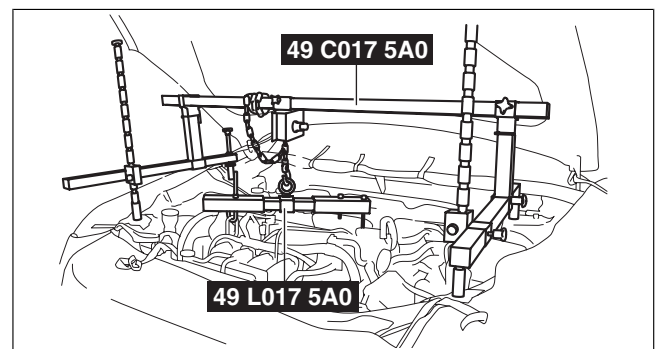
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Transaxle mounting bolt removal note

Warning

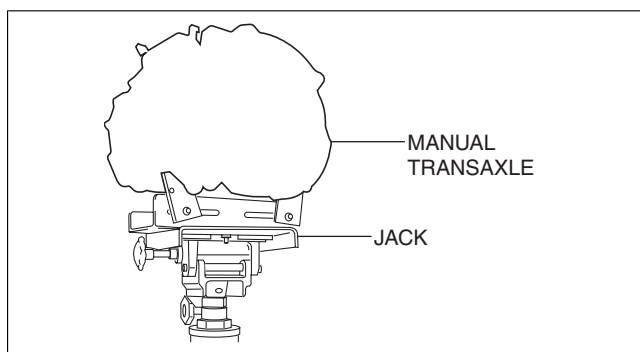
- Remove the manual transaxle carefully, holding it steady. If the manual transaxle falls it could be damaged or cause injury.

1. Adjust the **SST** and lean the engine toward the manual transaxle.



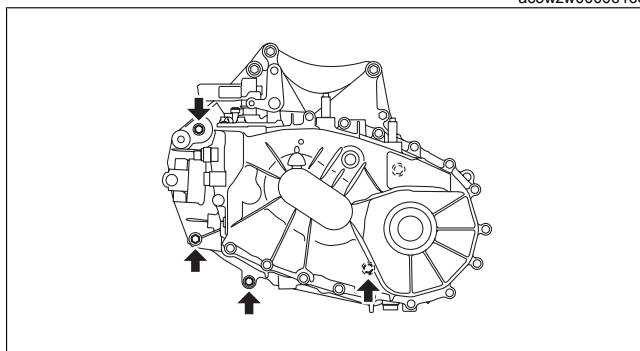
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2. Support the manual transaxle on a jack.



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3. Remove the transaxle mounting bolts (lower side).
4. Remove the manual transaxle.



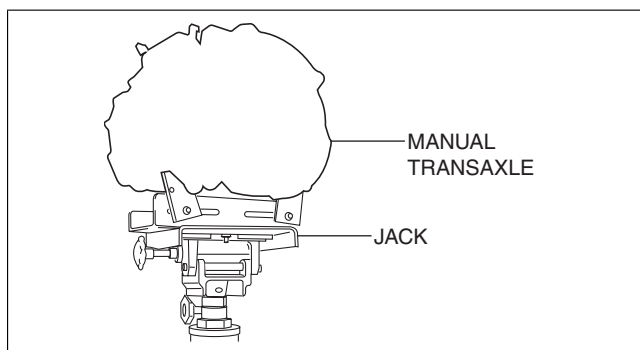
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Installation

Warning

- Install the manual transaxle carefully, holding it steady. If the manual transaxle falls it could be damaged or cause injury.

