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SECTION EX
EXHAUST SYSTEM

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HOW TO USE THIS MANUAL

APPLICATION NOTICE

Information

INFOID:000000013826225

Check the engine type to use the service information in this section.

As per the engine type, refer to [GI-35, "Model Variation"](#)

Service information	Engine type
Type 1	Turbo high pressure
Type 2	Turbo low pressure

PRECAUTION

PRECAUTIONS

Precautions for Removing Battery Terminal

INFOID:000000013600646

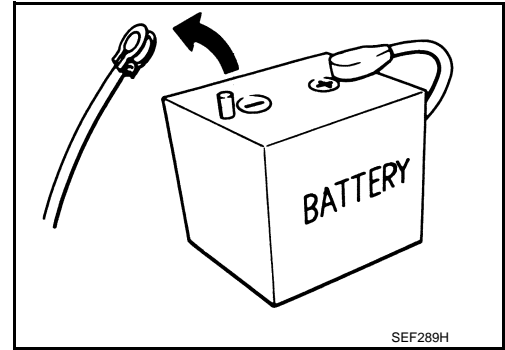
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When disconnecting the battery terminal, pay attention to the following.

- Always use a 12V battery as power source.
- Never disconnect battery terminal while engine is running.
- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
- For vehicles with the engine listed below, remove the battery terminal after a lapse of the specified time:

BR08DE	: 4 minutes	V9X engine	: 4 minutes
D4D engine	: 20 minutes	YD25DDTi	: 2 minutes
HR09DET	: 12 minutes	YS23DDT	: 4 minutes
HRA2DDT	: 12 minutes	YS23DDTT	: 4 minutes
K9K engine	: 4 minutes	ZD30DDTi	: 60 seconds
M9R engine	: 4 minutes	ZD30DDTT	: 60 seconds
R9M engine	: 4 minutes		



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NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- After high-load driving, if the vehicle is equipped with the V9X engine, turn the ignition switch OFF and wait for at least 15 minutes to remove the battery terminal.

NOTE:

- Turbocharger cooling pump may operate in a few minutes after the ignition switch is turned OFF.
- Example of high-load driving
 - Driving for 30 minutes or more at 140 km/h (86 MPH) or more.
 - Driving for 30 minutes or more on a steep slope.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

NOTE:

The removal of 12V battery may cause a DTC detection error.

Removal and Installation

INFOID:000000012788971

CAUTION:

- Be sure to use genuine exhaust system parts or equivalents which are specially designed for heat resistance, corrosion resistance, and shape.
- Perform the operation with the exhaust system fully cooled down because the system will be hot just after engine stops.
- Be careful not to cut your hand on the heat insulator edge.
- Never use silicon-containing products (e.g. oil) to prevent malfunctions such as the interference with the conduction of electricity and the occurrence of noise in the radio.

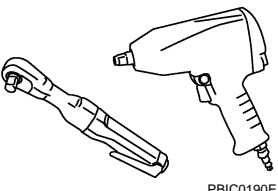
< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

INFOID:000000012788973

Tool name	Description
<p data-bbox="162 415 267 441">Power tool</p>  <p data-bbox="828 630 901 651">PBIC0190E</p>	<p data-bbox="1015 415 1266 441">Loosening bolts and nuts</p>

PERIODIC MAINTENANCE

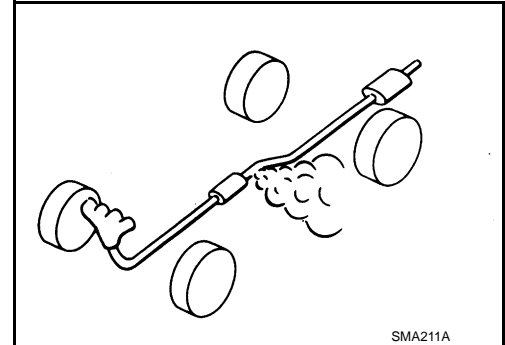
EXHAUST SYSTEM

Inspection

Check exhaust pipes, muffler and mounting for improper attachment, leaks, cracks, damage or deterioration.

