

# Your Ultimate Source for OEM Repair Manuals

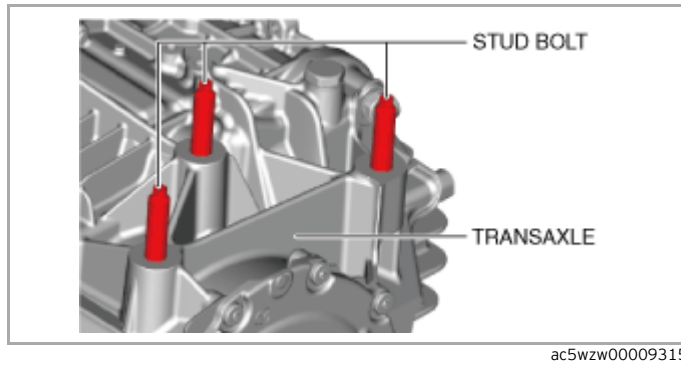
FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

## 2005 MAZDA 3 / Axela Hatchback OEM Service and Repair Workshop Manual

[Go to manual page](#)

40–52 N·m {4.1–5.3 kgf·m, 30–38 ft·lbf}

2. Tighten the transaxle stud bolts.



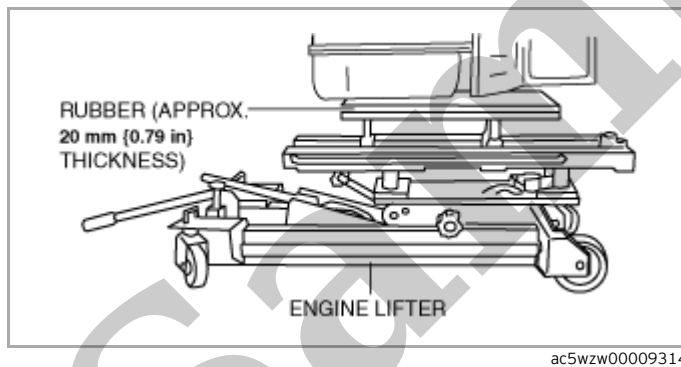
#### Tightening torque

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

#### 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 deformation of the oil pan and damage of the transaxle.

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



4. Return the engine and transaxle to their original position.

5. Temporarily tighten the No.3 engine mount installation bolts and nuts using the following procedure:

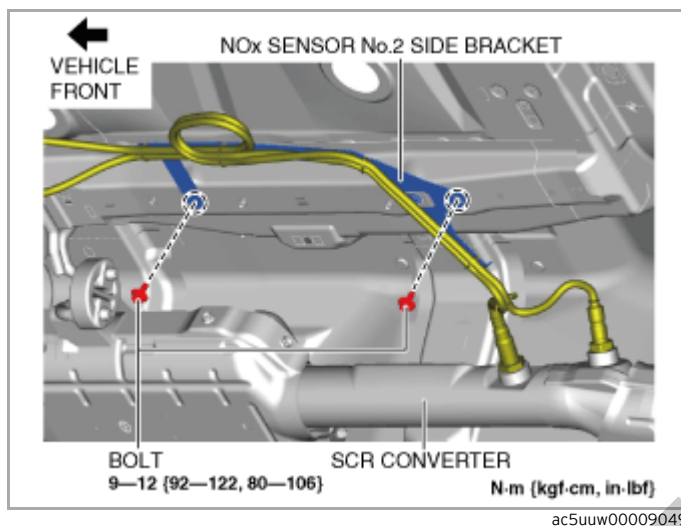
- (1) Temporarily tighten the bolts so that the bolt holes of the body are centered on the No.3 engine mount slots.

