

# ENGINE REMOVAL/INSTALLATION [ZJ, Z6]

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B3E011001001W02

## Warning

- 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 \[ZJ, Z6, LF\]](#).)

## Note

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

### 1. Remove the following parts:

- (1) Battery cover, battery box, battery clamp, battery and battery tray (See [BATTERY REMOVAL/INSTALLATION \[ZJ, Z6\]](#).)
- (2) Front wheels and tires (See [GENERAL PROCEDURES \(SUSPENSION\)](#).)
- (3) Under cover and splash shields
- (4) Fresh-air duct, air hose and air cleaner component (See [INTAKE-AIR SYSTEM REMOVAL/INSTALLATION \[ZJ, Z6\]](#).)
- (5) Accelerator cable and bracket
- (6) Drive belt (See [DRIVE BELT REPLACEMENT \[ZJ, Z6\]](#).)

### 2. Drain the following fluids:

- (1) ATF (ATX) or transaxle oil (MTX) (See [AUTOMATIC TRANSAXLE FLUID \(ATF\) REPLACEMENT](#).) (See [TRANSAXLE OIL REPLACEMENT \[F35M-R\]](#).)
- (2) Engine coolant (See [ENGINE COOLANT REPLACEMENT](#).)
- (3) P/S fluid (See [AIR BLEEDING](#).)

### 3. Disconnect the purge solenoid ventilation hose.

### 4. Disconnect the P/S return hose from the P/S oil pump side.

### 5. Disconnect the P/S pressure pipe from the steering gear side.

### 6. Disconnect the P/S return hose from the P/S reserve tank side.

### 7. Remove the following parts:

- (1) Member (See [EXHAUST SYSTEM REMOVAL/INSTALLATION \[ZJ, Z6\]](#).)
- (2) Front crossmember, front stabilizer, lower arm, steering gear and No.1 engine mount rubber component (See [STEERING GEAR AND LINKAGE REMOVAL/INSTALLATION](#).)
- (3) Drive shaft (See [DRIVE SHAFT REMOVAL/INSTALLATION](#).)
- (4) P/S reserve tank with the hose still connected
- (5) Coolant reserve tank with the hose still connected
- (6) Cooling fan component (See [RADIATOR REMOVAL/INSTALLATION](#).)
- (7) ATF hose, selector cable and wiring harness (ATX) (See [AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION \[Z6\]](#).)
- (8) Select cable and shift cable (MTX) (See [MANUAL TRANSAXLE REMOVAL/INSTALLATION \[F35M-R\]](#).)
- (9) Clutch release cylinder with the pipe still connected (MTX) (See [CLUTCH RELEASE CYLINDER REMOVAL/INSTALLATION](#).)
- (10) Earth (No.3 engine mount)

(11) The A/C compressor with the pipes still connected.

**Note**

- Secure the A/C compressor using wire or rope so that it is out of the way.

8. Disconnect the following parts:

- (1) Brake vacuum hose
- (2) Fuel hose (See [QUICK RELEASE CONNECTOR REMOVAL/INSTALLATION \[ZJ, Z6, LF\]](#).)
- (3) Heater hose
- (4) Upper and lower radiator hose
- (5) Main silencer (See [EXHAUST SYSTEM REMOVAL/INSTALLATION \[ZJ, Z6\]](#).)