- If anything is found, repair or replace damaged parts.

INFOID:000000012788974



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EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

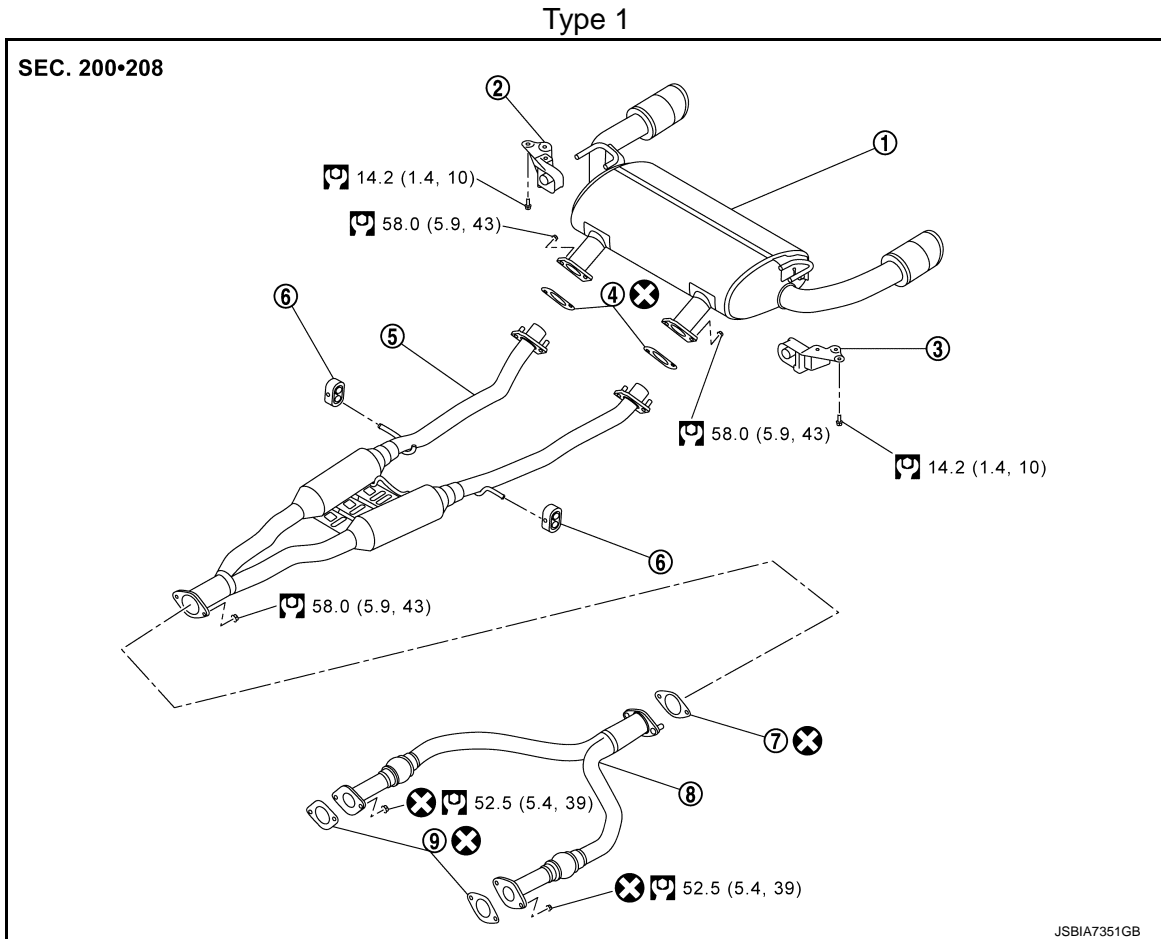
[VR30DDTT]

REMOVAL AND INSTALLATION

EXHAUST SYSTEM

Exploded View

INFOID:000000012788975



① Main muffler

② Mounting rubber (RH)

③ Mounting rubber (LH)

