

Warning

- A hot engine can cause severe burns. Turn off the engine and wait until it is cool before servicing.
- Fuel vapor is hazardous. It can very easily ignite, causing serious injury and damage. Always keep sparks and flames away from fuel.
- Fuel line spills and leakage are dangerous. Fuel can ignite and cause serious injuries or death and damage. Fuel can also irritate skin and eyes. To prevent this, always complete the "Fuel Line Safety Procedure". (See BEFORE SERVICE PRECAUTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)

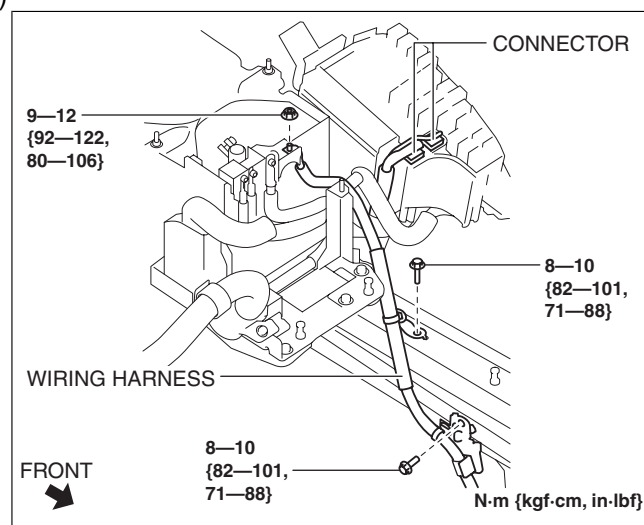
Caution

- 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.
- Applying excessive force (force of 100 N {10.2 kgf, 22.5 lbf} or more) to the electric variable valve timing motor/driver may cause a malfunction. When servicing, be careful not to apply excessive force to the electric variable valve timing motor/driver using other parts or tools.

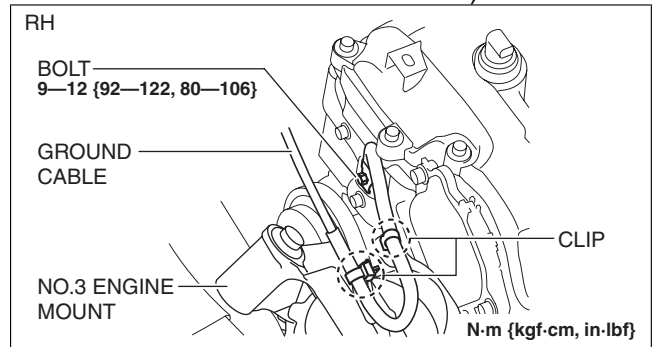
Note

- Perform the engine and transaxle component removal/installation from below the vehicle.

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 air cleaner, air hose and fresh air duct as a single unit. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
4. Remove the bolts, nut and connector shown in the figure, and set the wiring harness aside.
5. Remove the battery tray and PCM component. (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
6. Remove the front under cover No.1 and No.2. (See FRONT UNDER COVER No.1 REMOVAL/INSTALLATION.) (See FRONT UNDER COVER No.2 REMOVAL/INSTALLATION.)
7. Remove the splash shield. (See SPLASH SHIELD REMOVAL/INSTALLATION.)
8. Drain the engine coolant. (See ENGINE COOLANT REPLACEMENT [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
9. Drain the transaxle oil (MTX) or ATF (ATX). (See MANUAL TRANSAXLE OIL REPLACEMENT [C66M-R, C66MX-R].) (See AUTOMATIC TRANSAXLE FLUID (ATF) REPLACEMENT [FW6A-EL, FW6AX-EL].)
10. Remove the front wheels and tires. (See GENERAL PROCEDURES (SUSPENSION).)
11. Disconnect the selector cable. (ATX) (See AUTOMATIC TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION.)
12. Disconnect the control cable. (MTX) (See MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [C66M-R, C66MX-R].)
13. Remove the clutch release cylinder with the pipe still connected. (MTX) (See CLUTCH RELEASE CYLINDER REMOVAL/INSTALLATION [C66M-R, C66MX-R].)
14. Disconnect the brake vacuum hose. (See VACUUM HOSE REMOVAL/INSTALLATION.)
15. Disconnect the evaporative hose. (See PURGE SOLENOID VALVE REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
16. Disconnect the fuel hose. (See QUICK RELEASE CONNECTOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
17. Disconnect the lower radiator hose. (See RADIATOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
18. Disconnect the upper radiator hose. (See COOLING FAN MOTOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
19. Disconnect the heater hose. (See A/C UNIT REMOVAL/INSTALLATION.)