1. Set the manual transaxle on a jack and lift into place.

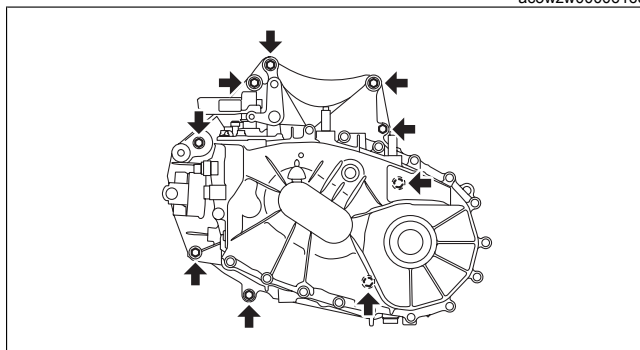


ac5wzw00006165

2. Install the manual transaxle to the engine, and tighten the transaxle mounting bolts.

Tightening torque

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

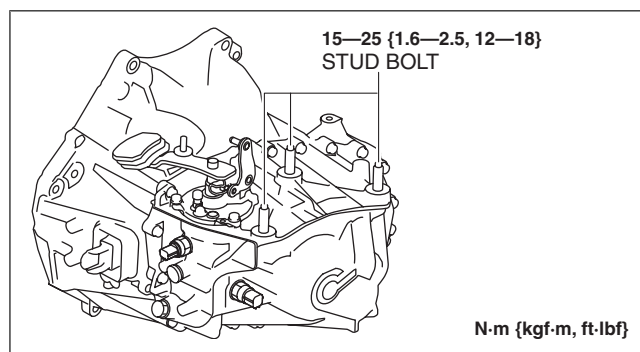


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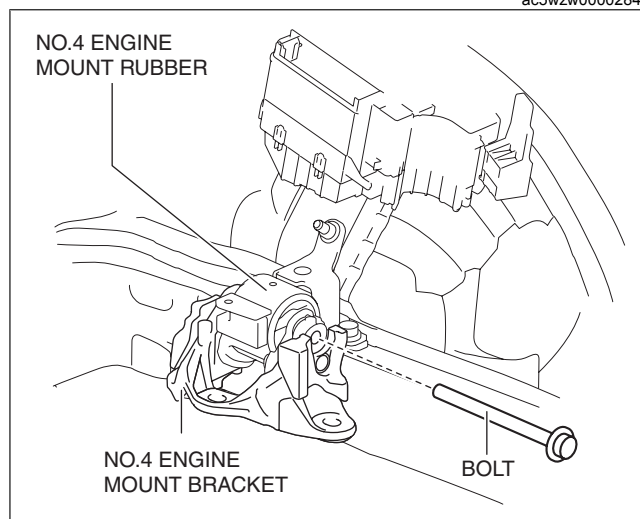
3. Tighten the stud bolts for the manual transaxle.

Note

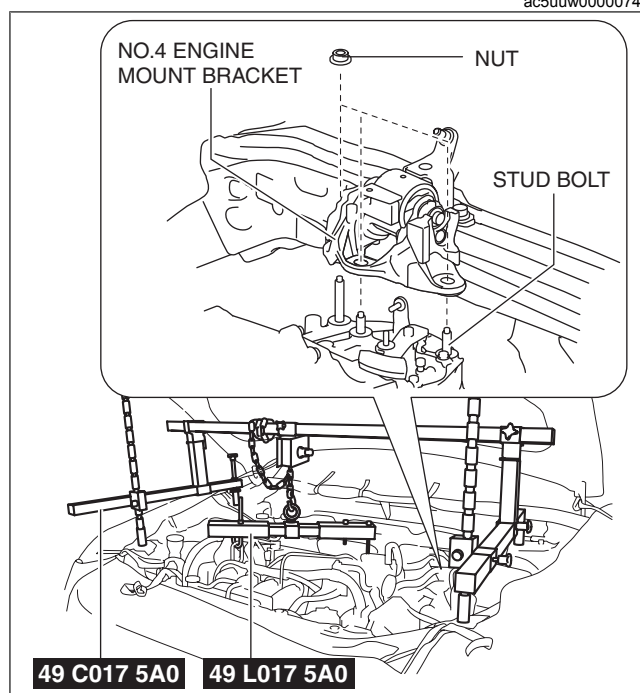
- If the No.4 engine mount bracket nut is loosened, tighten the stud bolts for the manual transaxle because they may be loosened.