④ Gasket

⑤ Center muffler

⑥ Mounting rubber

⑦ Gasket

⑧ Exhaust front tube

⑨ Gasket

: N·m (kg-m, ft-lb)

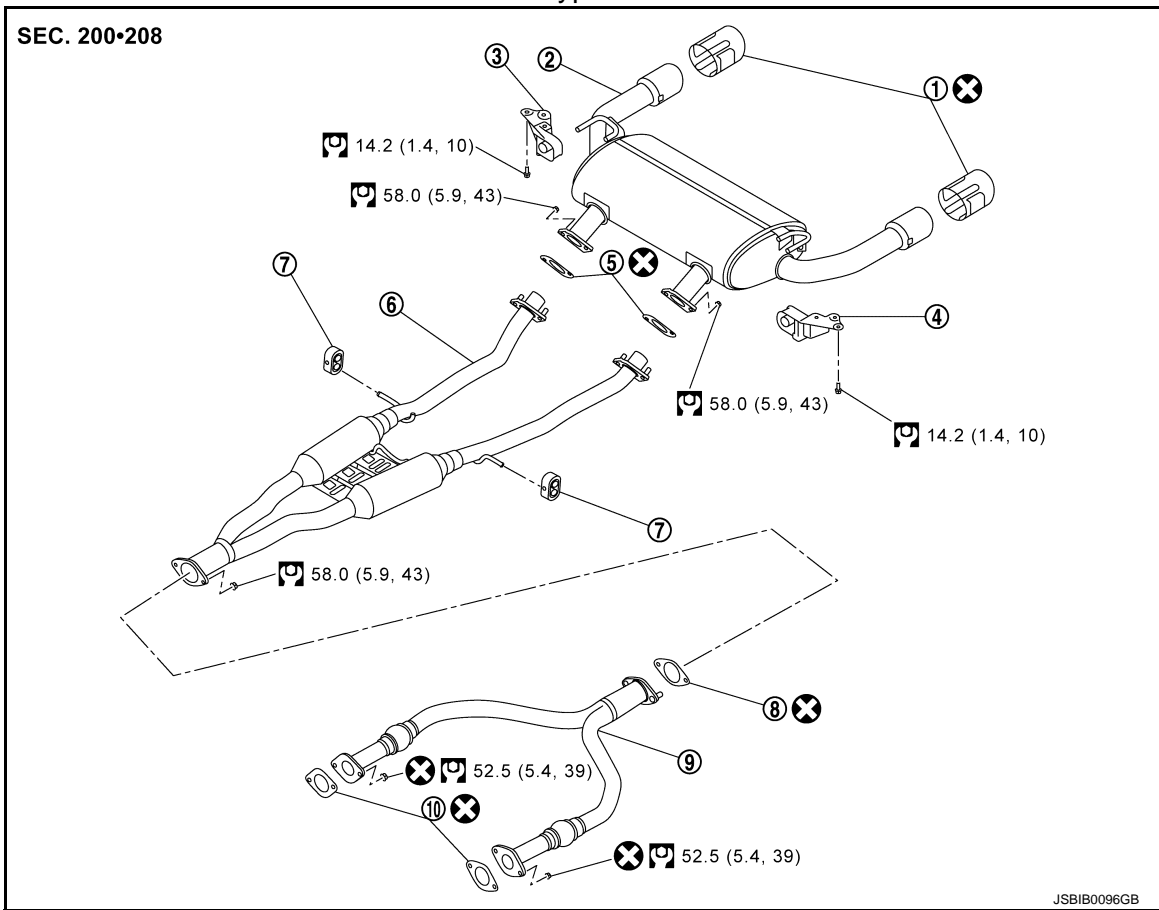
: Always replace after every disassembly.

EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

[VR30DDTT]

Type 2



- | | | |
|------------------------|----------------|------------------------|
| ① Exhaust finisher | ② Main muffler | ③ Mounting rubber (RH) |
| ④ Mounting rubber (LH) | ⑤ Gasket | ⑥ Center muffler |
| ⑦ Mounting rubber | ⑧ Gasket | ⑨ Exhaust front tube |
| ⑩ Gasket | | |

: N·m (kg·m, ft·lb)

: Always replace after every disassembly.