- NOx sensor No.2 side bracket

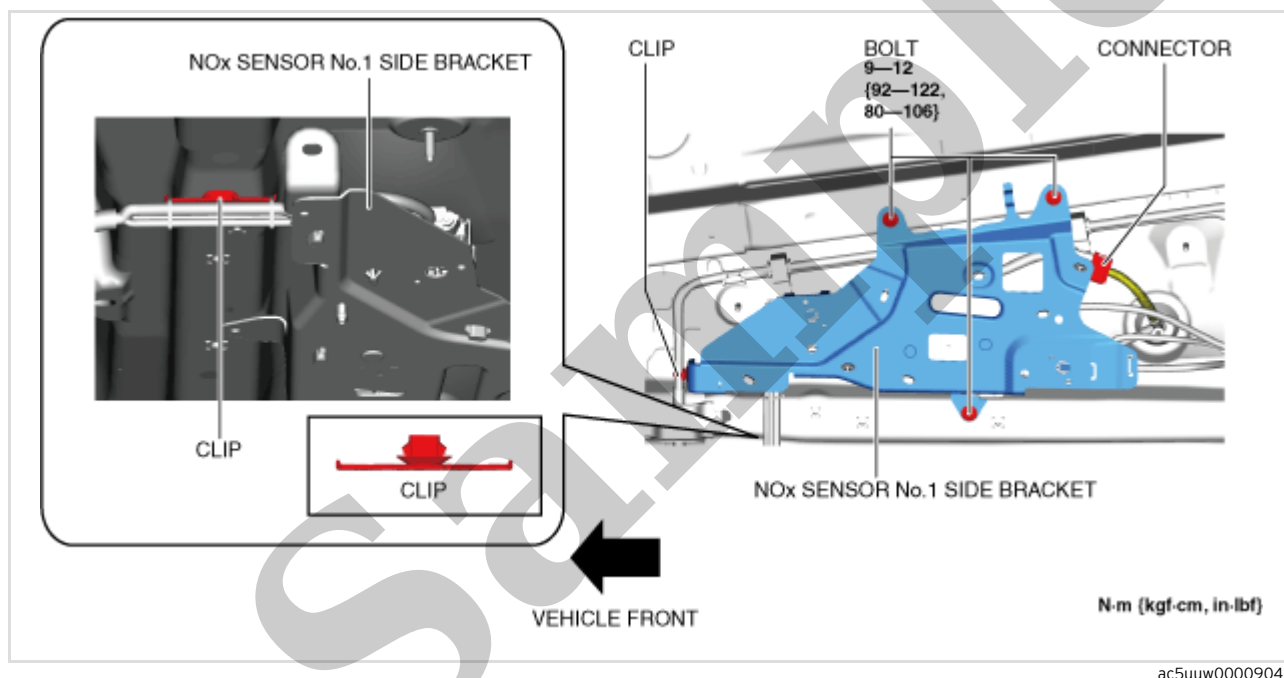
- SCR converter (See [EXHAUST SYSTEM REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

(2) Tighten the SCR converter installation nuts. (See [EXHAUST SYSTEM REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

(3) Install the NOx sensor No.2 side bracket.



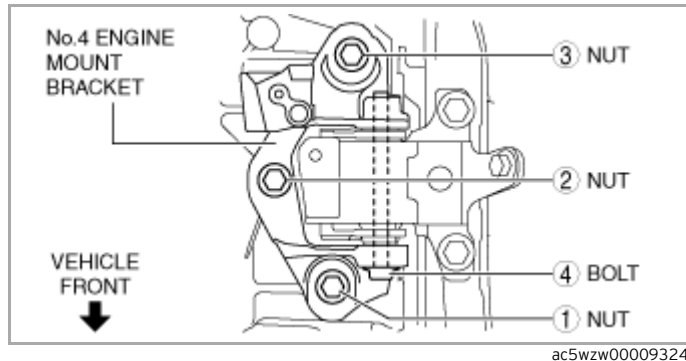
(4) Install the NOx sensor No.1 side bracket.



(5) Connect the quick release connector to the urea injector. (See [UREA INJECTOR REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#)) (See [QUICK RELEASE CONNECTOR \(EMISSION SYSTEM\) REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

