

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.

2024 Nissan Altima Service and Repair Manual

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EQUIPOTENTIAL TEST

After installing the electric compressor, measure the resistance below.

- Between electric compressor (aluminum part) and body (ground bolt).
- Between electric compressor (aluminum part) and traction motor inverter.

WARNING:



To prevent electric shock hazards, be sure to wear protective gear.



Standard

: Less than 0.1 Ω

If the result deviates from the standard value, check for paint, oil, dirt, or other substance adhering to the bolts or conductive mounting parts. If such substances are found, clean the surrounding area and remove foreign substances.

Sample

DANGER:

Since hybrid vehicles and electric vehicles contain a high voltage battery, there is the risk of electric shock, electric leakage, or similar accidents if the high voltage component and vehicle are handled incorrectly. Be sure to follow the correct work procedures when performing inspection and maintenance.

WARNING:

- Be sure to remove the service plug in order to disconnect the high voltage circuits before performing inspection or maintenance of high voltage system harnesses and parts.
- The removed service plug must always be carried in a pocket of the responsible worker or placed in the tool box during the procedure to prevent the plug from being connected by mistake.
- Be sure to wear insulating protective equipment consisting of glove, shoes, face shield and glasses before beginning work on the high voltage system.
- Never allow workers other than the responsible person to touch the vehicle containing high voltage parts. To keep others from touching the high voltage parts, these parts must be covered with an insulating sheet except when using them.
- Refer to [Precautions for High Voltage](#).

CAUTION:

- Never bring the vehicle into the READY status with the service plug removed unless otherwise instructed in the Service Manual. A malfunction may occur if this is not observed.
- Perform lubricant return operation before each refrigeration system disassembly. However, if a large amount of refrigerant or lubricant is detected, never perform lubricant return operation. Refer to [Perform Lubricant Return Operation](#).

REMOVAL

1 Follow the instructions below before starting the procedure.

CAUTION:

- Disconnect high voltage circuit. Refer to [HOW TO DISCONNECT HIGH VOLTAGE : Precautions](#).
- Check voltage in high voltage circuit. Refer to [CHECK VOLTAGE IN HIGH VOLTAGE CIRCUIT : Precautions](#).

2 Use a refrigerant collecting equipment (for HFO-1234yf) to discharge the refrigerant. Refer to [Recycle Refrigerant](#).

3 Remove high voltage power delivery assembly. Refer to [HIGH VOLTAGE POWER DELIVERY ASSEMBLY : Removal & Installation](#).

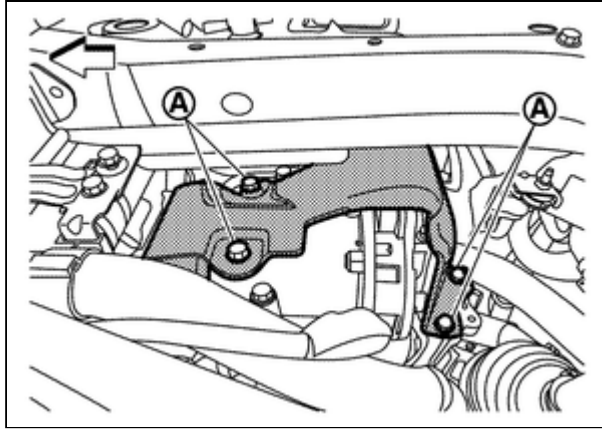
4 Remove Front tire LH. Refer to [ROAD WHEEL TIRE : Removal & Installation](#).

5 Remove front fender protector LH. Refer to [Removal & Installation](#).

6 Disconnect high-pressure flexible hose from electric compressor. Refer to [Removal & Installation](#).

7 Disconnect low-pressure flexible hose from electric compressor. Refer to [Removal & Installation](#).

8 Remove mounting bolts (A), and then remove compressor stay.



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WARNING:

