

2012 - Mazda6 - Engine

INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZR 2.5]

WARNING:

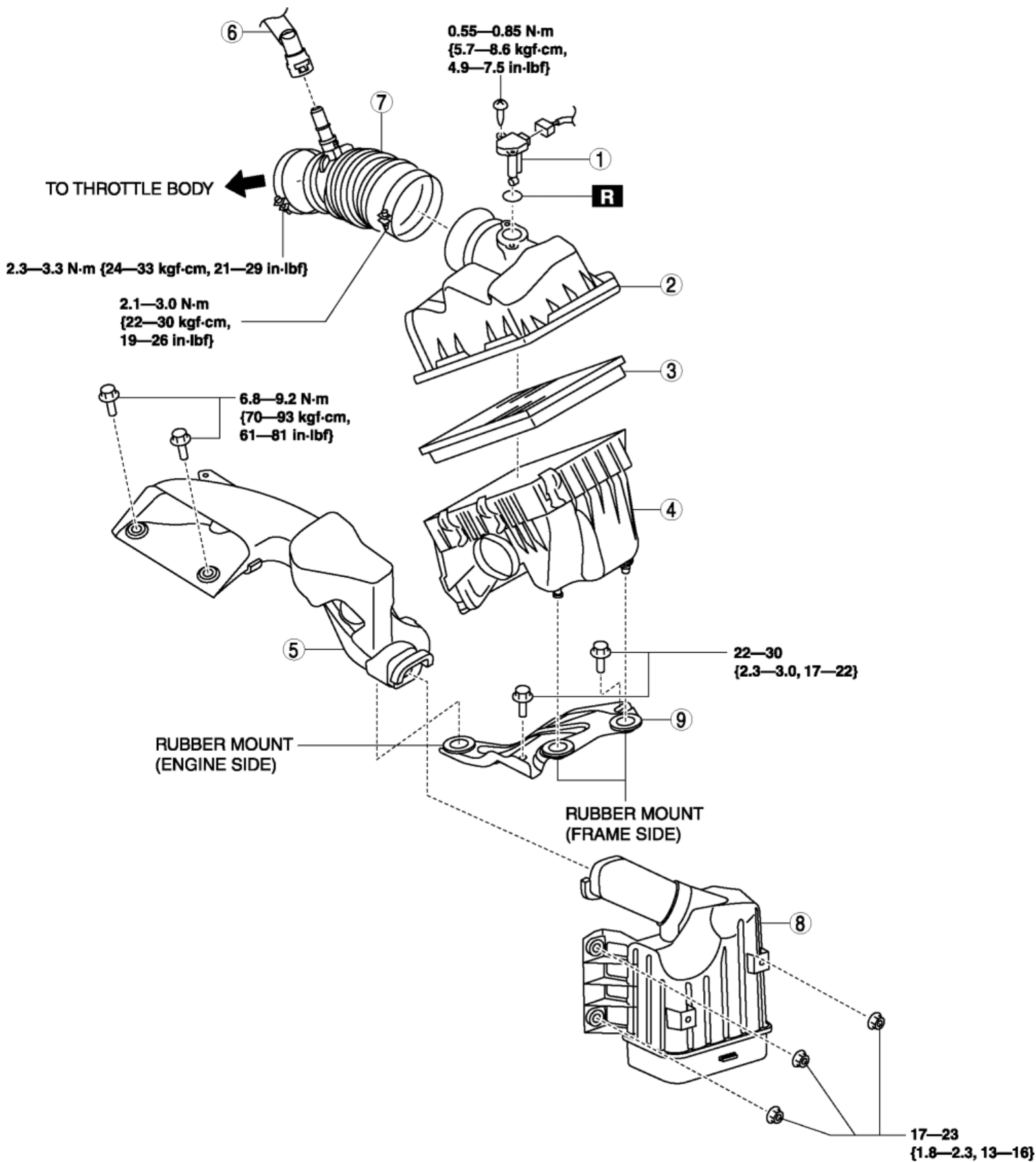
- A hot engine and intake air system can cause severe burns. Turn off the engine and wait until they are cool before removing the intake air system.
- Fuel line spills and leakage from the pressurized fuel system are dangerous. Fuel can ignite and cause serious injury or death and damage. Fuel can also irritate skin and eyes. To prevent this, always complete the "Fuel Line Safety Procedure".