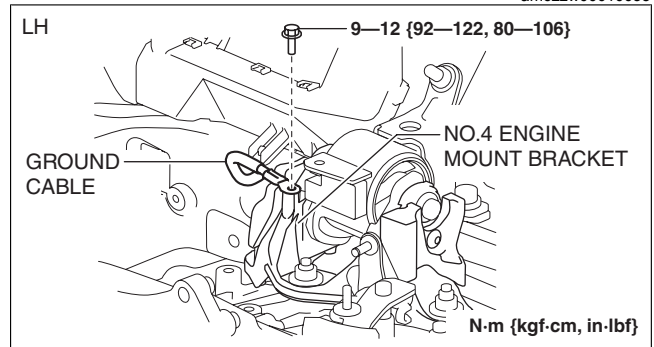


20. Remove the generator drive belt. (See DRIVE BELT REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
21. Remove the A/C compressor with the cooler hose still connected and secure it using wire or rope so that it is out of the way. (See A/C COMPRESSOR REMOVAL/INSTALLATION.)
22. Remove the propeller shaft. (4WD) (See PROPELLER SHAFT REMOVAL/INSTALLATION.)
23. Remove the TWC installation nuts (exhaust manifold side) and secure the TWC using wire or rope so that it is out of the way. (See EXHAUST SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
24. Disconnect the drive shaft (LH) from the transaxle side and set the drive shaft (LH) out of the way. (See FRONT DRIVE SHAFT REMOVAL/INSTALLATION.)
25. Disconnect the drive shaft (RH) from the transaxle side and set the drive shaft (RH) out of the way. (2WD) (See FRONT DRIVE SHAFT REMOVAL/INSTALLATION.)
26. Remove the drive shaft (RH). (4WD) (See FRONT DRIVE SHAFT REMOVAL/INSTALLATION.)
27. Remove the bolt and clips, and set the ground cable aside.



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28. Remove in the order indicated in the table.
29. Install in the reverse order of removal.
30. Refill the transaxle oil (MTX) or ATF (ATX). (See MANUAL TRANSAXLE OIL REPLACEMENT [C66M-R, C66MX-R].) (See AUTOMATIC TRANSAXLE FLUID (ATF) REPLACEMENT [FW6A-EL, FW6AX-EL].)
31. Refill the engine coolant. (See ENGINE COOLANT REPLACEMENT [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
32. Start the engine, and inspect and adjust the following:
 - Front wheel alignment (See FRONT WHEEL ALIGNMENT.)
 - Leakage of engine oil, engine coolant, ATF (ATX), transaxle oil (MTX), and fuel.
 - Runout and contact of pulley and belt.
 - Ignition timing, idle speed and idle mixture. (See ENGINE TUNE-UP [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
 - Engine-driven accessories operation.