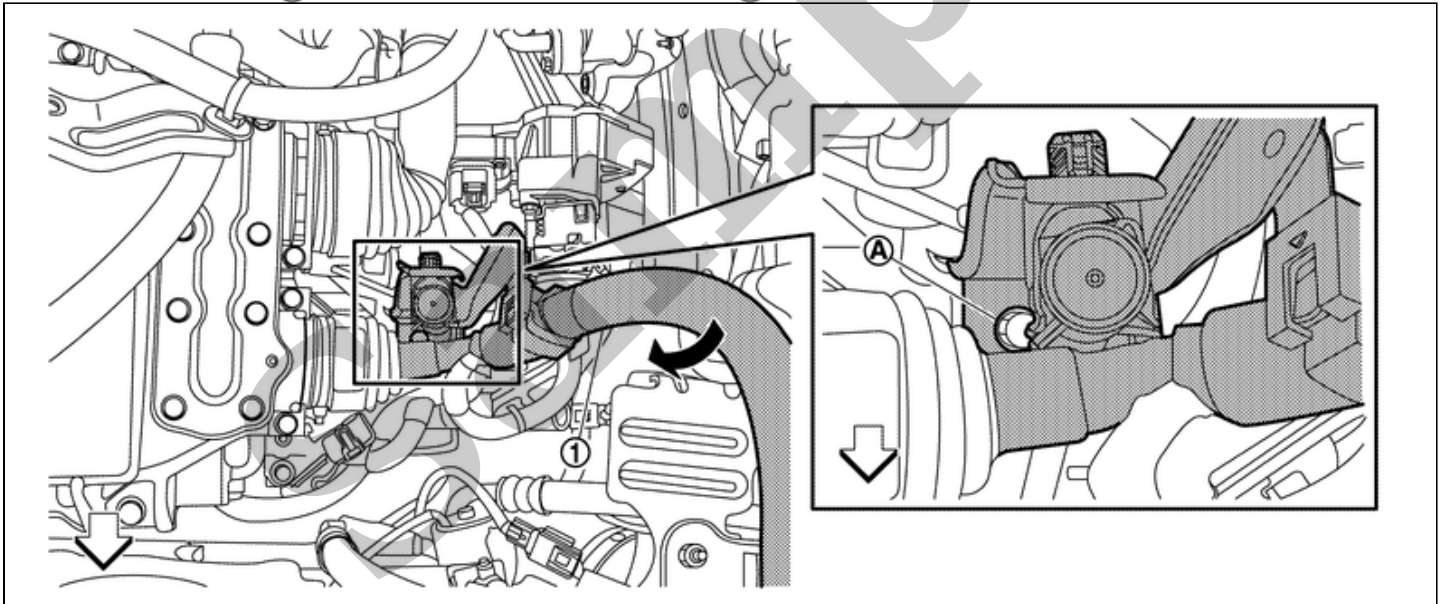


To prevent electric shock hazards, be sure to wear protective gear.



: Vehicle front

9 Remove mounting bolt (A), and then remove high voltage harness (1) from compressor bracket.



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WARNING:

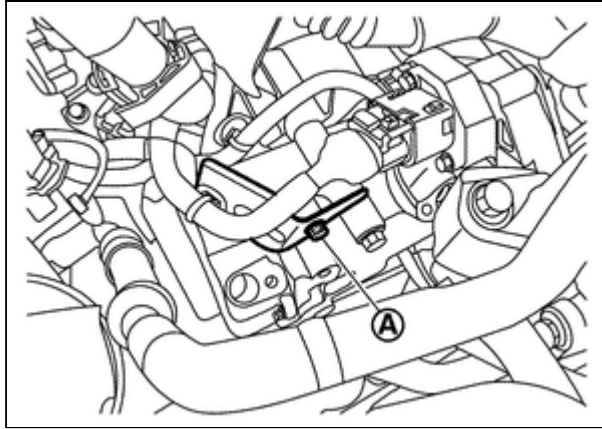


To prevent electric shock hazards, be sure to wear protective gear.



: Vehicle front

10 Remove mounting bolt (A) of high voltage harness bracket.



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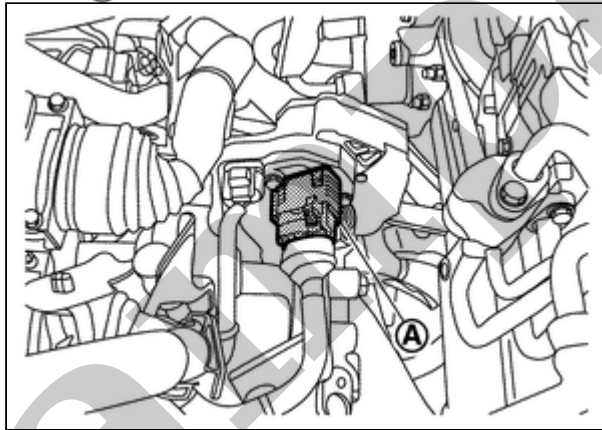
WARNING:



To prevent electric shock hazards, be sure to wear protective gear.