Removal and Installation

INFOID:000000012788976

REMOVAL

Disconnect each joint and mounting using power tool.

INSTALLATION

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

- Temporarily tighten nuts and bolts when installing exhaust pipe assembly. Tighten them to the specified torque when connecting the vehicle rear to the vehicle front.

CAUTION:

- Always replace exhaust tube gaskets with new ones when reassembling.
- Remove deposits from the sealing surface of each connection. Connect them securely to avoid gases leakage.
- Temporarily tighten mounting nuts on the exhaust manifold side and mounting bolts on the vehicle side. Check each part for unusual interference, and then tighten them to the specified torque.
- When installing each mounting rubber, avoid twisting or unusual extension in up/down and right/left directions.

Exhaust finisher

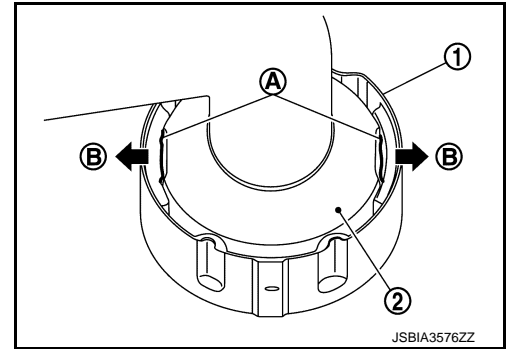
EXHAUST SYSTEM

[VR30DDTT]

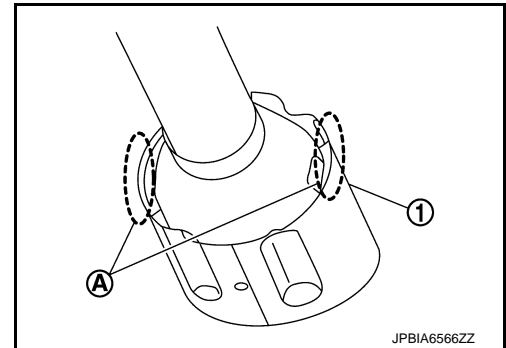
< REMOVAL AND INSTALLATION >

1. Expand the portion (A) of inside exhaust finisher (1) in the direction (B) with a flat blade screwdriver.

(2) : Main muffler



2. Hammer the portion (A) of exhaust finisher (1) to remove it in the rearward direction of vehicle.



Inspection

INFOID:000000012788977

INSPECTION AFTER INSTALLATION

- Check clearance between tail tube and rear bumper is even.
- With engine running, check exhaust tube joints for gas leaks and unusual noises.
- Check to ensure that mounting brackets and mounting rubbers are installed properly and free from undue stress. Improper installation could result in excessive noise and vibration.

PRECAUTION

PRECAUTIONS

Precautions for Removing Battery Terminal

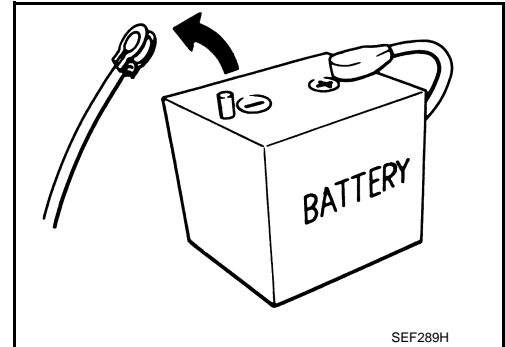
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When disconnecting the battery terminal, pay attention to the following.