11. Install the A/C compressor. (See [A/C COMPRESSOR REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

12. Install the front crossmember extension (RH).

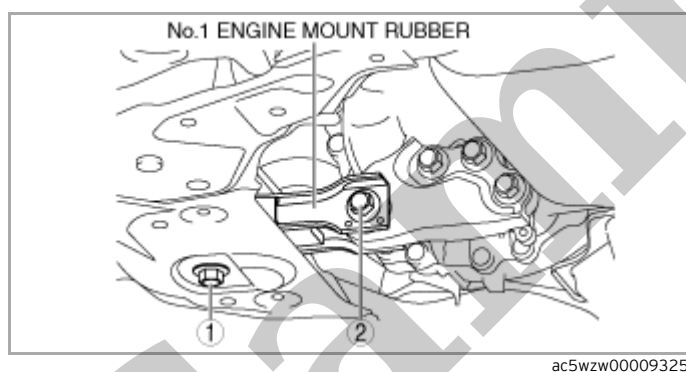


### Tightening torque

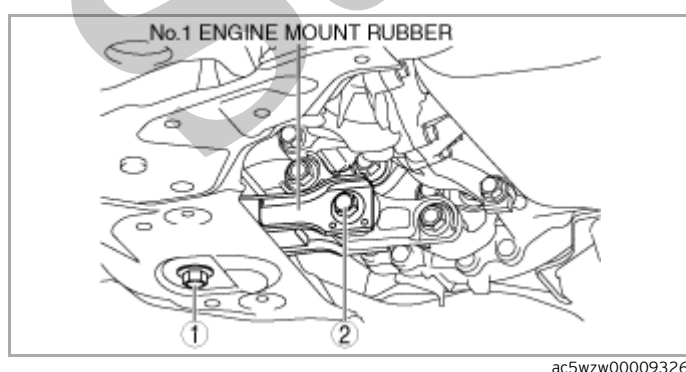
Installation position	Tightening torque
1, 2, 3	92–116 N·m {9.4–11 kgf·m, 68–85 ft·lbf}
4	81–99 N·m {8.3–10 kgf·m, 60–73 ft·lbf}

20.Tighten the No.1 engine mount rubber installation bolts in the order shown in the figure.

### 2WD



### AWD



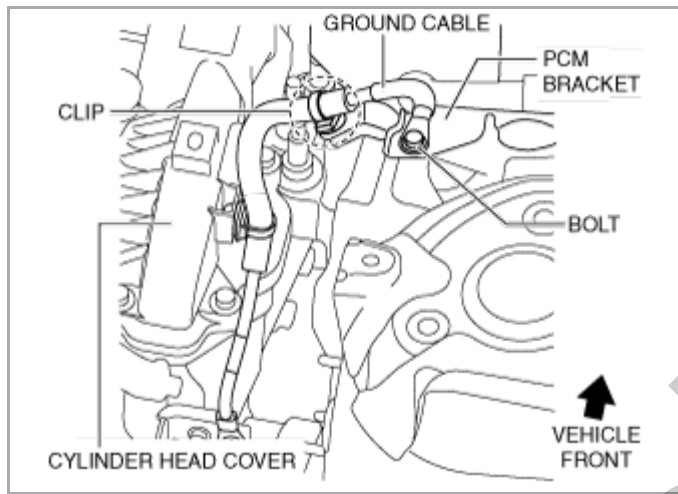
### Tightening torque

Installation position	Tightening torque
1	141–172 N·m {15–17 kgf·m, 104–126 ft·lbf}
2	130–164 N·m {14–16 kgf·m, 96–120 ft·lbf}

- Turbocharger air outlet pipe component
- Charge air cooler inlet hose

31. Connect the ground cable shown in the figure.

RH

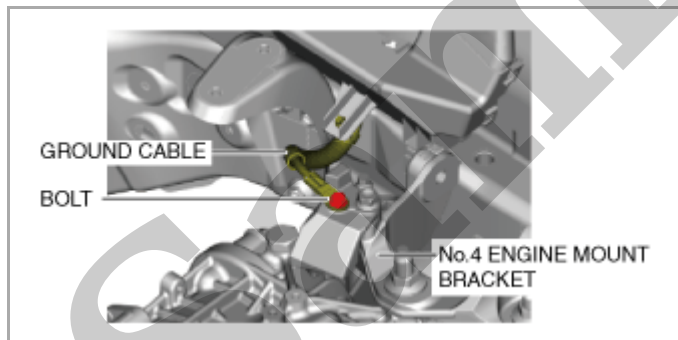


ac5wzw00009306

#### Tightening torque

9–12 N·m {92–122 kgf·cm, 80–106 in·lbf}

LH



ac5wzw00009307

#### Tightening torque

9–12 N·m {92–122 kgf·cm, 80–106 in·lbf}

32. Install the battery tray and battery. (See [BATTERY REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

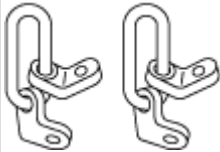
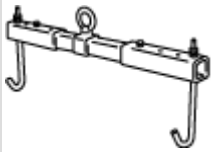
33. Connect the wiring harness shown in the figure.