CAUTION:

- Parts for engines manufactured in Mexico and Hiroshima cannot be used interchangeably as the engine will not operate correctly resulting in a serious malfunction. To prevent this, when replacing parts refer to the 'VEHICLE IDENTIFICATION NUMBER (VIN) CODE' table below and verify the engine's place of manufacture before performing the servicing. (See [VEHICLE IDENTIFICATION NUMBER \(VIN\) CODE](#).)

1. Complete the "BEFORE SERVICE PRECAUTION". (See [BEFORE SERVICE PRECAUTION \[MZR 2.5\]](#).)
2. Disconnect the negative battery cable. (See [BATTERY REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
3. Disconnect the wiring harness.
4. Remove in the order indicated in the table.
5. Install in the reverse order of removal.
6. Add the engine coolant to the cooling system filler neck and the coolant reserve tank to replace that during servicing.
7. Inspect the engine coolant level. (See [ENGINE COOLANT LEVEL INSPECTION \[MZR 2.5\]](#).)
8. Inspect for engine coolant leakage. (See [ENGINE COOLANT LEAKAGE INSPECTION \[MZR 2.5\]](#).)
9. Complete the "AFTER SERVICE PRECAUTION". (See [AFTER SERVICE PRECAUTION \[MZR 2.5\]](#).)