- Always use a 12V battery as power source.
- Never disconnect battery terminal while engine is running.
- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
- For vehicles with the engine listed below, remove the battery terminal after a lapse of the specified time:

BR08DE	: 4 minutes	V9X engine	: 4 minutes
D4D engine	: 20 minutes	YD25DDTi	: 2 minutes
HR09DET	: 12 minutes	YS23DDT	: 4 minutes
HRA2DDT	: 12 minutes	YS23DDTT	: 4 minutes
K9K engine	: 4 minutes	ZD30DDTi	: 60 seconds
M9R engine	: 4 minutes	ZD30DDTT	: 60 seconds
R9M engine	: 4 minutes		



NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- After high-load driving, if the vehicle is equipped with the V9X engine, turn the ignition switch OFF and wait for at least 15 minutes to remove the battery terminal.

NOTE:

- Turbocharger cooling pump may operate in a few minutes after the ignition switch is turned OFF.
- Example of high-load driving
 - Driving for 30 minutes or more at 140 km/h (86 MPH) or more.
 - Driving for 30 minutes or more on a steep slope.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

NOTE:

The removal of 12V battery may cause a DTC detection error.

Removal and Installation

INFOID:0000000012958254

CAUTION:

- Be sure to use genuine exhaust system parts or equivalents which are specially designed for heat resistance, corrosion resistance, and shape.
- Perform the operation with the exhaust system fully cooled down because the system will be hot just after engine stops.
- Be careful not to cut your hand on the heat insulator edge.
- Never use silicon-containing products (e.g. oil) to prevent malfunctions such as the interference with the conduction of electricity and the occurrence of noise in the radio.

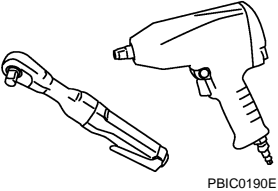
< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

INFOID:0000000012958255

Tool name	Description
<p data-bbox="162 415 272 441">Power tool</p>  <p data-bbox="828 630 901 646">PBIC0190E</p>	<p data-bbox="1015 415 1263 441">Loosening bolts and nuts</p>

PERIODIC MAINTENANCE

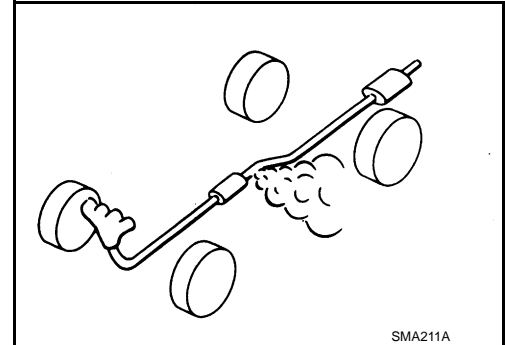
EXHAUST SYSTEM

Inspection

Check exhaust pipes, muffler and mounting for improper attachment, leaks, cracks, damage or deterioration.

- If anything is found, repair or replace damaged parts.

INFOID:0000000012958256



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EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