ENGINE DISASSEMBLY/ASSEMBLY [SKYACTIV-D 2.2]

SM2897206

id0110s580050

Special Service Tool (SST)

1. : Mazda SST number 2. : Global SST number			
1: 49 UN30 3050 2: 303-050		1: 49 L017 5A0 2: -	
Engine lifting bracket		Support hanger	

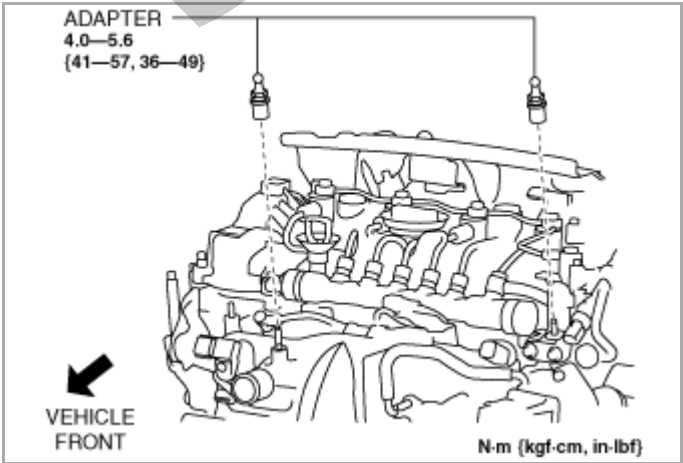
Replacement Part

Gasket Quantity: 1 Location of use: Exhaust gas pressure sensor No.1 component	Gasket Quantity: 2 Location of use: Water pipe	Bolt Quantity: 1 Location of use: Noise suppression cover (No.3)
Gasket Quantity: 1 Location of use: Water pump component	Hose Quantity: 2 Location of use: Exhaust gas pressure sensor No.2 component	Clip Quantity: 2 Location of use: Exhaust gas pressure sensor No.2 component

Caution

- When the transaxle is installed, do not suspend the engine. Otherwise, the SST installation area of the cylinder head may be damaged due to excess weight. Only suspend the engine after separating the engine and transaxle.

1.Remove the adapter.



ac5wzw00009332

2.Remove the insulator shown in the figure.

- EGR cooler bypass valve (See [EGR COOLER BYPASS VALVE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- EGR pipe (See [EGR PIPE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- EGR valve (See [EGR VALVE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- EGR cooler (See [EGR COOLER REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

12.Remove the bracket No.1. (See [FRONT DRIVE SHAFT REMOVAL/INSTALLATION.](#))

13.Remove the starter. (See [STARTER REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

14.Remove the generator. (See [GENERATOR REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

15.Remove the drive belt auto tensioner. (See [DRIVE BELT AUTO TENSIONER REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

16.Lock the drive plate against rotation using the crankshaft pulley lock bolt.

17.Remove the torque converter installation nut from the starter installation hole. (See [AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION \[GW6A-EL \(SKYACTIV-D 2.2\)\] \(2WD\).](#)) (See [AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION \[GW6AX-E \(SKYACTIV-D 2.2\)\] \(AWD\).](#))

18.Disconnect the engine and transaxle, and lower only the engine from the engine lifter. (See [AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION \[GW6A-EL \(SKYACTIV-D 2.2\)\] \(2WD\).](#)) (See [AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION \[GW6AX-E \(SKYACTIV-D 2.2\)\] \(AWD\).](#))

19.Remove the intake-air system. (See [INTAKE-AIR SYSTEM REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

20.Remove the following fuel system related parts:

