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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.

2013 Nissan Titan Service and Repair Manual

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Oil Leakage Inspection

- Check that there is no oil leakage around the front traction motor.
- If an abnormality is found, replace the front traction motor. Refer to [FRONT TRACTION MOTOR : Removal & Installation](#).

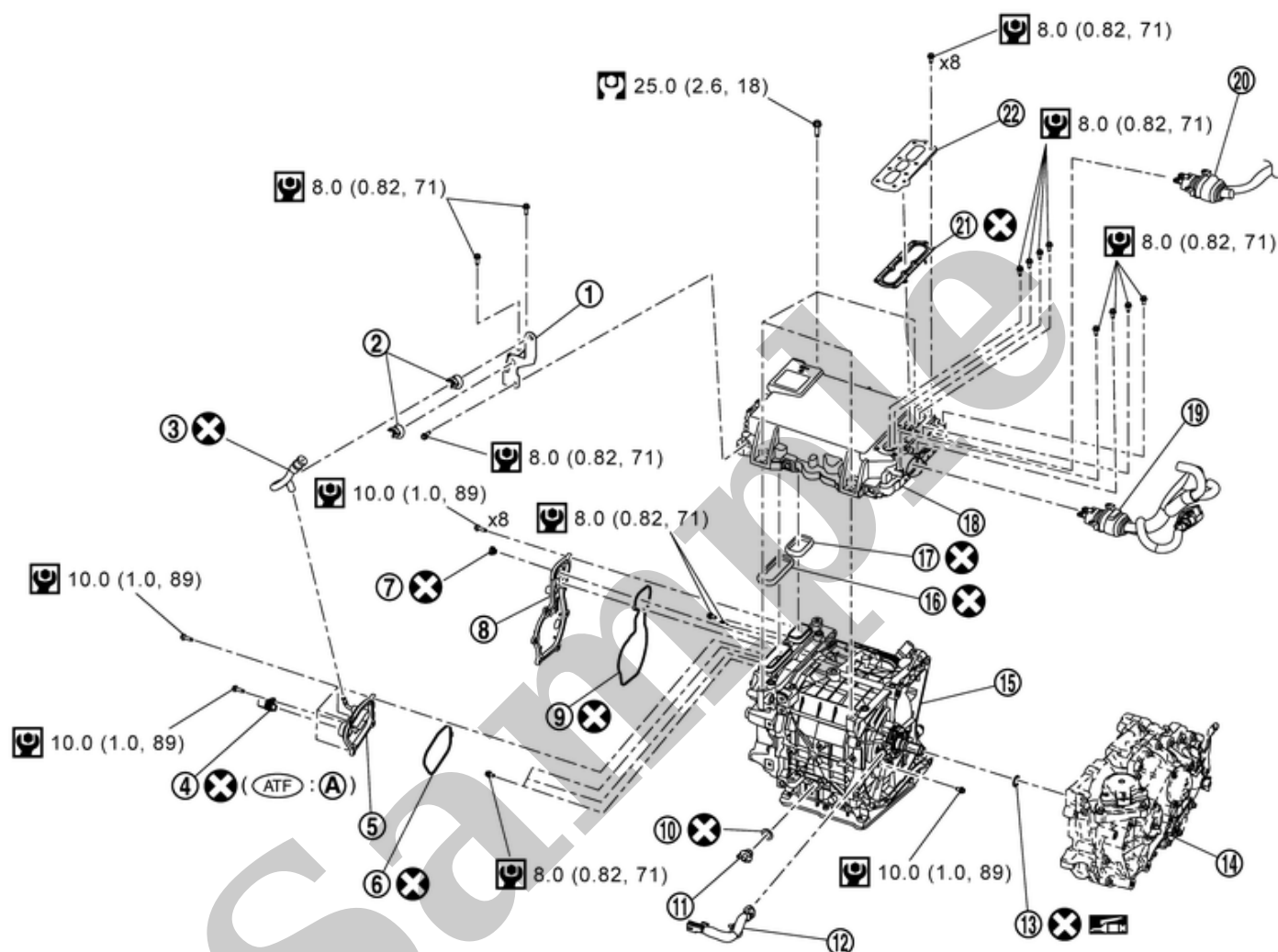
Sample

INVERTER (FRONT) : Exploded View

RDE-002027873






INVERTER (FRONT) AND FRONT TRACTION MOTOR

SEC. 290



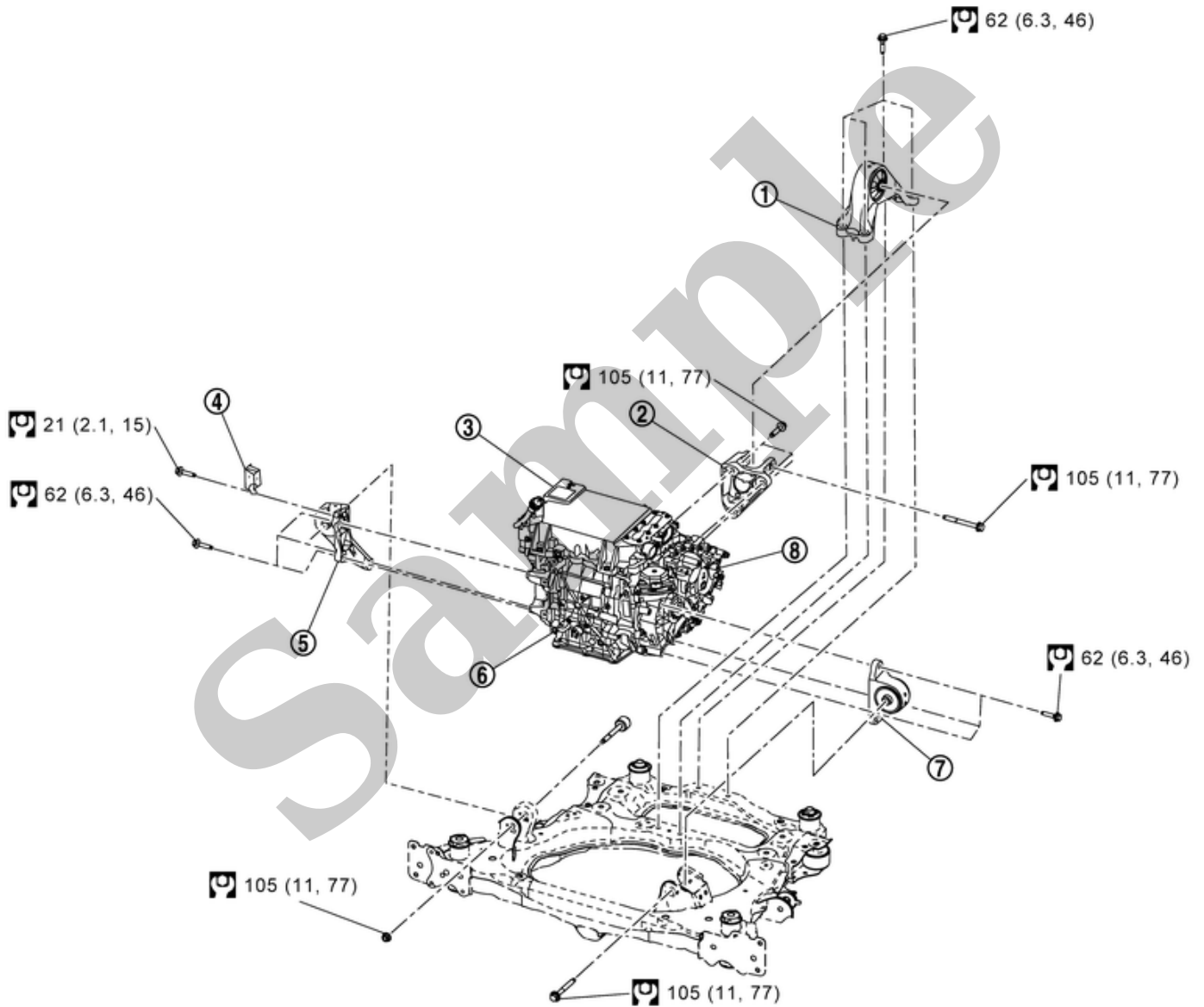
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①	Bracket	②	Clip	③	Air breather hose
④	Front traction motor stator temperature sensor joint connector	⑤	3-phase bus bar cover	⑥	Gasket
⑦	Breather	⑧	Excitation cover	⑨	Gasket
⑩	Gasket	⑪	Plug	⑫	Resolver harness
⑬	O-ring	⑭	Reduction gear	⑮	Front traction motor
⑯	Seal	⑰	Seal	⑱	Inverter (front)
⑲	High voltage harness	⑳	High voltage harness	㉑	Gasket
㉒	High voltage harness cover	Ⓐ	O-ring		


	: Always replace after every disassembly.				
	: N·m (kg-m, in-lb)				
	: N·m (kg-m, ft-lb)				
	: Apply lithium-based grease including molybdenum disulphide.				
	: Apply Genuine NISSAN Matic S ATF or equivalent.				