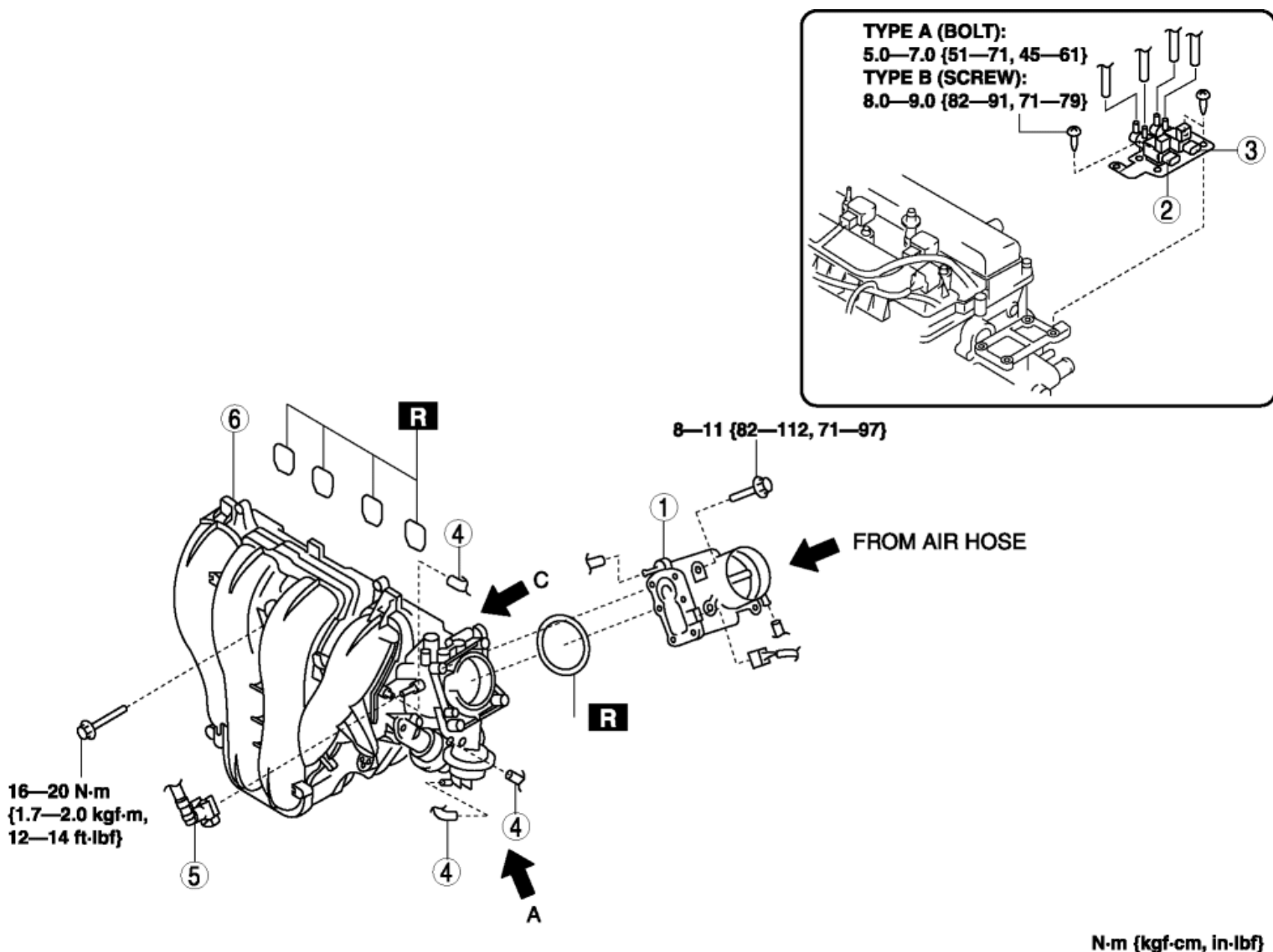
Step 1



N·m {kgf·m, ft·lbf}

1	MAF/IAT sensor
2	Air cleaner cover
3	Air cleaner element
4	Air cleaner case (See Air Cleaner Case Installation Note.)
5	Fresh-air duct (See Fresh-Air Duct Installation Note.)
6	Ventilation hose (See QUICK RELEASE CONNECTOR (EMISSION SYSTEM) REMOVAL/ INSTALLATION [MZR 2.5].)
7	Air hose
8	Resonance chamber (See Resonance Chamber Removal Note.)
9	Air cleaner bracket

Step 2



1	Throttle body (See Throttle Body Removal Note.) (See Throttle Body Installation Note.)
2	Variable intake air solenoid valve
3	Variable tumble solenoid valve
4	Vacuum hose (See Intake Manifold Removal Note.) (See Vacuum Hose Installation Note.)
5	Quick release connector (See QUICK RELEASE CONNECTOR (EMISSION SYSTEM) REMOVAL/ INSTALLATION [MZR 2.5].)
6	Intake manifold (See Intake Manifold Removal Note.)

Resonance Chamber Removal Note

1. Remove the front mudguard (LH). (See [FRONT MUDGUARD REMOVAL/ INSTALLATION](#).)
2. Remove the resonance chamber.

Throttle Body Removal Note

WARNING:

- Turn off the engine and wait until it is cool. Even then, be very careful when removing the cap. Wrap a thick cloth around it and slowly turn it counterclockwise to the first stop. Step back while the pressure escapes.
- When you are sure all the pressure is gone, press down on the cap using the cloth, turn it, and remove it.