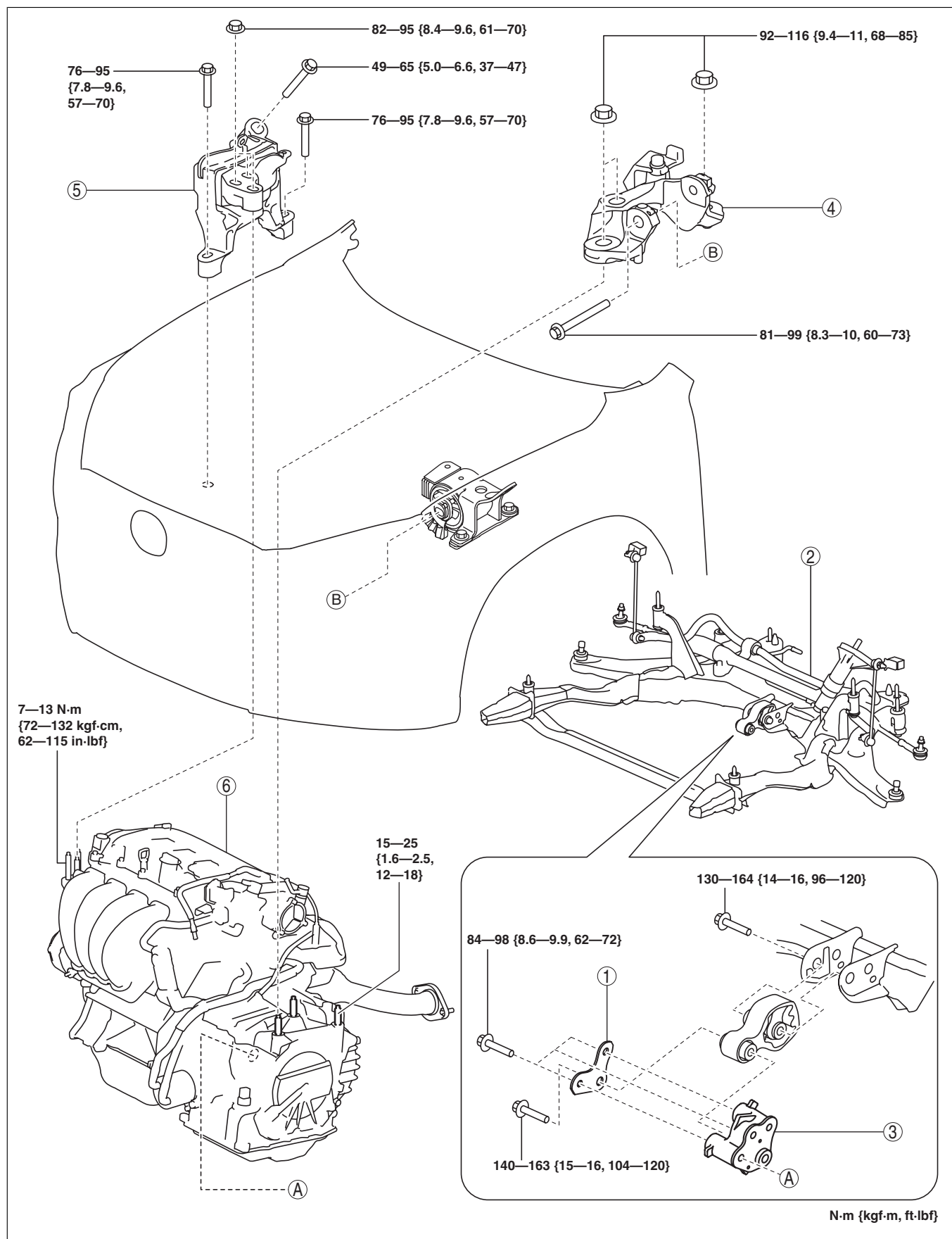


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Note

- If the engine is overhauled and assembled to the vehicle, perform a road test to verify that there is no abnormal vibration and noise.

2WD



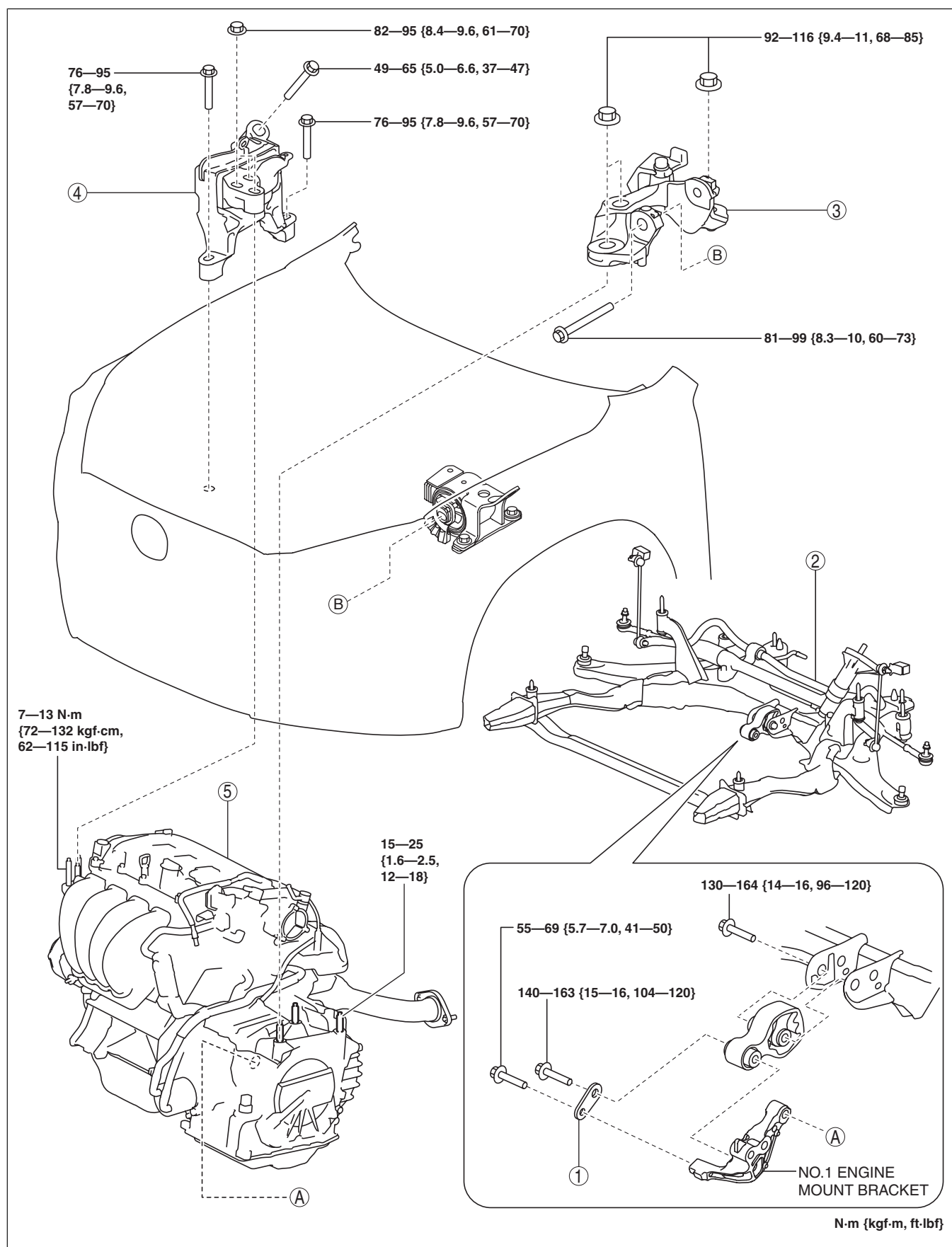
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- | | |
|---|--|
| 1 | Bracket plate
(See Engine Mount Installation Note.) |
|---|--|

2	No.1 engine mount rubber, front crossmember component (See No.1 Engine Mount Rubber, Front Crossmember Component Removal Note.) (See Engine Mount Installation Note.)
3	No.1 engine mount bracket (See Engine Mount Installation Note.)
4	No.4 engine mount bracket (See No.3 Engine Mount, No.4 Engine Mount Bracket Removal Note.) (See Engine Mount Installation Note.)