FRONT TRACTION MOTOR MOUNTING

SEC. 112



RDE-002027873-02-000379793

①	Motor mounting rear	②	Motor mounting bracket rear	③	Inverter (front)
④	Bracket	⑤	Motor mounting RH	⑥	Front traction motor
⑦	Motor mounting LH	⑧	Reduction gear		
	: N·m (kg-m, ft-lb)				

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 [HIGH VOLTAGE PRECAUTIONS : Precautions](#).

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.
- Never remove plug and gasket of front traction motor. If they are removed by mistake, replace the gasket with a new one and install them.

REMOVAL

WARNING:

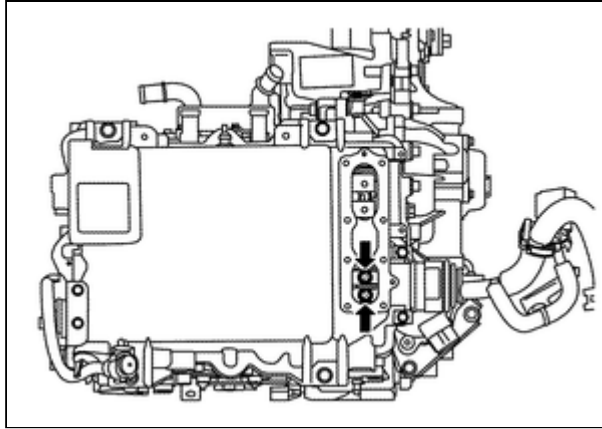
Follow the instructions below before starting the procedure.

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

1 Remove inverter (front), front traction motor and reduction gear from vehicle together as suspension member assembly. Refer to [FRONT SUSPENSION MEMBER : Removal & Installation](#).

2 Remove the electric compressor, low-pressure flexible hose, and high-pressure flexible hose together. Refer to [Removal & Installation](#).

3 Remove high voltage harness terminal mounting bolts (←).



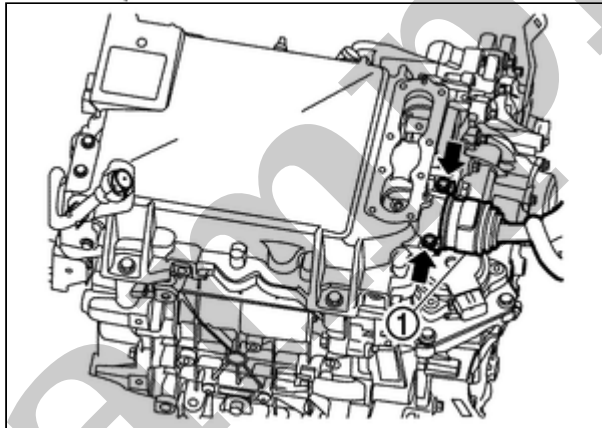
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WARNING:

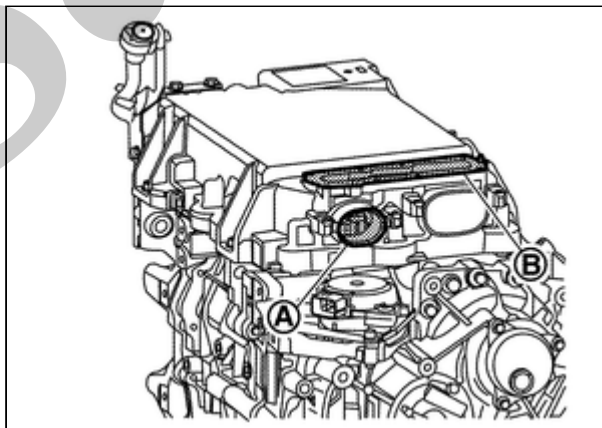
To prevent electric shock hazards, be sure to put on insulating protective gear before beginning work on the high voltage system.