9. Remove in the order indicated in the table.

10. Install in the reverse order of removal.

**Caution**

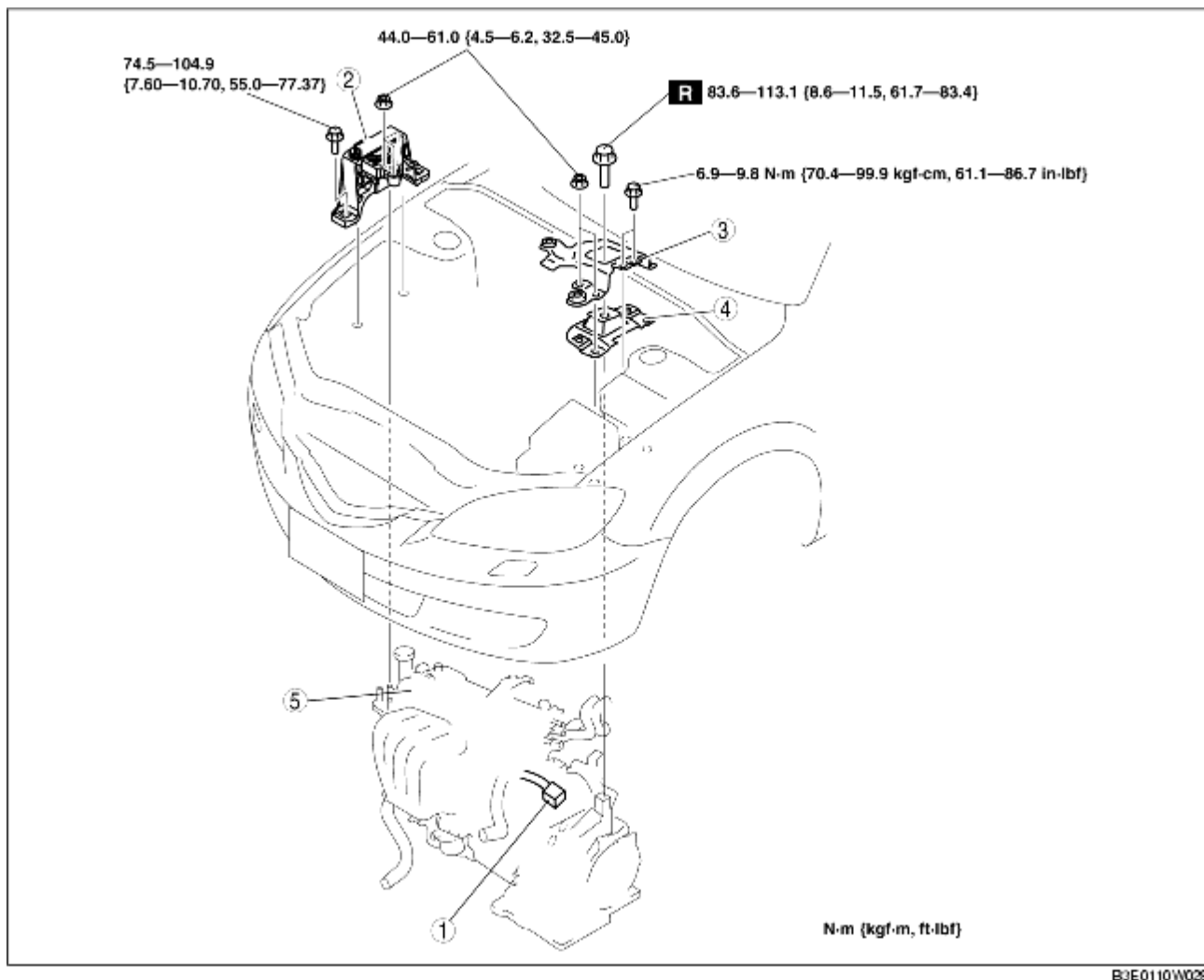
- Do not tighten the No.1 engine mount rubber installation bolt before installing the No.3 engine mount. (See [No.3 Engine Mount Installation Note](#).)

11. Inspect the following and adjust them if necessary.

- Front wheel alignment (See [FRONT WHEEL ALIGNMENT](#).)
- Pulley and belt for runout and contact.
- Leakage of engine oil, engine coolant, ATF, MT oil, and fuel.
- Ignition timing and idle speed. Verify the amount of CO, HC. (See [ENGINE TUNE-UP \[ZJ, Z6\]](#).)
- Engine-driven accessories operation

**Note**

- If the engine is overhauled and installed to the vehicle, perform the road test and verify that there is no abnormality.