CAUTION:

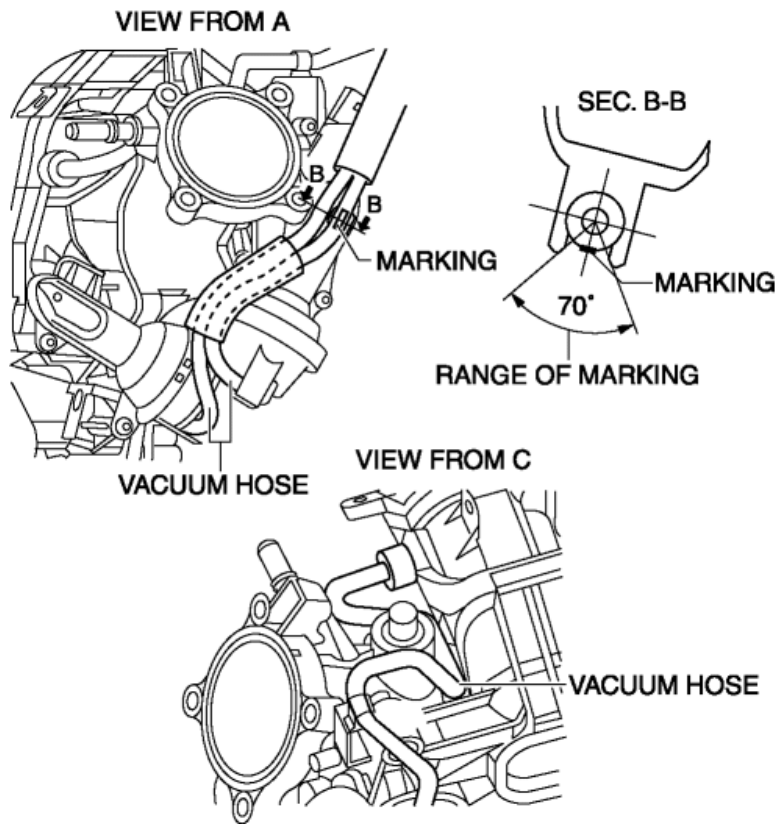
- Do not plug the water hose with a sharp-edged object. Otherwise, the hose could be damaged.
1. Wrap a clean cloth around the cooling system cap and release the pressure by loosening the cap slowly.
 2. Remove the water hose from the throttle body and plug the water hose quickly.

Intake Manifold Removal Note

1. Remove the aerodynamic under cover No.2. (See [AERODYNAMIC UNDER COVER NO.2 REMOVAL/ INSTALLATION](#).)
2. Remove the coolant reserve tank. (See [COOLANT RESERVE TANK REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
3. Remove all clips for securing wiring harnesses from the intake manifold.
4. Disconnect the vacuum hoses connecting the intake manifold.
5. Remove the fuel distributor and fuel injector as a single unit. (See [FUEL INJECTOR REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
6. Remove the intake manifold.

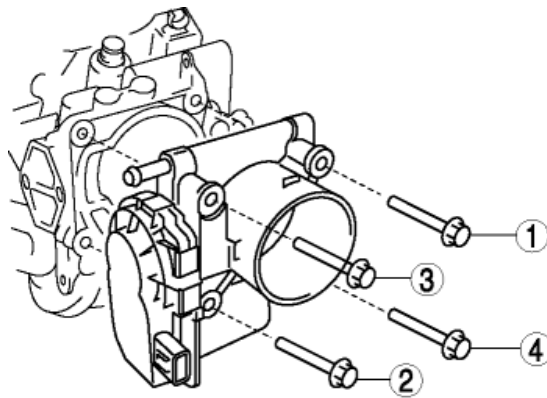
Vacuum Hose Installation Note

1. Install the vacuum hose shown in the figure.



Throttle Body Installation Note

1. Temporarily tighten the throttle body to the intake manifold.
2. Tighten the installation bolts in the order shown in the figure.