5	No.3 engine mount (See No.3 Engine Mount, No.4 Engine Mount Bracket Removal Note.) (See Engine Mount Installation Note.)
6	Engine, transaxle

4WD



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- | | |
|---|--|
| 1 | Bracket plate
(See Engine Mount Installation Note.) |
|---|--|

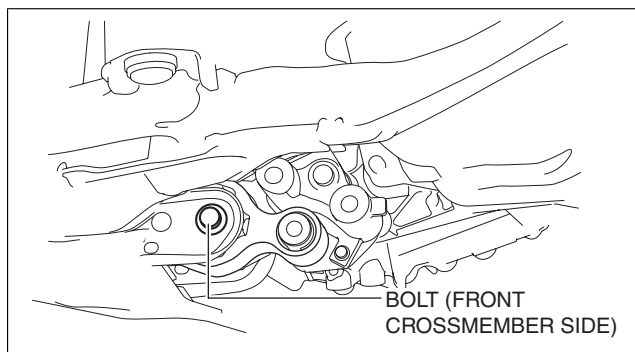
2	No.1 engine mount rubber, front crossmember component (See No.1 Engine Mount Rubber, Front Crossmember Component Removal Note.) (See Engine Mount Installation Note.)
3	No.4 engine mount bracket (See No.3 Engine Mount, No.4 Engine Mount Bracket Removal Note.) (See Engine Mount Installation Note.)

4	No.3 engine mount (See No.3 Engine Mount, No.4 Engine Mount Bracket Removal Note.) (See Engine Mount Installation Note.)
5	Engine, transaxle

No.1 Engine Mount Rubber, Front Crossmember Component Removal Note

- Loosen the No.1 engine mount rubber installation bolt (front crossmember side) shown in the figure.

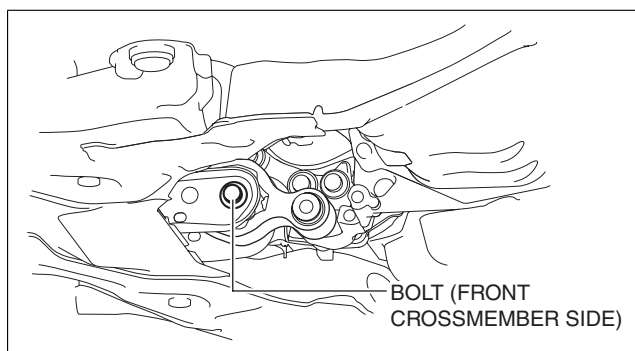
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4WD

- Remove the No.1 engine mount rubber and the front crossmember component as a single unit. (See FRONT CROSSMEMBER REMOVAL/ INSTALLATION.)



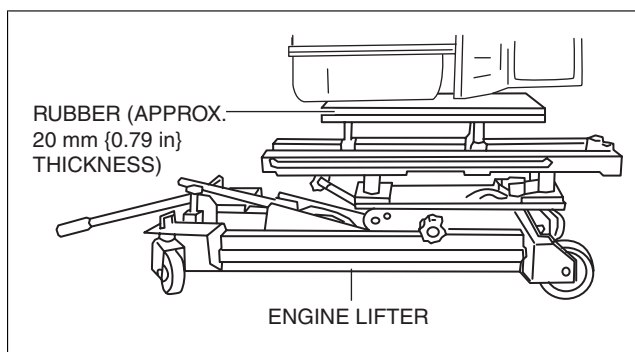
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No.3 Engine Mount, No.4 Engine Mount Bracket Removal Note

Caution

- When supporting the engine and transaxle, insert rubber of appropriate size (approx. 20 mm {0.79 in} thickness) between the engine lifter and the oil pan, transaxle to prevent the deformation of the oil pan and damage of the transaxle.

- Secure the engine and transaxle using a commercially available engine lifter.
- Remove the No.4 engine mount bracket.
- Remove the No.3 engine mount.



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Engine Mount Installation Note

Caution

- Slots have been adopted for the No.3 engine mount and No.4 engine mount bracket installation holes. Tighten the installation bolts and nuts so that they are centered on the slots. Otherwise, engine noise or vibration could increase.

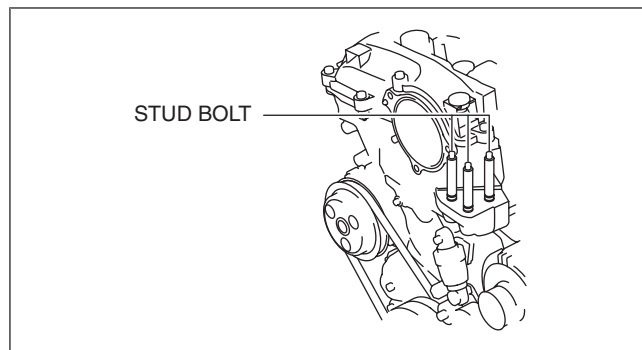
Note

- Retighten the engine front cover and transaxle stud bolts when the nuts of No.3 engine mount and No.4 engine mount bracket are loosened.