4 Remove high voltage harness mounting bolts (←), and then disconnect high voltage harness ①.



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RPR-002027875-03-000359593

WARNING:

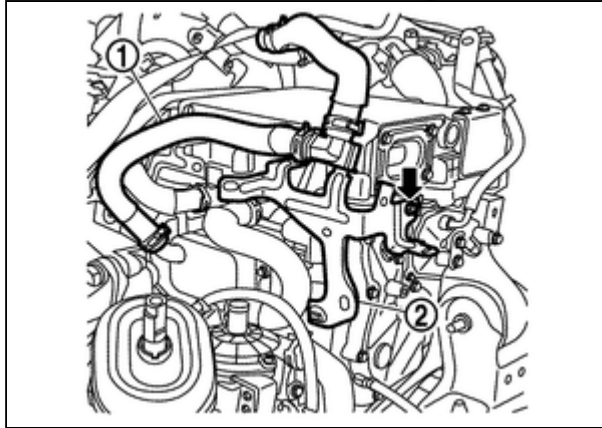
To prevent electric shock hazards, be sure to put on insulating protective gear before beginning work on the high voltage system.



CAUTION:

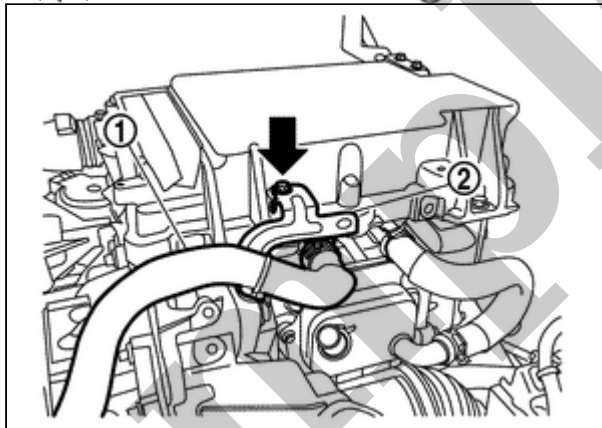
Cover the opening (A) and (B) with tape to prevent dust, dirt, foreign material, etc. from entering the inverter (front) after removing the high voltage harness mounting bolt.

5 Remove harness bracket mounting bolt (←), and then remove water hose (1) and harness bracket (2).



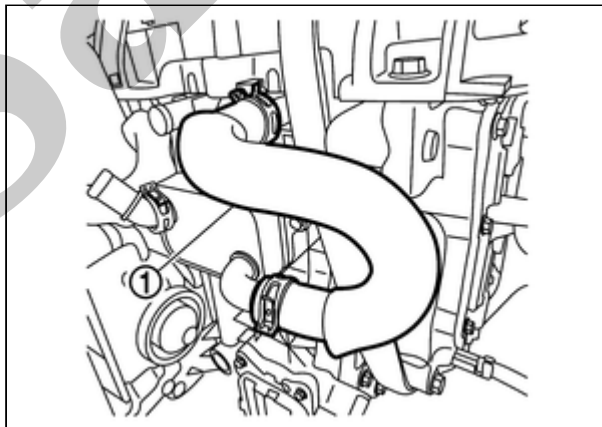
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6 Remove harness bracket mounting bolt (←), and then remove water hose (1) and harness bracket (2).



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7 Remove the water hose (1).

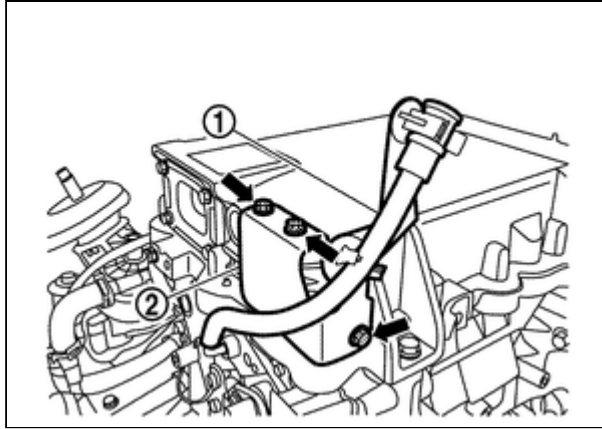


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8 Remove the bracket mounting bolts (←) and remove the breather hose (1) and bracket (2).