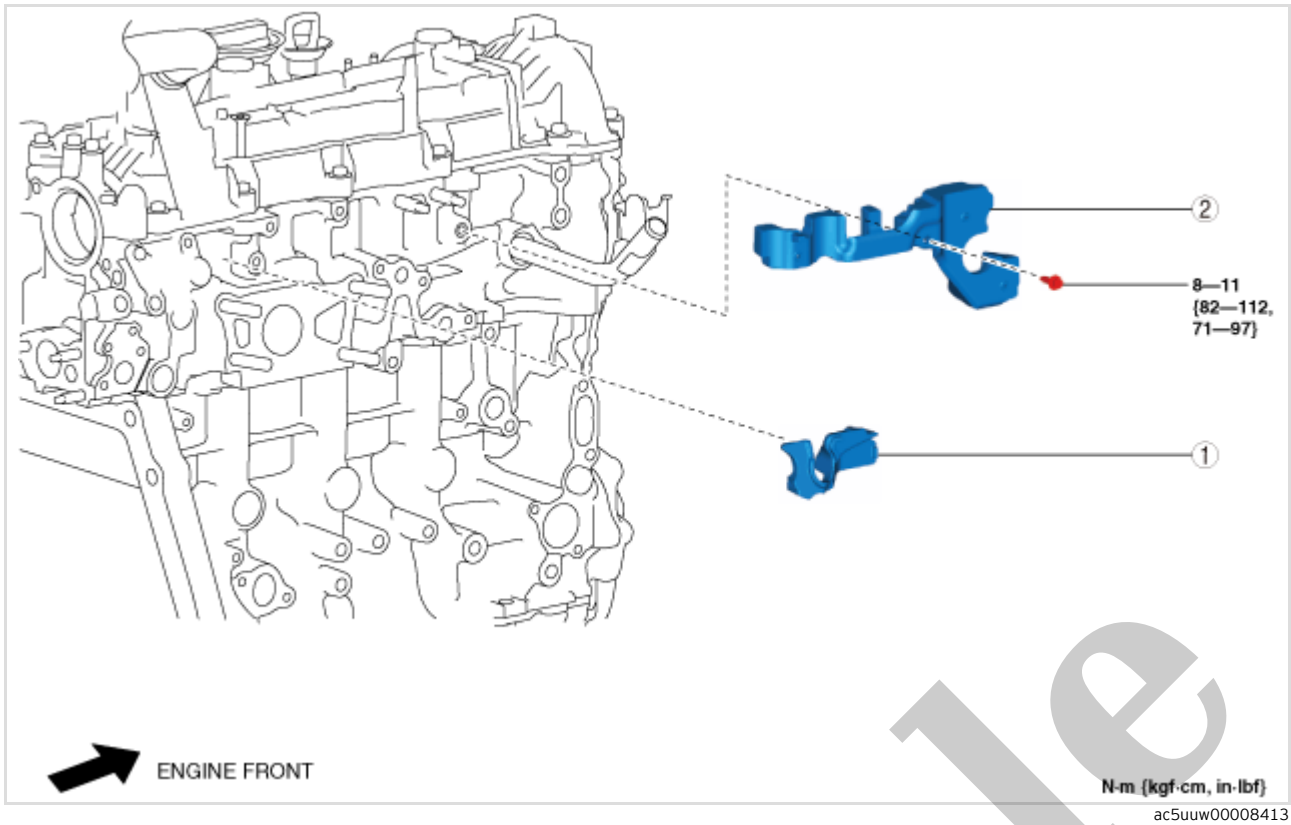
- Injection pipe (See [INJECTION PIPE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- Fuel injectors (See [FUEL INJECTOR REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- Supply pump (See [SUPPLY PUMP REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- Lower case (See [LOWER CASE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- Common rail (See [COMMON RAIL REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

21.Remove the glow plugs. (See [GLOW PLUG REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

22.Remove the vacuum pump. (See [VACUUM PUMP REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