1. Tighten the engine front cover stud bolts.

Tightening torque

7—13 N·m {72—132 kgf·cm, 62—115 in·lbf}

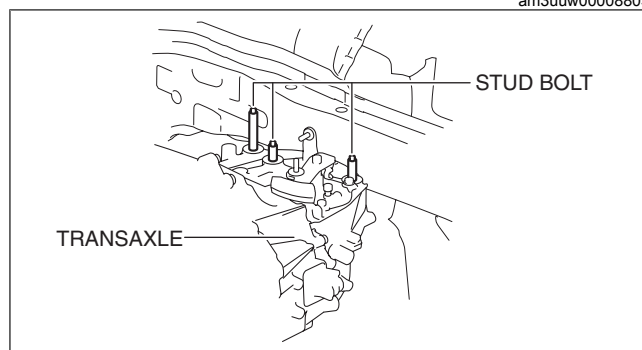


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2. Tighten the transaxle stud bolts.

Tightening torque

15—25 N·m {1.6—2.5 kgf·m, 12—18 ft·lbf}

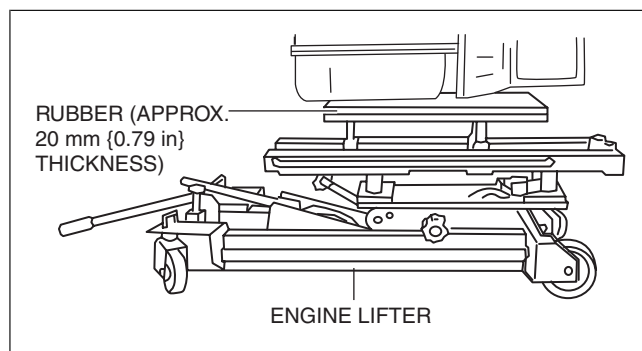


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Caution

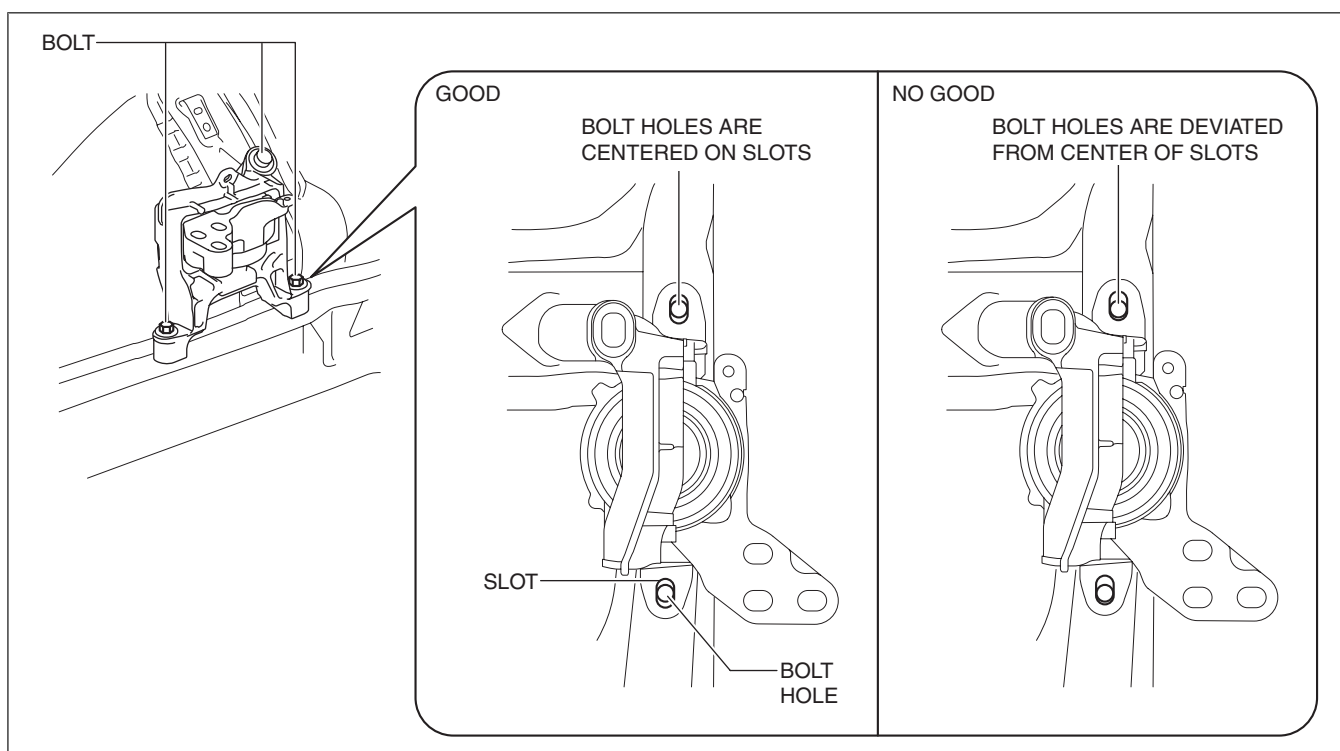
- When supporting the engine and transaxle, insert rubber of appropriate size (approx. 20 mm {0.79 in} thickness) between the engine lifter and the oil pan, transaxle to prevent the deformation of the oil pan and damage of the transaxle.