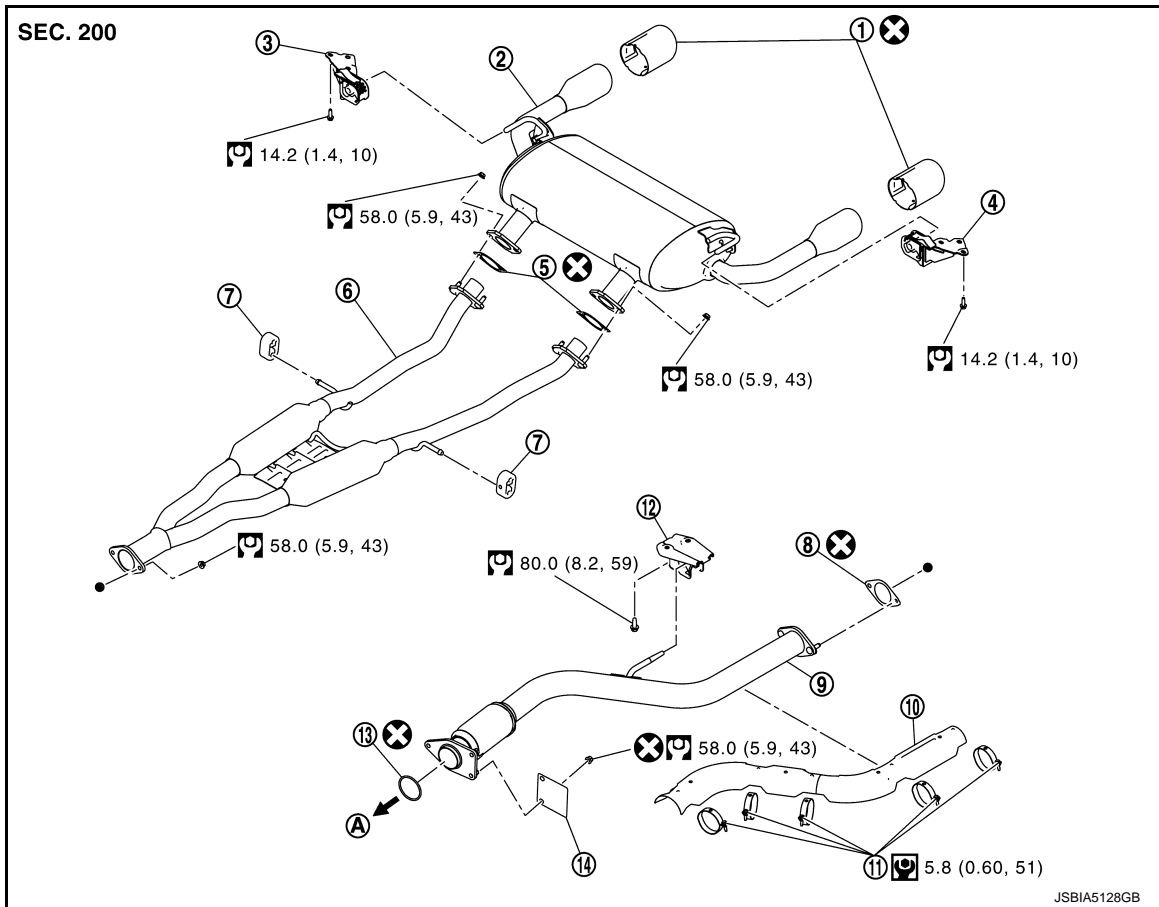
[2.0L TURBO GASOLINE ENGINE]

REMOVAL AND INSTALLATION

EXHAUST SYSTEM

Exploded View

INFOID:000000012958257



- | | | |
|------------------------|------------------|------------------------|
| ① Diffuser | ② Main muffler | ③ Mounting rubber (RH) |
| ④ Mounting rubber (LH) | ⑤ Gasket | ⑥ Center muffler |
| ⑦ Mounting rubber | ⑧ Gasket | ⑨ Exhaust front tube |
| ⑩ Heat insulator | ⑪ Clamp | ⑫ Mounting rubber |
| ⑬ Ring gasket | ⑭ Heat insulator | |

Ⓐ To Three way catalyst

: N-m (kg-m, in-lb)

: N-m (kg-m, ft-lb)

: Always replace after every disassembly.

: Indicates that the part is connected at points with same symbol in actual vehicle.

Removal and Installation

INFOID:000000012958258

REMOVAL

- Disconnect each joint and mounting using power tool.

Diffuser

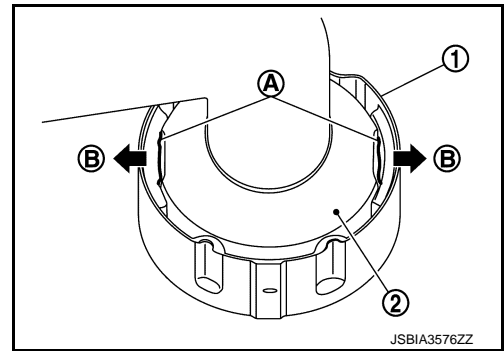
EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