1	Main fuse block connector (See <a href="#">Main Fuse Block Connector Removal Note.</a> )
2	No.3 Engine mount (See <a href="#">No.3 Engine Mount, No.4 Engine Mount Rubber Removal Note.</a> ) (See <a href="#">No.3 Engine Mount Installation Note.</a> )
3	Battery tray bracket
4	No.4 Engine mount rubber (See <a href="#">No.3 Engine Mount, No.4 Engine Mount Rubber Removal Note.</a> ) (See <a href="#">No.4 Engine Mount Rubber Installation Note.</a> )
5	Engine, transaxle

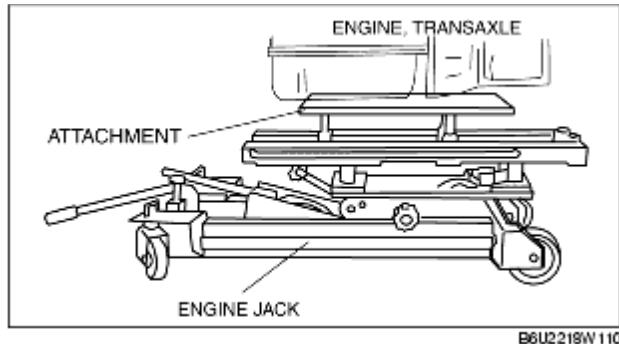
## Main Fuse Block Connector Removal Note

1. Release the tab in the order shown in the figure.

2. Pull the lock lever up and remove the connector.

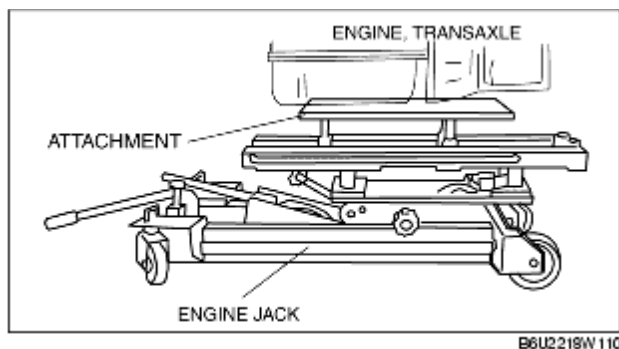
### No.3 Engine Mount, No.4 Engine Mount Rubber Removal Note

1. Secure the engine and the transaxle using an engine jack and attachment.



### No.4 Engine Mount Rubber Installation Note

1. Secure the engine and the transaxle using an engine jack and attachment.

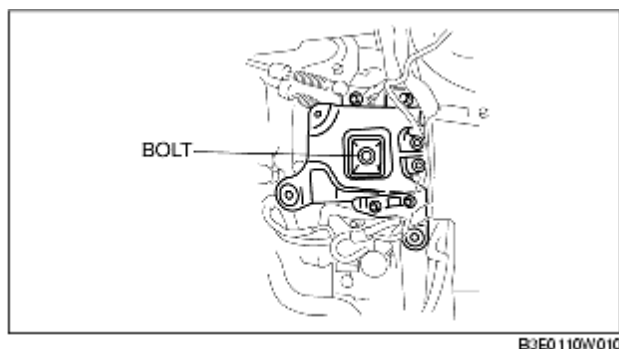


2. Install the No.1 engine mount rubber and No.4 engine mount rubber.

#### Note

- Do not tighten the bolt and nut for the No.1 engine mount rubber and No.4 engine mount rubber during this step.

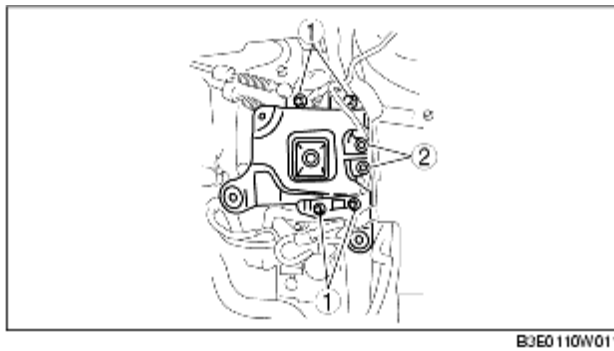
3. Tighten the new No.4 engine mount rubber installation bolt shown in the figure.