Throttle body tightening torque

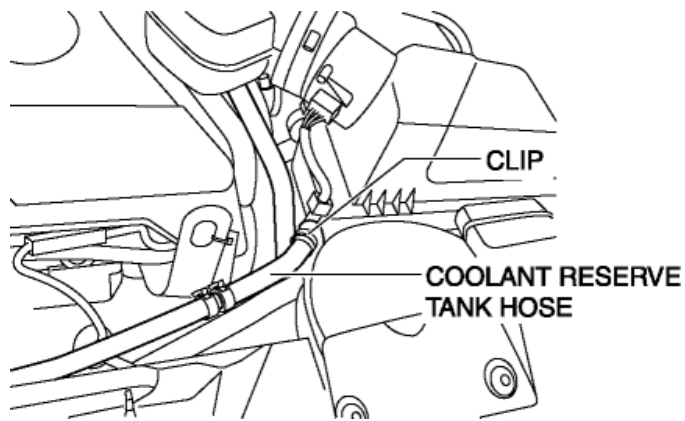
- 8—11 N·m {82—112 kgf·cm, 71—97 in·lbf}

3. Remove the plug from the engine coolant hose and install the water hose to the throttle body quickly.

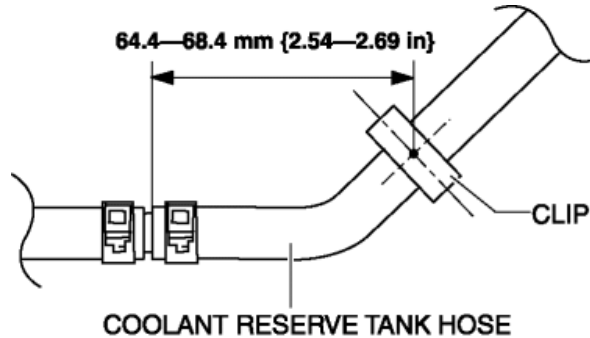
Fresh-Air Duct Installation Note

CAUTION:

- If the coolant reserve tank hose is installed to the clips at the wrong locations, the hose may contact other parts and be damaged. When reinstalling the coolant reserve tank hose to the clips, install it to the original locations according to the following procedure.



1. Install the coolant reserve tank hose to the clips as shown in the figure.



Air Cleaner Case Installation Note

CAUTION:

- Before assembling the air cleaner, verify that the rubber mounts have not fallen off from the air cleaner bracket (3 locations).
- Always install the air cleaner case using the following procedure.

NOTE:

- When inserting the rubber mounts into the air cleaner case, soapy water can be applied.

1. Verify that the rubber mounts are set in the air cleaner bracket (3 locations).
2. Install the projections on the frame side (2 locations).
3. Verify that the projections on the frame side are installed securely.
4. Install the projection on the engine side (remaining location).
5. Verify that the projection on the engine side installed securely.