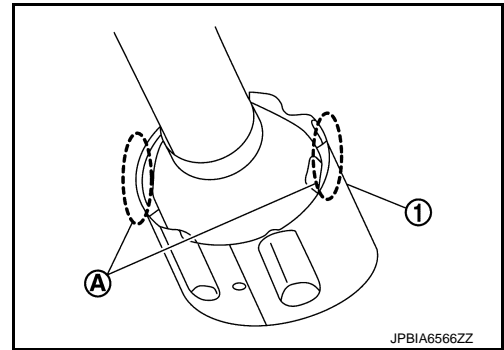
[2.0L TURBO GASOLINE ENGINE]

1. Expand the portion (A) of inside diffuser (1) in the direction (B) with a flat blade screwdriver.

(2) : Main muffler



2. Hammer the portion (A) of diffuser (1) to remove it in the rearward direction of vehicle.



INSTALLATION

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

- Temporarily tighten nuts and bolts when installing exhaust pipe assembly. Tighten them to the specified torque when connecting the vehicle rear to the vehicle front.

CAUTION:

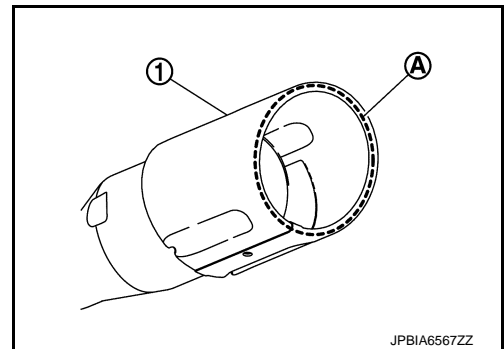
- Always replace exhaust tube gaskets with new ones when reassembling.
- If heat insulator is badly deformed, repair or replace it. If deposits such as mud pile up on the heat insulator, remove them.
- When installing heat insulator avoid large gaps or interference between heat insulator and each exhaust pipe.
- Remove deposits from the sealing surface of each connection. Connect them securely to avoid gases leakage.
- Temporarily tighten mounting nuts on the exhaust manifold side and mounting bolts on the vehicle side. Check each part for unusual interference, and then tighten them to the specified torque.
- When installing each mounting rubber, avoid twisting or unusual extension in up/down and right/left directions.

Diffuser

1. Insert diffuser (1) by using a plastic hammer.

CAUTION:

Never damage the portion (A) of the diffuser.



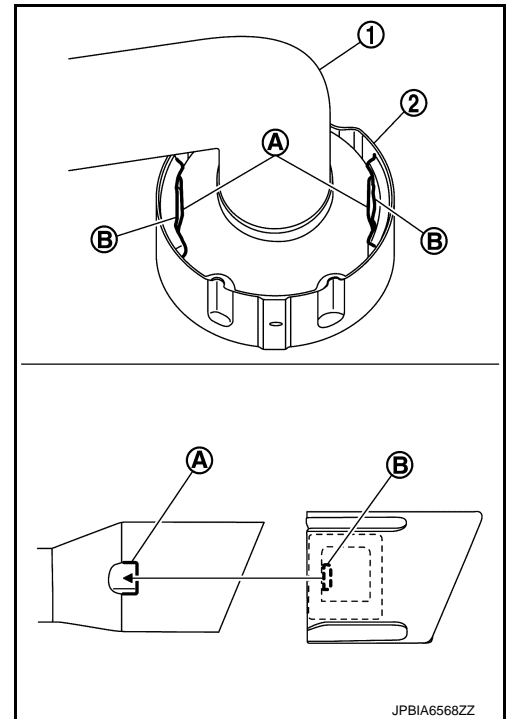
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EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

[2.0L TURBO GASOLINE ENGINE]

2. Check that the portion ② of diffuser ② is tightly fitted to the portion ① of main muffler ①.



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Inspection

INFOID:000000012958259

INSPECTION AFTER INSTALLATION

- Check clearance between tail tube and rear bumper is even.
- With engine running, check exhaust tube joints for gas leaks and unusual noises.
- Check to ensure that mounting brackets and mounting rubbers are installed properly and free from undue stress. Improper installation could result in excessive noise and vibration.