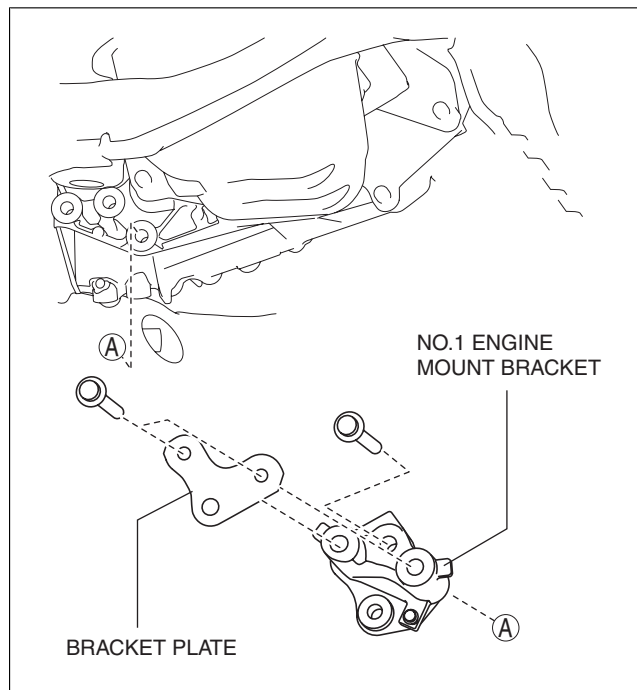
4. Install the No.4 engine mount bracket to No.4 engine mount rubber, and temporarily tighten the installation bolt.



5. Pull up the manual transaxle using the **SSTs**, pass the manual transaxle stud bolts through the No.4 engine mount bracket, and temporarily tighten the No.4 engine mount installation nuts.

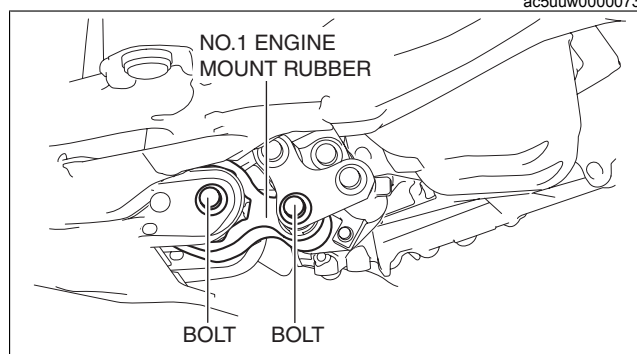


6. Install the No.1 engine mount bracket and bracket plate to the manual transaxle, and temporarily tighten the installation bolts.
7. Install the front crossmember component and No.1 engine mount rubber as a single unit. (See FRONT CROSSMEMBER REMOVAL/INSTALLATION.)