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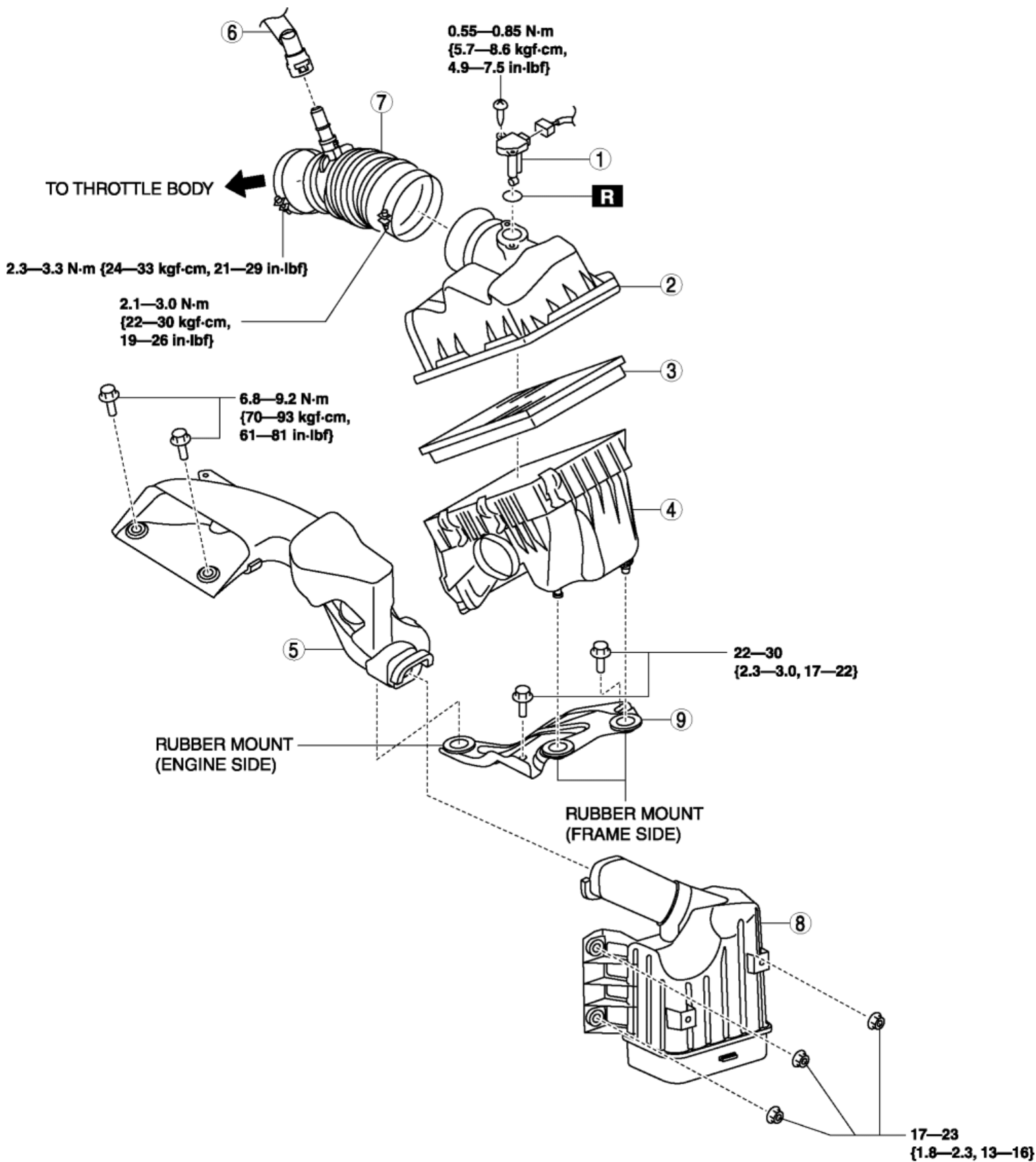
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2. Disconnect the negative battery cable. (See [BATTERY REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
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6. Add the engine coolant to the cooling system filler neck and the coolant reserve tank to replace that during servicing.
7. Inspect the engine coolant level. (See [ENGINE COOLANT LEVEL INSPECTION \[MZR 2.5\]](#).)
8. Inspect for engine coolant leakage. (See [ENGINE COOLANT LEAKAGE INSPECTION \[MZR 2.5\]](#).)
9. Complete the "AFTER SERVICE PRECAUTION". (See [AFTER SERVICE PRECAUTION \[MZR 2.5\]](#).)