CAUTION:

If the air breather hose was pulled out, do not reuse the air breather hose.



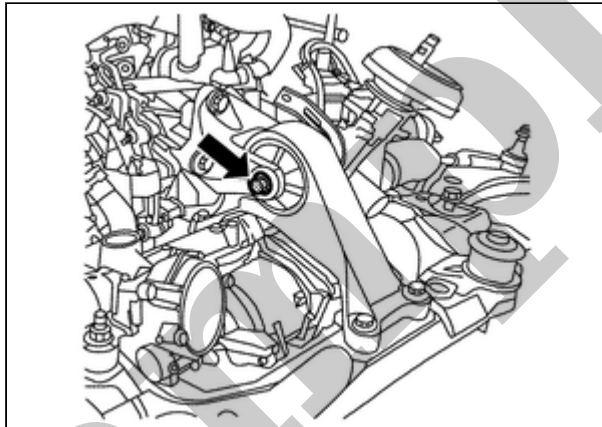
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9 Attach sling belts to the inverter (front), front traction motor, and reduction gear, and prepare to separate them from the front suspension member assembly.

CAUTION:

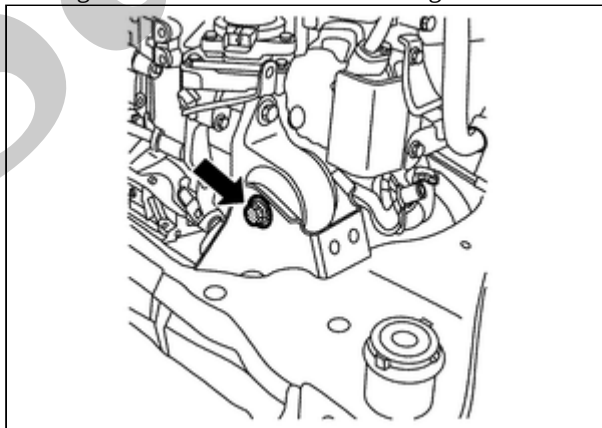
When attaching the sling belts, avoid locations of connectors and other parts that are easily damaged.

10 Remove joint bolt (←) of motor mounting bracket rear and motor mounting rear.



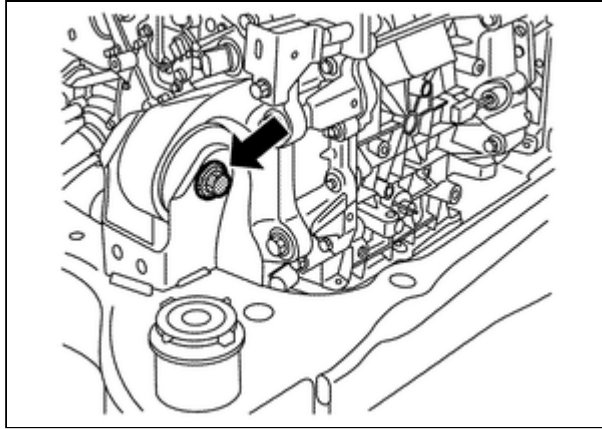
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11 Remove joint bolt (←) of motor mounting bracket LH and motor mounting LH.



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12 Remove joint bolt (←) of motor mounting bracket RH and motor mounting RH.



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13 Remove the water hose from electric water pump for Li-ion battery, and then remove the electric water pump. Refer to [ELECTRIC WATER PUMP : Removal & Installation](#).

14 Remove the water hose from electric water pump, and then remove the electric water pump. Refer to [ELECTRIC WATER PUMP : Removal & Installation](#).

15 Use a hoist to lift up the inverter (front), front traction motor, and reduction gear, and separate them from the front suspension member assembly.

CAUTION:

Lift slowly and be careful that the inverter (front), front traction motor, and reduction gear do not fall.