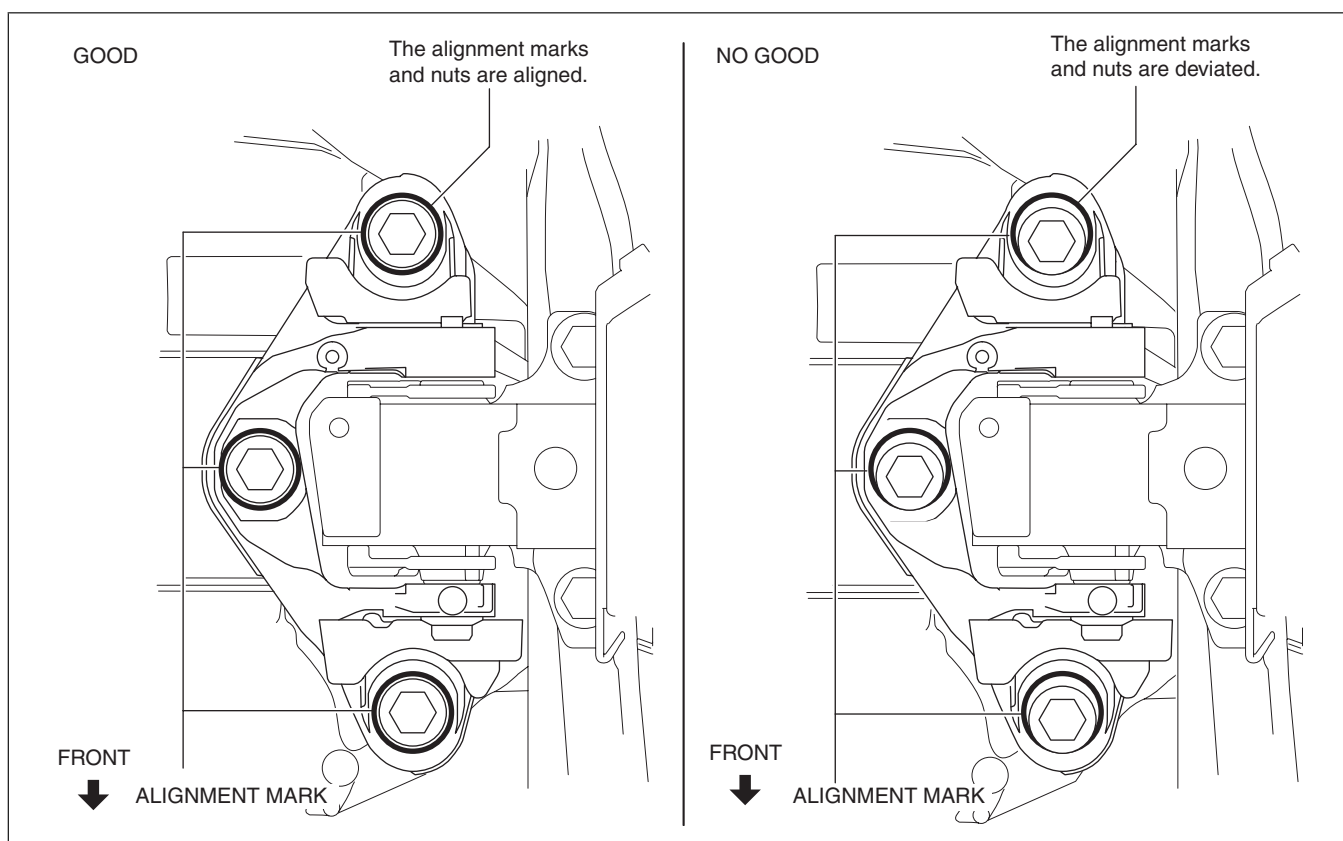
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8. Temporarily tighten the No.1 engine mount rubber installation bolts.



ac5uuw00000749

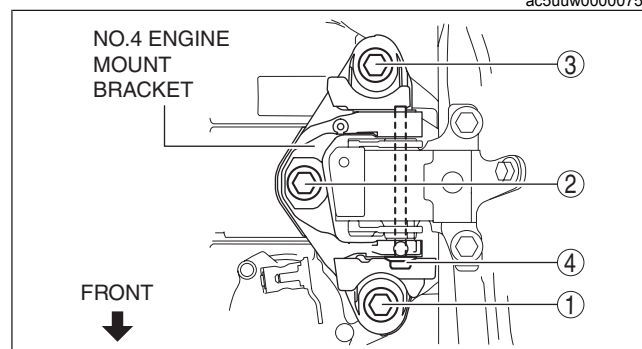
9. Align the alignment marks on the No.4 engine mount bracket and nuts, and temporarily tighten the nuts shown in the figure.



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10. Tighten the No.4 engine mount bracket installation nuts and bolt in the order shown in the figure.