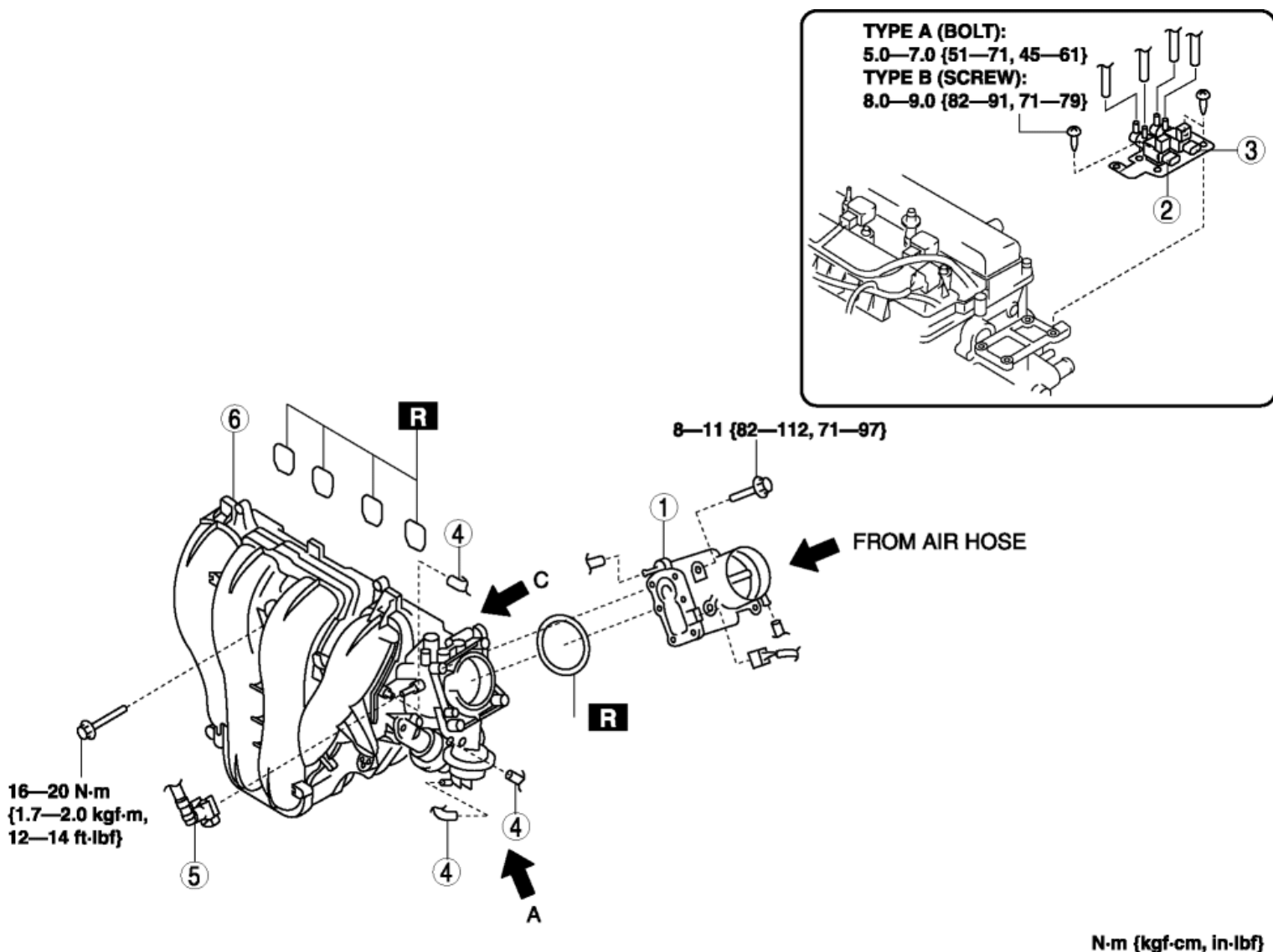
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9	Air cleaner bracket