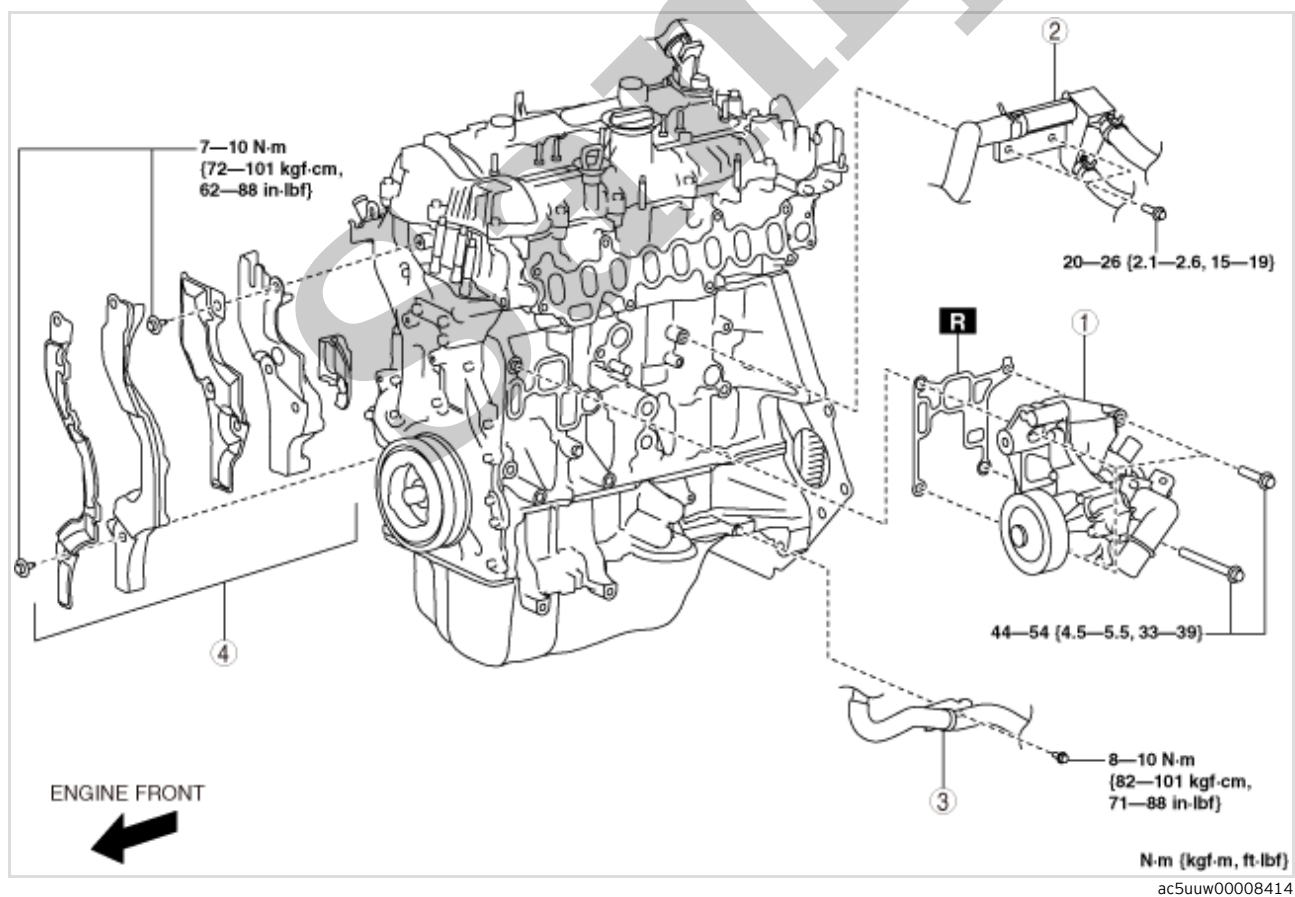
23.Remove the oil cooler. (See [OIL COOLER REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

24.Remove the oil filter. (See [OIL FILTER REPLACEMENT \[SKYACTIV-D 2.2\].](#))