No.	Tightening torque
1, 2, 3	92—116 N·m {9.4—11 kgf·m, 68—85 ft·lbf}
4	81—99 N·m {8.3—10 kgf·m, 60—73 ft·lbf}



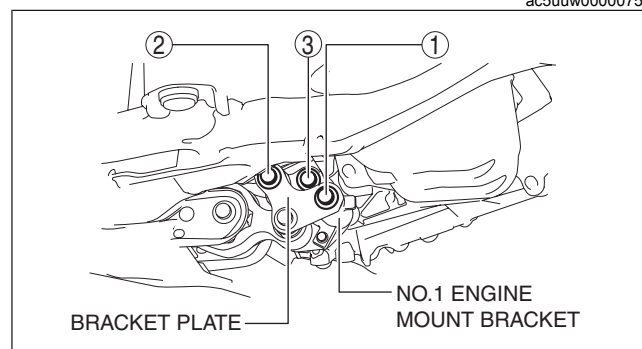
ac5uuw00000751

11. Tighten the No.1 engine mount bracket and bracket plate installation bolts in the order shown in the figure.

Tightening torque

84—98 N·m {8.6—9.9 kgf·m, 62—72 ft·lbf}

12. Remove the **SST (49 C017 5A0)**.



ac5uuw00000752

13. Tighten the No.1 engine mount rubber installation bolts.

14. Connect and/or Install the following parts to the underside of the vehicle.

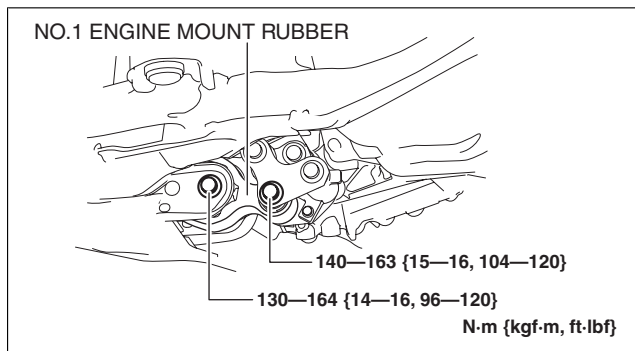
- (1) Install the starter. (See STARTER REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
- (2) Install the clutch release cylinder to the manual transaxle. (See CLUTCH RELEASE CYLINDER REMOVAL/INSTALLATION [C66M-R, C66MX-R].)

15. Connect and/or Install the following parts related to the suspension and axle.

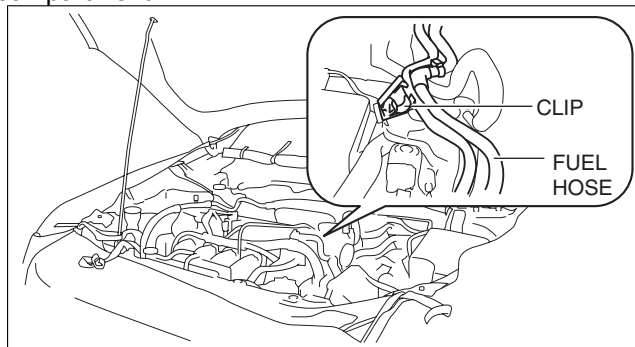
- (1) Connect the drive shaft (RH) to the manual transaxle. (See FRONT DRIVE SHAFT REMOVAL/INSTALLATION.)
- (2) Connect the drive shaft (LH) to the manual transaxle. (See FRONT DRIVE SHAFT REMOVAL/INSTALLATION.)
- (3) Connect the front lower arms to the steering knuckles. (See FRONT CROSSMEMBER REMOVAL/INSTALLATION.)
- (4) Connect the stabilizer control links to the stabilizer. (See FRONT STABILIZER REMOVAL/INSTALLATION.)
- (5) Connect the tie-rod end ball joints to the steering knuckles. (See FRONT CROSSMEMBER REMOVAL/INSTALLATION.)
- (6) Connect the ABS wheel-speed sensors to the steering knuckles. (See FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION.)
- (7) Connect the clip securing the brake hose to the shock absorber. (See BRAKE HOSE (FRONT) REMOVAL/INSTALLATION.)
- (8) Install the front tires. (See GENERAL PROCEDURES (FRONT AND REAR AXLES).)