3. Secure the engine and transaxle using a commercially available engine lifter.



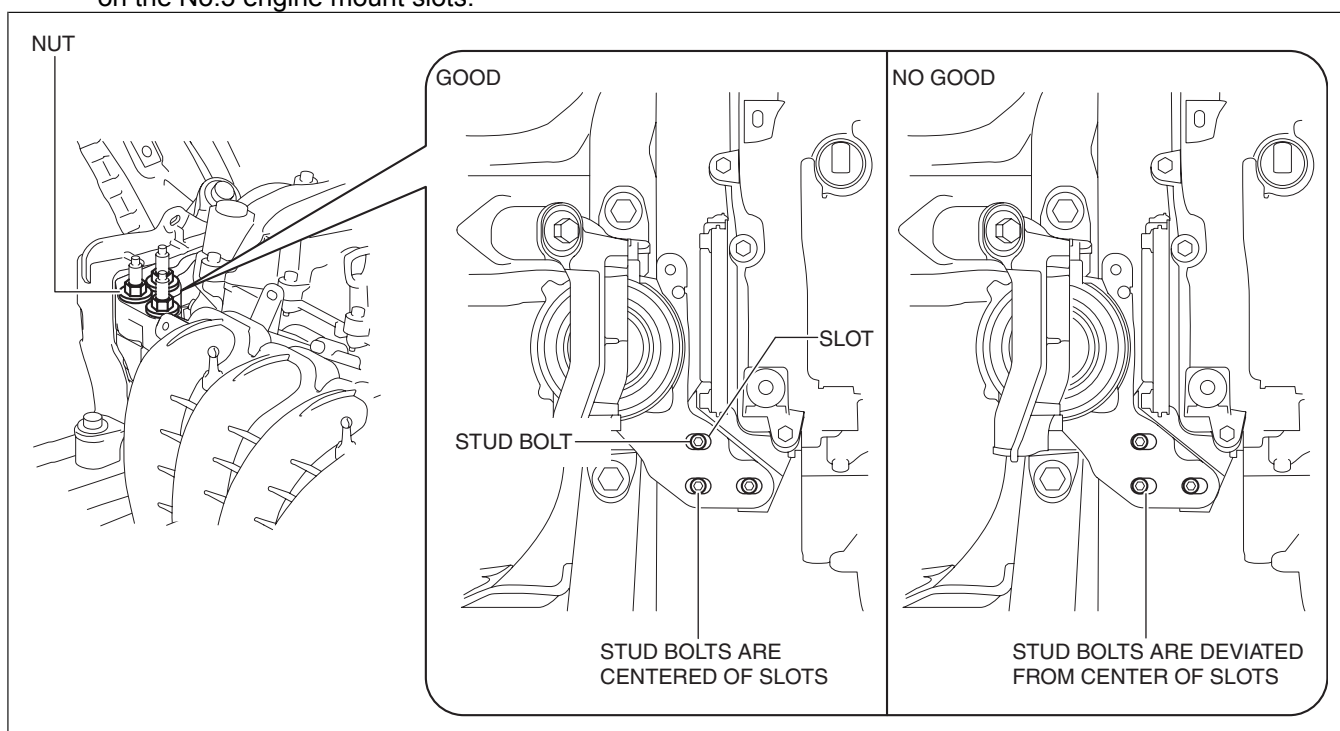
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4. Temporarily tighten the No.3 engine mount installation bolts and nuts using the following procedure:
(1) Temporarily tighten the bolts shown in the figure so that they are centered on the No.3 engine mount slots.



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- (2) Temporarily tighten the nuts shown in the figure so that the stud bolts of the engine front cover are centered on the No.3 engine mount slots.



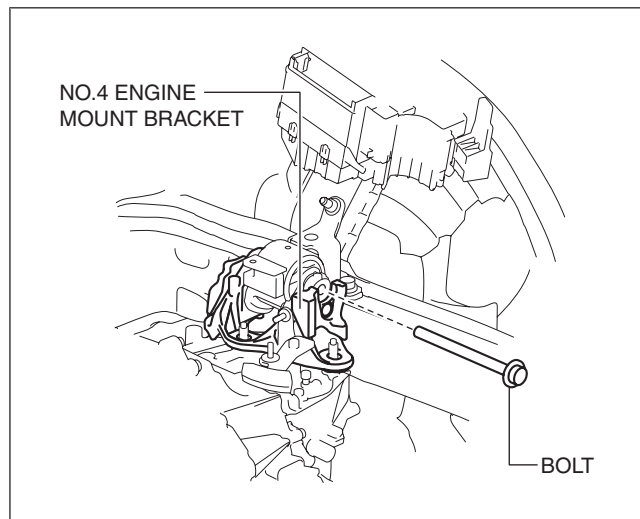
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Note

- If the stud bolts are deviated from the center of the slots, align the stud bolts with the center of the slots while slightly moving the engine, and temporarily tighten the installation nuts.