Step 2



1	Throttle body (See Throttle Body Removal Note.) (See Throttle Body Installation Note.)
2	Variable intake air solenoid valve
3	Variable tumble solenoid valve
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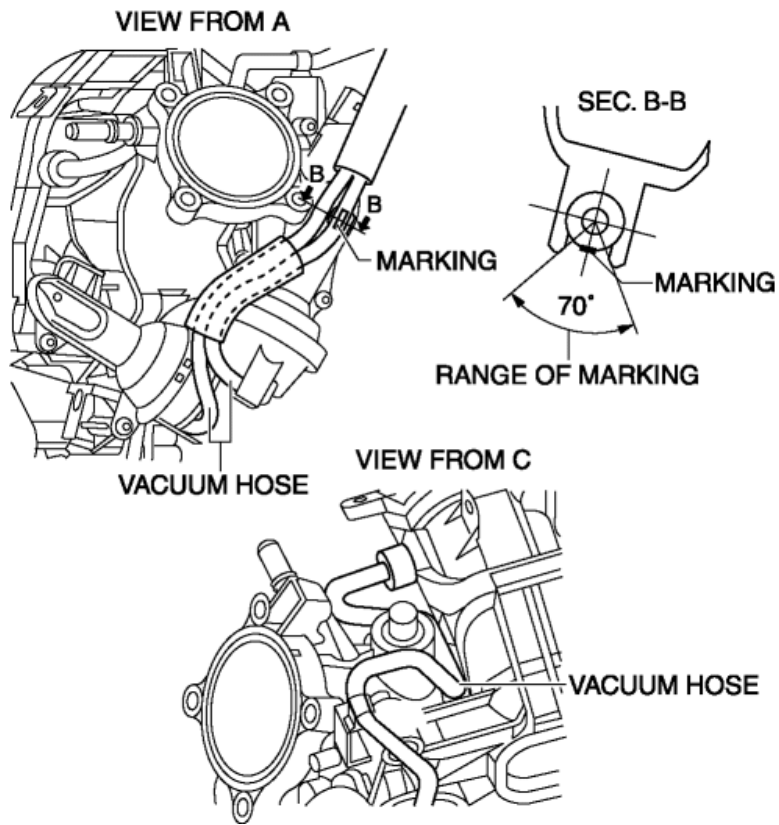
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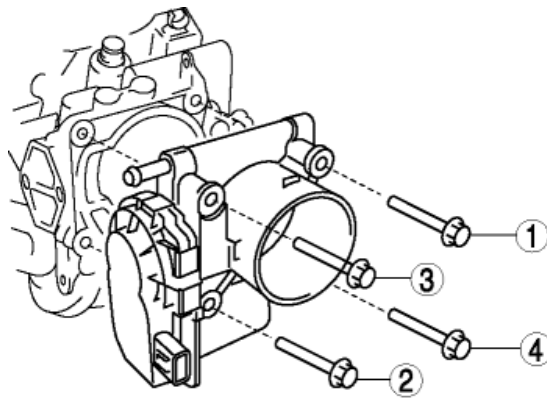
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Throttle body tightening torque

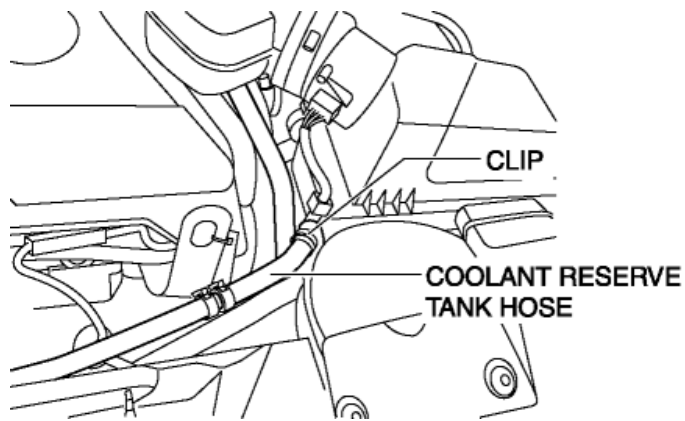
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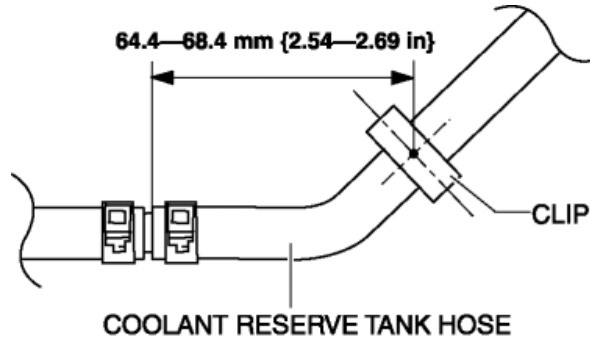
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