16. Connect and/or install the following parts in the engine compartment.

- (1) Install the fuel hose to the clip shown in the figure.

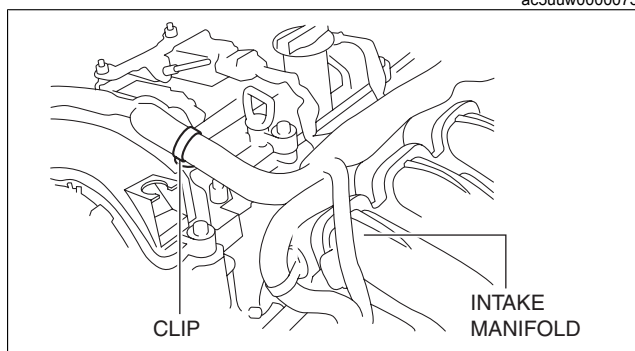


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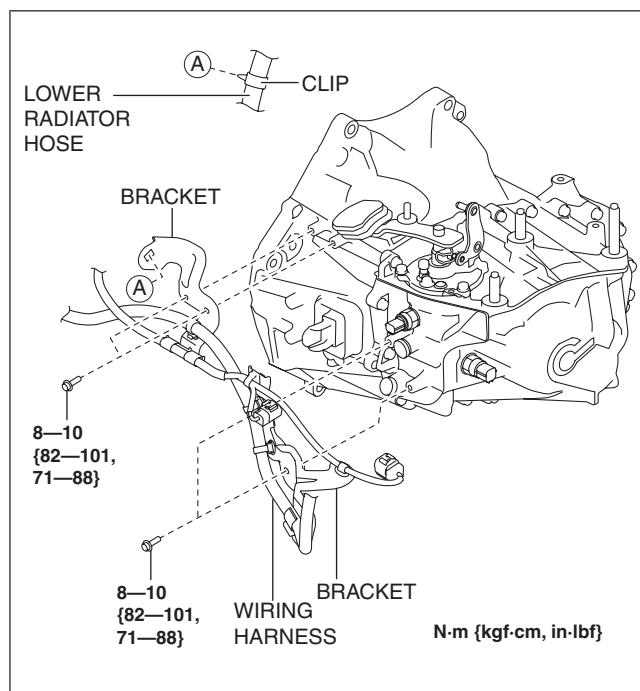
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- (2) Connect the clip shown in the figure.
- (3) Install the cowl panel. (See COWL PANEL REMOVAL/INSTALLATION.)
- (4) Install the cowl grille. (See COWL GRILLE REMOVAL/INSTALLATION.)
- (5) Install the windshield wiper arm and blade. (See WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)



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- (6) Install the lower radiator hose clip and bracket to the manual transaxle.
- (7) Connect the back-up light switch connector. (See BACK-UP LIGHT SWITCH REMOVAL/ INSTALLATION [C66M-R, C66MX-R].)
- (8) Connect the neutral switch connector. (See NEUTRAL SWITCH REMOVAL/ INSTALLATION [C66M-R, C66MX-R].)



ac5wzw00002846

- (9) Install the bracket to the manual transaxle and the exhaust manifold using the following procedure:
 - 1) Tighten the bolt A.

Tightening torque

19—25 N·m {2.0—2.5 kgf·m, 15—18 ft·lbf}

- 2) Temporarily tighten the bolt B and C.
- 3) Tighten the bolt B.