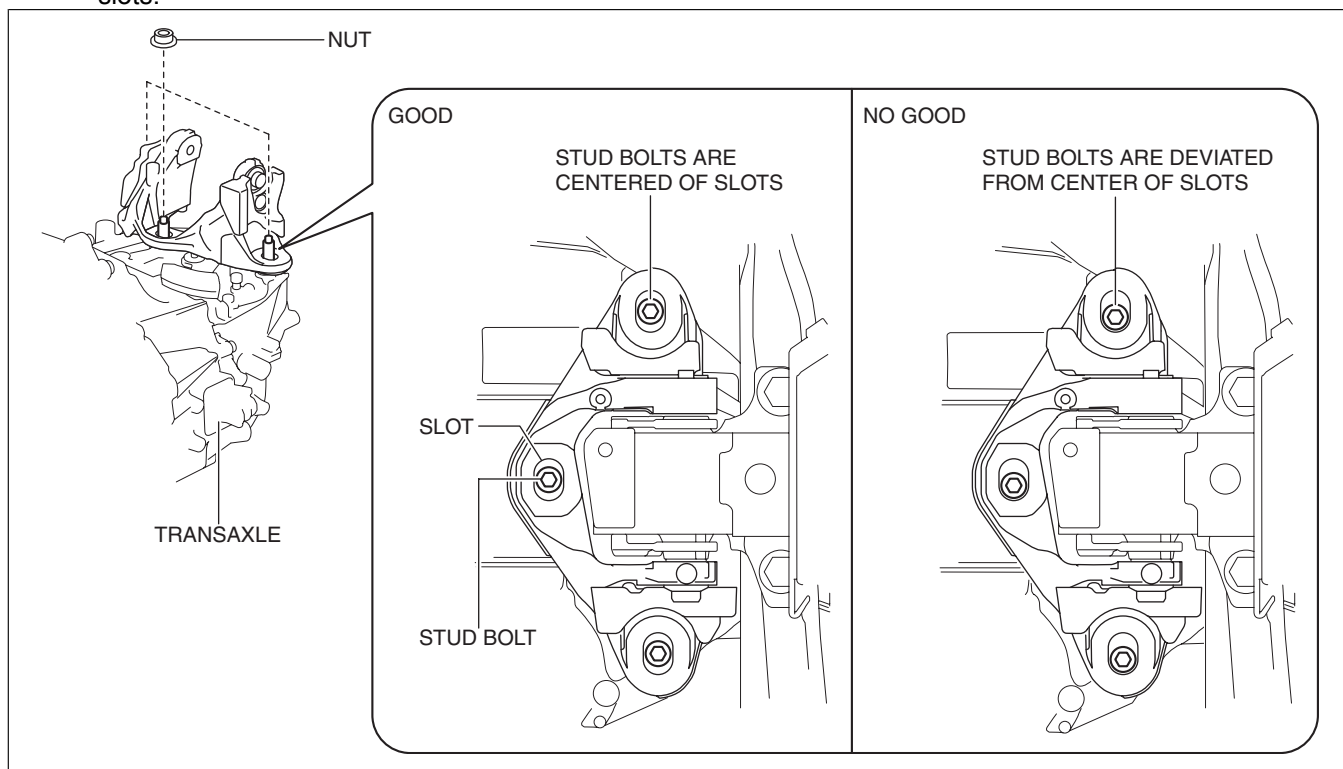
5. Temporarily tighten the No.4 engine mount bracket installation bolt and nuts using the following procedure:

(1) Temporarily tighten the bolt shown in the figure.



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(2) Temporarily tighten the nuts shown in the figure so that they are centered on the No.4 engine mount bracket slots.



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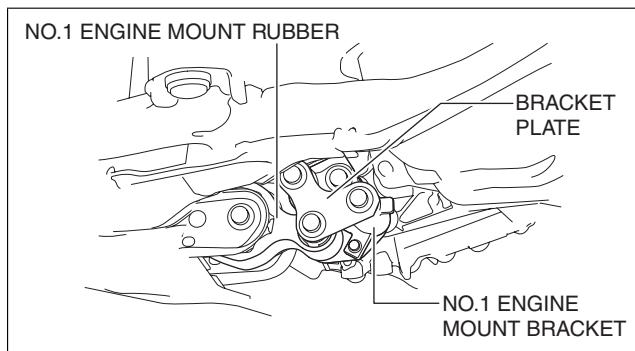
Note

- If the stud bolts are deviated from the center of the slots, align the stud bolts with the center of the slots while slightly moving the transaxle, and temporarily tighten the installation nuts.