WARNING:

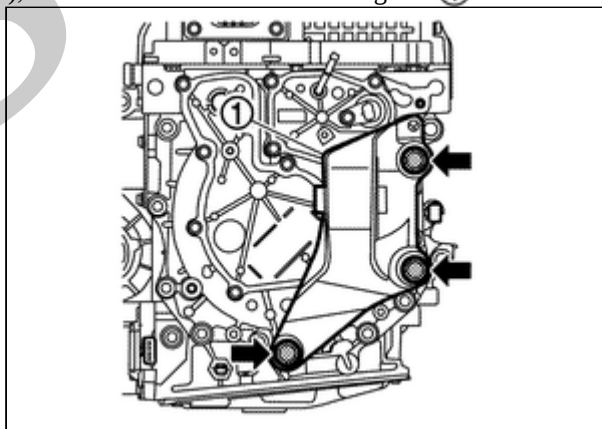
To prevent electric shock hazards, be sure to put on insulating protective gear before beginning work on the high voltage system.

16 Slowly lower the inverter (front), front traction motor, and reduction gear onto sandbags or similar objects, then disconnect the sling belts from the hoist.

CAUTION:

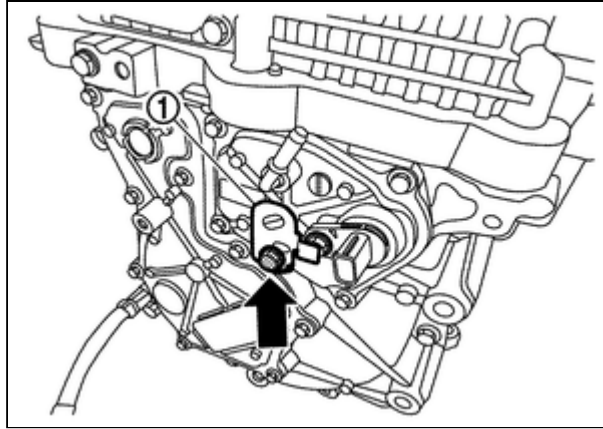
Use pieces of wood or other means to maintain the balance to prevent the inverter (front), front traction motor, and reduction gear from falling over.

17 Remove motor mounting bolts (←), and then remove motor mounting RH ①.



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18 Remove harness bracket mounting bolt (←), and then remove harness bracket ①.



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19 Remove three-phase bus bar cover mounting bolts (←), and then remove three-phase bus bar cover ①.

WARNING:

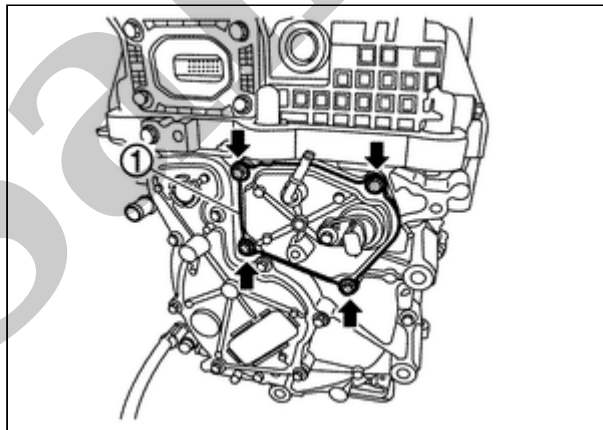


When performing high voltage system operations, be sure to wear insulated protective gear.



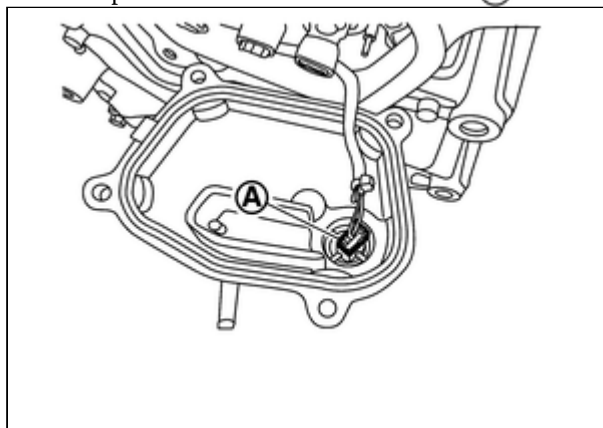
CAUTION:

- Do not remove the stator temperature sensor joint connector for the front traction motor from the three-phase bus bar cover.
- The stator temperature sensor joint connector for the front traction motor is a non-reusable part. Do not reuse it.
- Oil may leak out from the opening. If it does, use cloth or other material to wipe it up.



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20 Disconnect the front traction motor stator temperature sensor harness connector ①.



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