#### Tightening torque

83.6-113.1 N·m {86-11.5 kgf·m, 61.7-83.4 ft·lbf}

4. Tighten the No.4 engine mount rubber and battery tray bracket installation bolt and nut in the order shown in the figure.

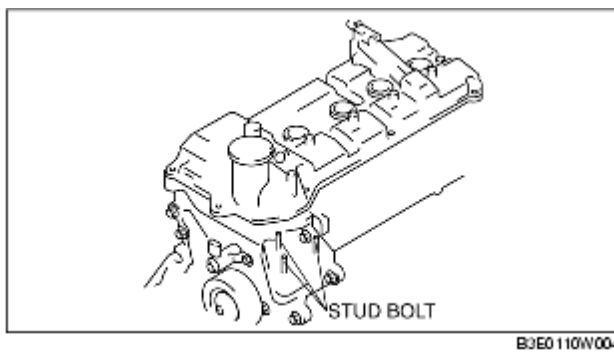


**Tightening torque**

- 1: 44-61 N·m {4.5-6.2 kgf·m, 33-44 ft·lbf}  
 2: 6.9-9.8 N·m {70.4-99.9 kgf·cm, 61.1-86.7 in·lbf}

### No.3 Engine Mount Installation Note

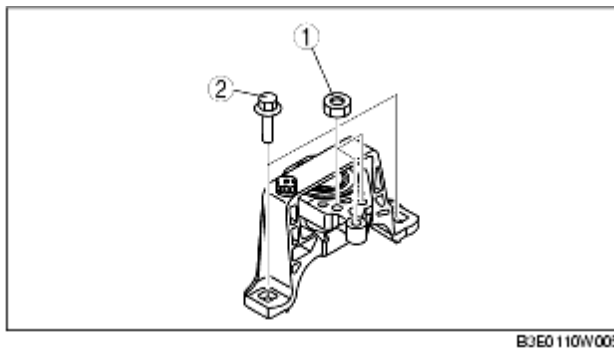
1. Tighten the No.3 engine mount installation stud bolts.



**Tightening torque**

- 7-13 N·m {0.8-1.3 kgf·m, 5.2-9.5 ft·lbf}

2. Install the No.3 engine mount, and then temporarily tighten the installation bolts and nuts.  
 3. Tighten the installation bolts in the order shown in the figure.

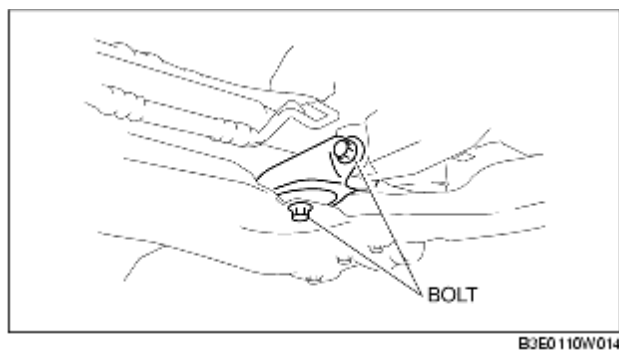


**Tightening torque**

- 1 (nuts) : 44-61 N·m {4.5-6.2 kgf·m, 33-44 ft·lbf}  
 2 (bolts) : 74.5-104.9 N·m {7.60-10.70 kgf·m, 55.0-77.3 ft·lbf}

4. Remove the engine jack and attachment.

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



**Tightening torque**

**93.1-116.6 N·m {9.50-11.88 kgf·m, 68.7-85.9 ft·lbf}**