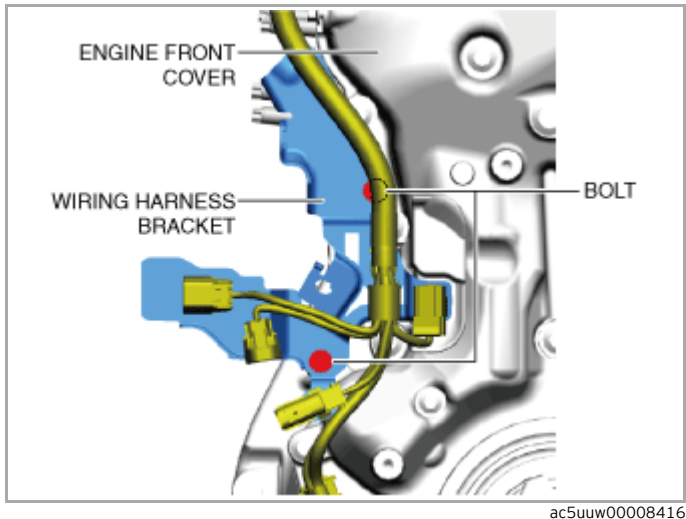


1	Insulator
2	Seal plate

### Step 3

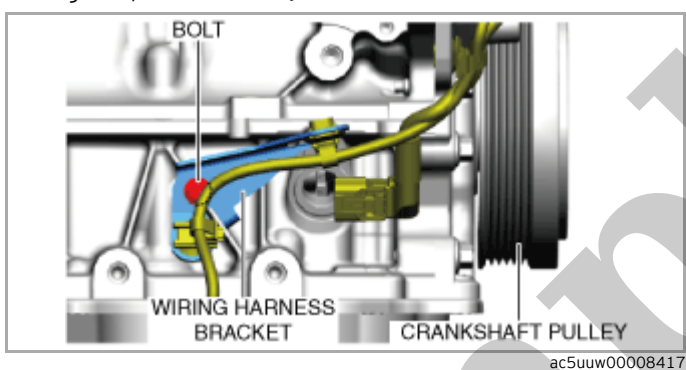


1	Water pump component (See <a href="#">Water Pump Component Installation Note.</a> )
2	Water pipe



#### Tightening torque

8–11 N·m {82–112 kgf·cm, 71–97 in·lbf}



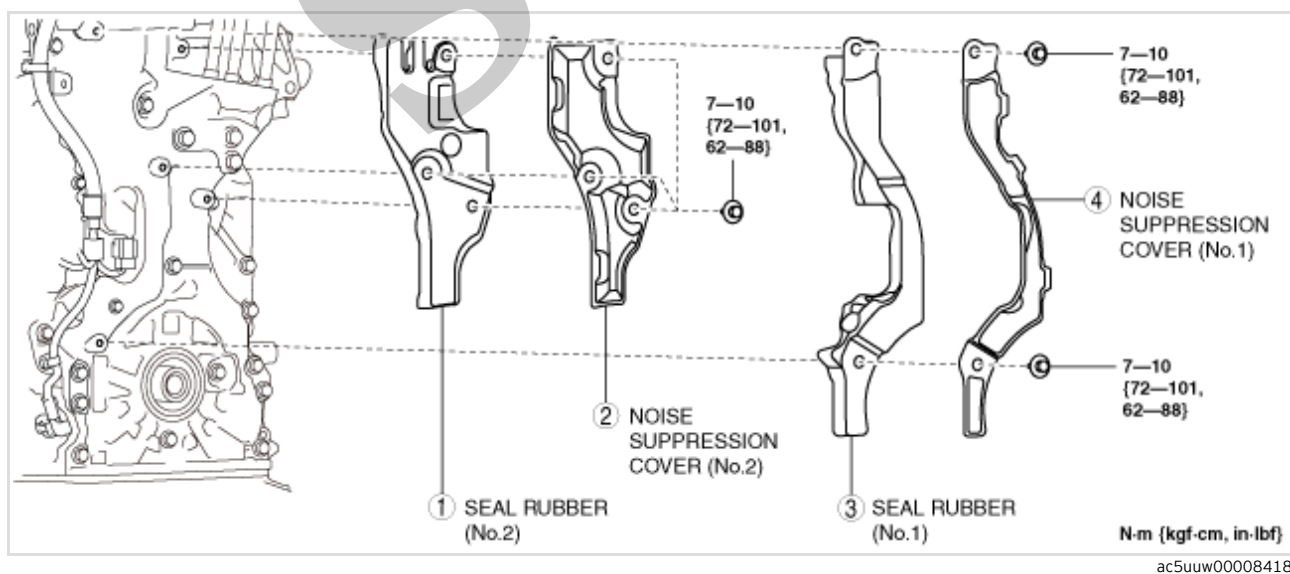
#### Tightening torque

8–11 N·m {82–112 kgf·cm, 71–97 in·lbf}

#### Caution

- Be careful that the covers and seal rubbers do not get hung up on the noise suppression cover installation bolts.

3. Install the noise suppression covers and seal rubbers in the order shown in the figure.



### Water Pump Component Installation Note

- If there is a malfunction, refer to "ENGINE SYMPTOM TROUBLESHOOTING". (See [SYMPTOM DIAGNOSTIC INDEX \[SKYACTIV-D 2.2\]](#).)

#### **Difference between target idle speed and the engine speed**

Within 50 rpm

#### **Note**

- The target idle speed is determined by the idle air control as follows.

#### **Target idle speed (reference)**

Normal: 800 rpm

DPF auto regeneration: 800 rpm

Injector learning: 775 rpm

Sample