11 Disconnect high voltage harness connector (A).




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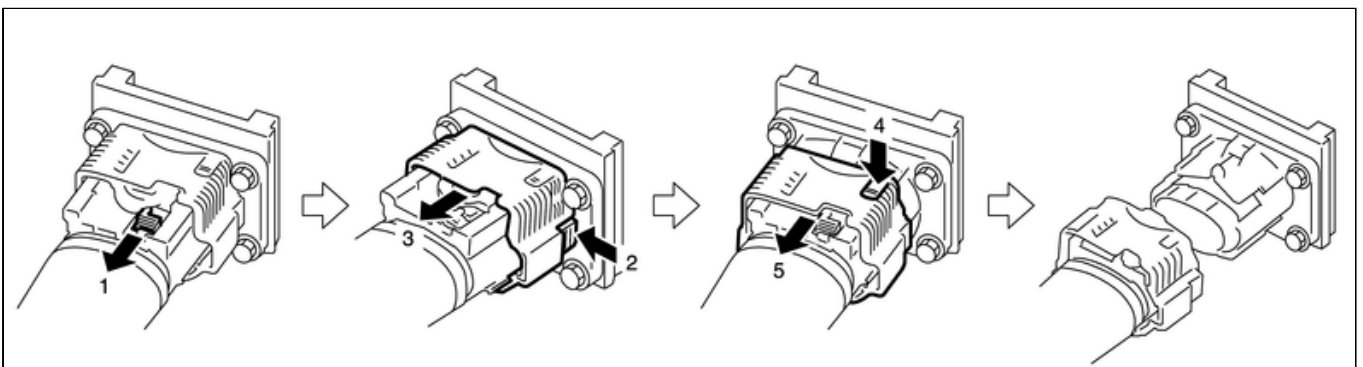
• **WARNING:**



To prevent electric shock hazards, be sure to wear protective gear.

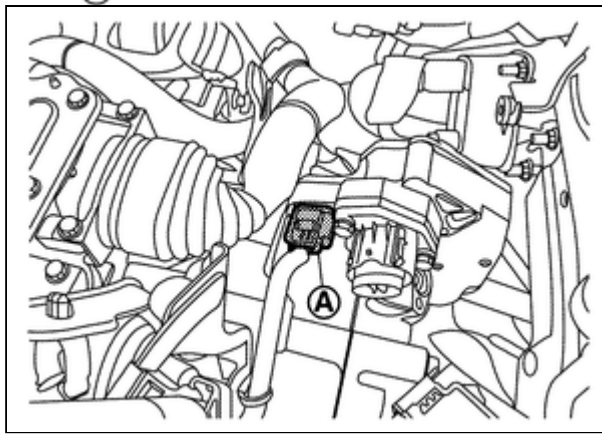


-  To prevent electric shock hazards, immediately wrap insulating tape around disconnected high voltage connector terminals.
- Disconnect high voltage harness connector according to numerical order 1 → 5 indicated by arrows as shown in the figure.



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12 Disconnect low voltage harness connector (A).