6. Install the No.1 engine mount rubber and the front crossmember component as a single unit. (See FRONT CROSSMEMBER REMOVAL/INSTALLATION.)
7. Temporarily tighten the following parts:

2WD

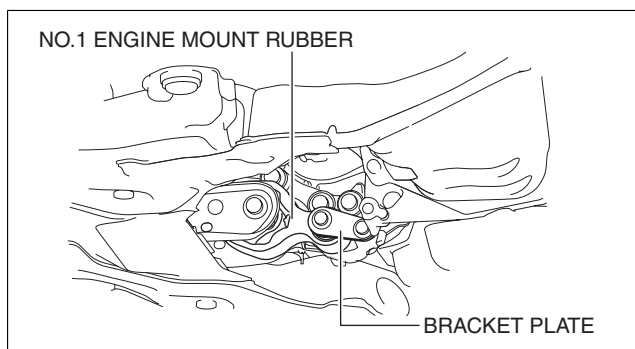
- No.1 engine mount bracket, No.1 engine mount rubber and bracket plate



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4WD

- No.1 engine mount rubber and bracket plate

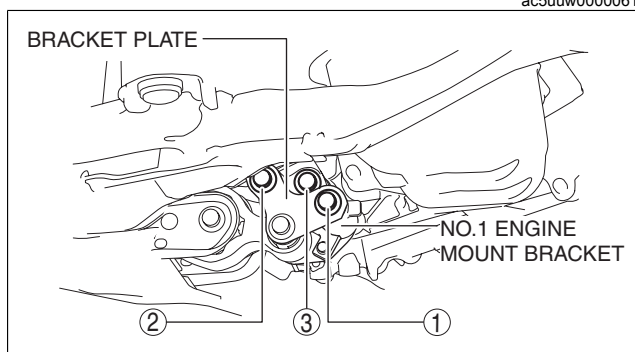


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8. Tighten the No.1 engine mount bracket and bracket plate installation bolts in the order shown in the figure. (2WD)

Tightening torque

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

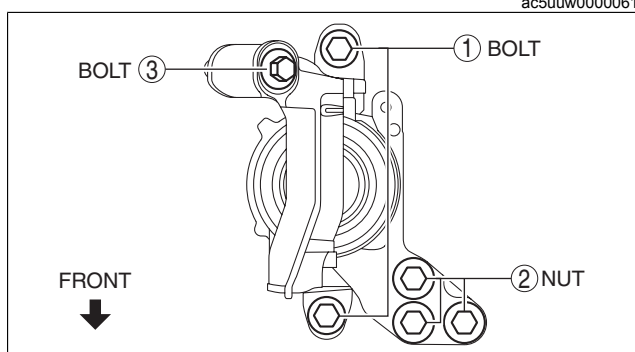


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9. Tighten the No.3 engine mount installation bolts and nuts in the order shown in the figure.

Tightening torque

No.	Tightening torque
1	76—95 N·m {7.8—9.6 kgf·m, 57—70 ft·lbf}
2	82—95 N·m {8.4—9.6 kgf·m, 61—70 ft·lbf}
3	49—65 N·m {5.0—6.6 kgf·m, 37—47 ft·lbf}

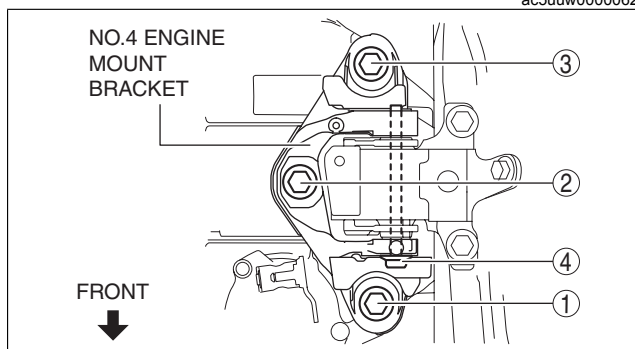


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10. Tighten the No.4 engine mount bracket installation bolt and nuts in the order shown in the figure.

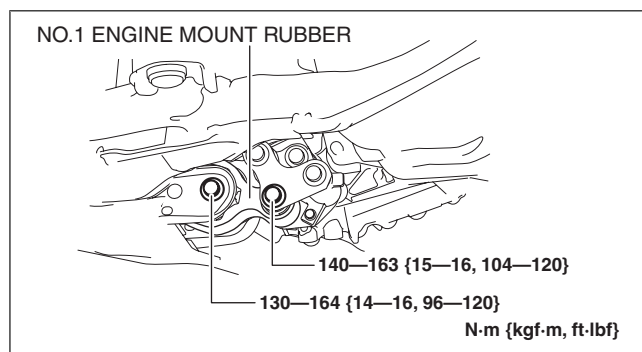
Tightening torque

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}



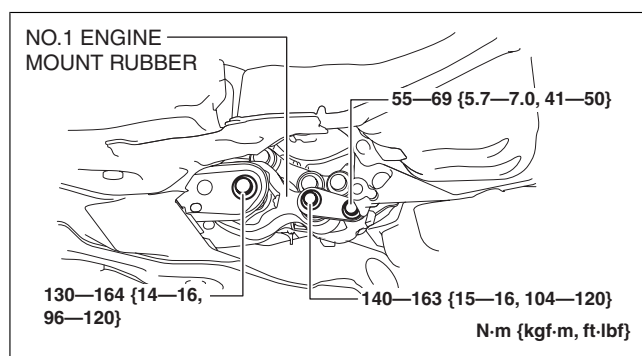
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11. Tighten the No.1 engine mount rubber installation bolts.
2WD



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4WD



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