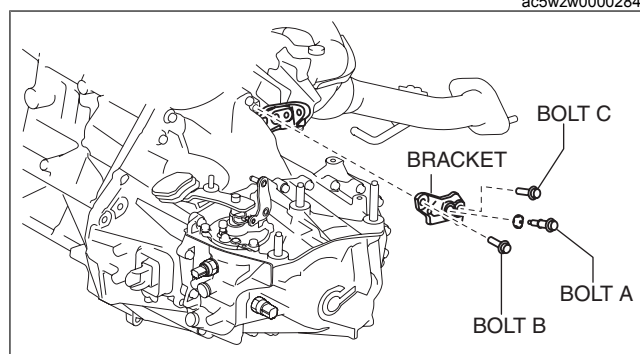
Tightening torque

38—51 N·m {3.9—5.2 kgf·m, 29—37 ft·lbf}

- 4) Tighten the bolt C.

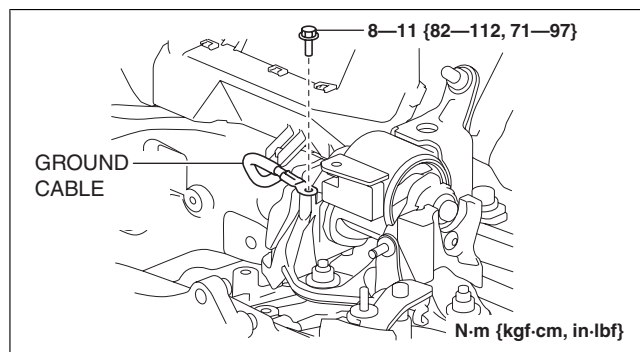
Tightening torque

38—51 N·m {3.9—5.2 kgf·m, 29—37 ft·lbf}



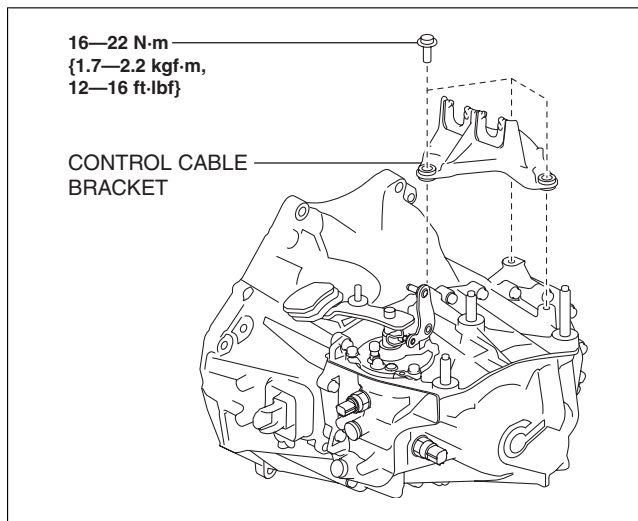
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- (10) Connect the ground cable to the No.4 engine mount bracket.



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- (11) Install the control cable bracket to the manual transaxle.
 - (12) Connect the control cable to the manual transaxle. (See MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [C66M-R, C66MX-R].)
 - (13) Install the battery component (battery, battery tray and PCM component). (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
 - (14) Install the air cleaner component (air cleaner, air hose). (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
17. Install the splash shield. (See SPLASH SHIELD REMOVAL/INSTALLATION.)
 18. Install the front under cover No.1. (See FRONT UNDER COVER No.1 REMOVAL/INSTALLATION.)
 19. Add the specified amount of specified manual transaxle oil. (See MANUAL TRANSAXLE OIL REPLACEMENT [C66M-R, C66MX-R].)
 20. Install the front under cover No.2. (See FRONT UNDER COVER No.2 REMOVAL/INSTALLATION.)
 21. Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].)
 22. Install the plug hole plate. (See PLUG HOLE PLATE REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
 23. If the manual transaxle is overhauled, perform the "INSPECTION AFTER MANUAL TRANSAXLE OVERHAUL". (See INSPECTION AFTER MANUAL TRANSAXLE OVERHAUL [C66M-R, C66MX-R].)



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