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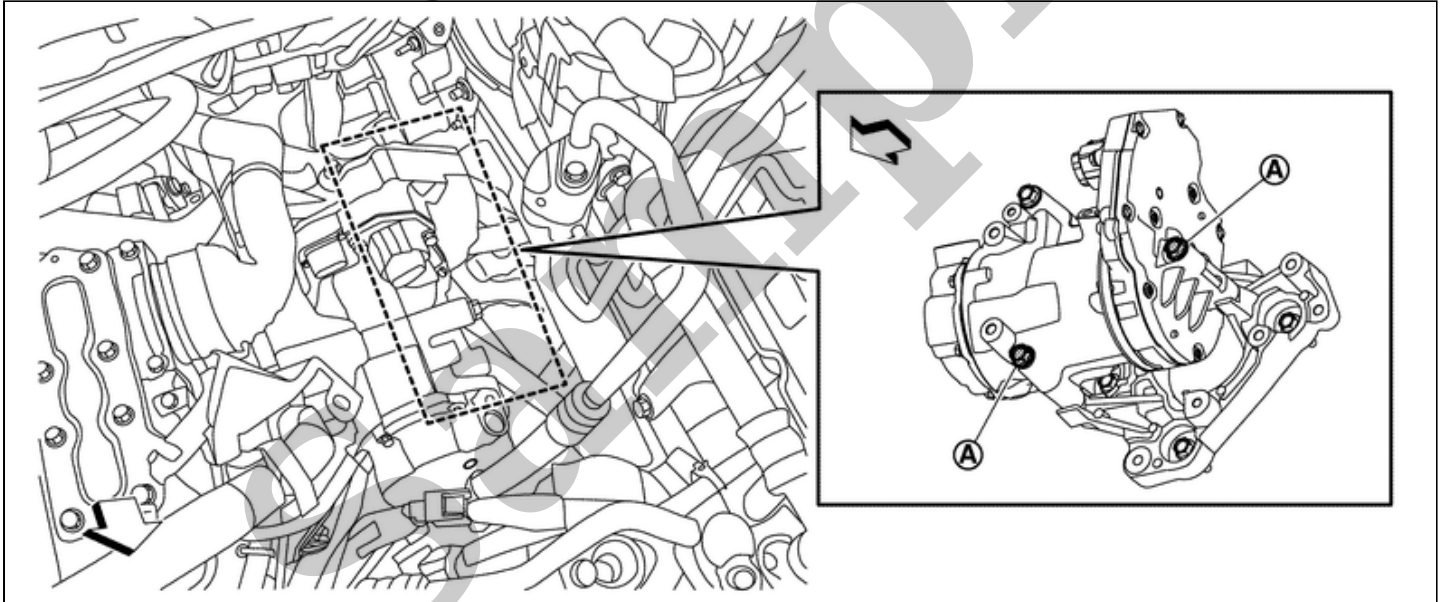
WARNING:



To prevent electric shock hazards, be sure to wear protective gear.



13 Remove lower side mounting bolts (A) of electric compressor.



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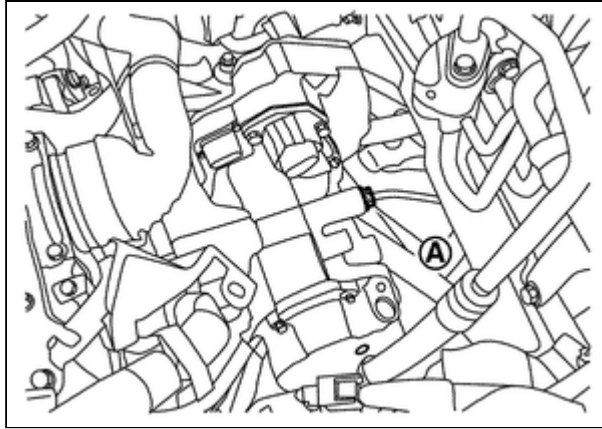


To prevent electric shock hazards, be sure to wear protective gear.



: Vehicle front

14 Completely loosen electric compressor upper side mounting bolt (A).



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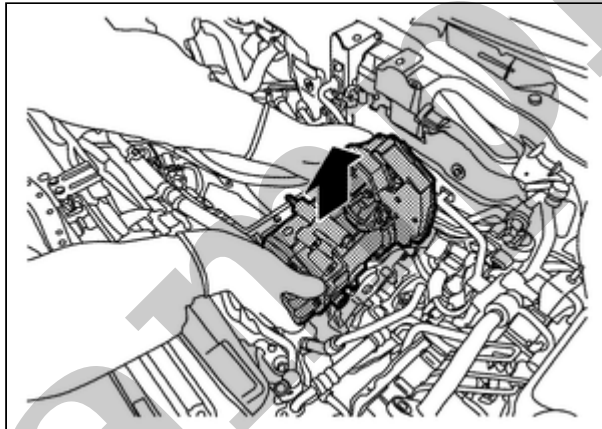
WARNING:



To prevent electric shock hazards, be sure to wear protective gear.



15 Remove electric compressor and electric compressor upper side mounting bolt as a set from vehicle.



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WARNING:



To prevent electric shock hazards, be sure to wear protective gear.



INSTALLATION

Note the following items, and then install in the reverse order of removal.

WARNING:



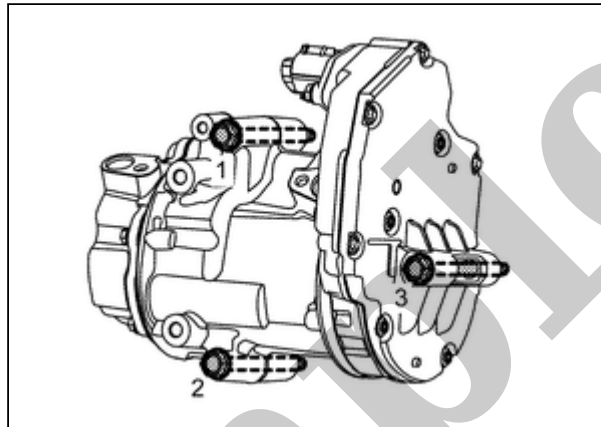
To prevent electric shock hazards, be sure to wear protective gear.



CAUTION:

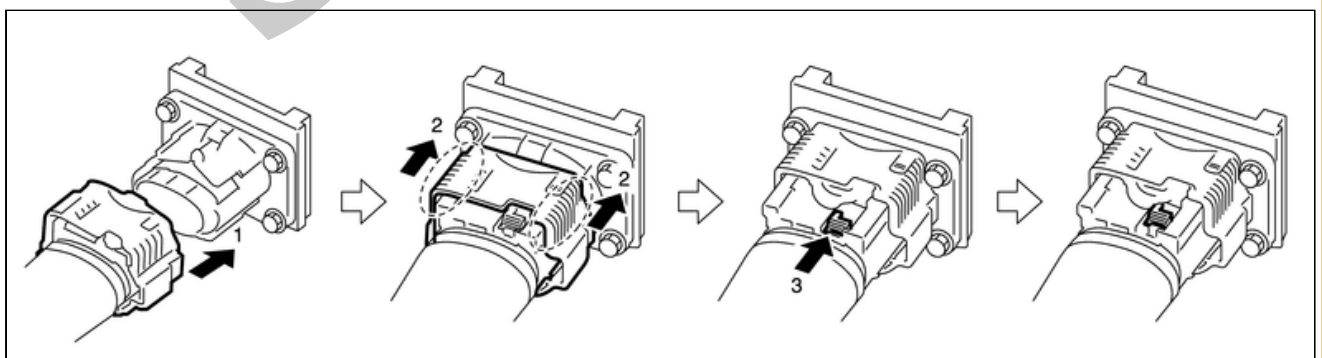
- Be sure to reinstall high voltage harness clip in their original position. If a clip is damaged, replace it with a new clip before installing.

- Before installing the new electric compressor, adjust the compressor oil level. Refer to [Lubricant Adjusting Procedure for Compressor Replacement](#).
- To prevent degradation in insulation performance, use special electric compressor oil as the compressor oil.
- In order to prevent conventional PAG oil from becoming mixed in, never reuse recovered electric compressor oil and instead always use new oil. The use of oil including the conventional PAG oil may degrade the performance of insulation.
- To prevent performance degradation, never use a fluorescent agent in order to detect refrigerant leakage. Also be careful that a fluorescent agent never enter the oil.
- No dust, oil or paint on the adhesive surface of electric compressor, electric compressor mounting bolts and compressor bracket. If it adheres, wipe it off with alcohol before installing it.
- For electric compressor installed, temporarily bolts according to numerical order 1 → 3, and then bolts to the specified torque. Refer to [Exploded View](#).



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- To prevent leakage of refrigerant, replace the O-ring with a new one. Apply a coat of electric compressor oil to the O-ring prior to installation.
- Use a refrigerant collecting equipment (for HFO-1234yf) to charge the refrigerant. Refer to [Charge Refrigerant](#).
- Perform a check for refrigerant leakage when charging with refrigerant. Refer to [Leak Test](#).
- Set the vehicle to READY and operate the air-conditioner for at least 1 minute with the vehicle parked to perform a break-in.
- Connect the high voltage harness connector according to the numerical order 1 → 3 indicated by arrows as shown in the figure.

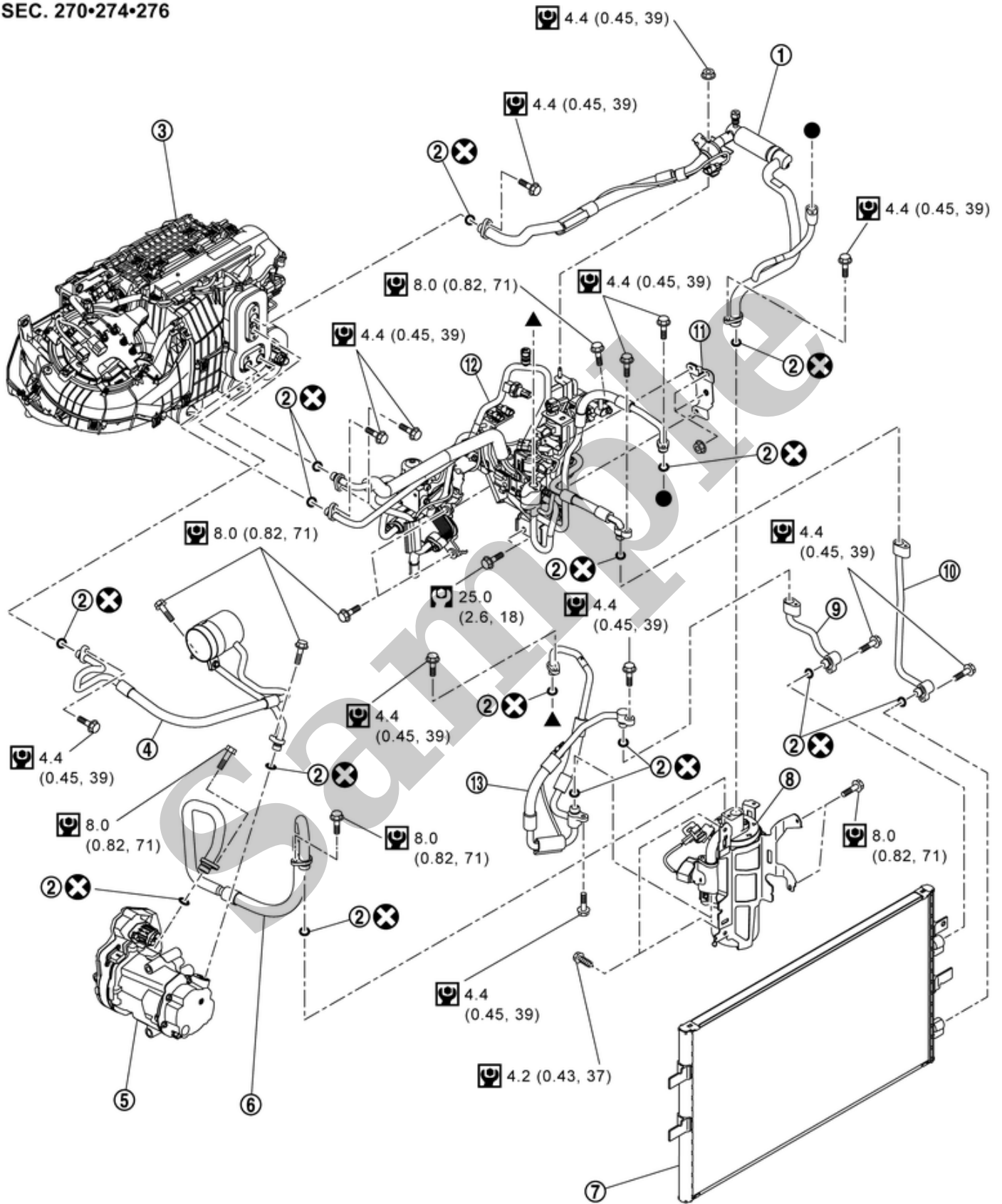


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- After all parts are installed, be sure to check the equipotential. Refer to [Inspection](#).

Removal & Installation

SEC. 270•274•276



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①	Low-pressure refrigerator pipe assembly	②	O-ring	③	A/C unit assembly
④	High-pressure flexible hose	⑤	Electric compressor	⑥	Low-pressure flexible hose
⑦	Condenser	⑧	Accumulator assembly	⑨	Cooler pipe A

⑩	Cooler pipe B	⑪	Bracket	⑫	High-pressure cooler pipe assembly
⑬	High-pressure flexible pipe assembly				
⊗	: Always replace after every disassembly.				
🔧	: N•m (kg-m, in-lb)				
● ▲	: Indicates that the part is connected at points with same symbol in actual vehicle.				

Disassembly & Assembly

HIGH-PRESSURE COOLER PIPE ASSEMBLY

Sample