

SECTION

EX

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EXHAUST SYSTEM

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PRECAUTION

PRECAUTIONS

Removal and Installation

INFOID:000000000905770

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.

PREPARATION

< PREPARATION >

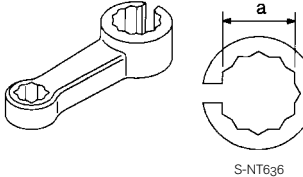
[HR16DE]

PREPARATION

PREPARATION

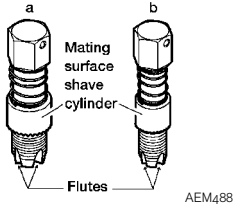
Special Service Tools

INFOID:000000000905778

Tool number Tool name	Description
KV10114400 Heated oxygen sensor wrench	Loosening or tightening heated oxygen sensor 2 For 22 mm (0.87 in) width hexagon nut
 S-NT636	

Commercial Service Tools

INFOID:000000000905779

Tool name	Description
Heated oxygen sensor thread cleaner	Reconditioning the exhaust system threads before installing a new heated oxygen sensor (Use with anti-seize lubricant shown below.) a: 18 mm (0.71 in) dia. for zirconia heated oxygen sensor b: 12 mm (0.47 in) dia. for titania heated oxygen sensor
 AEM488	
Anti-seize lubricant (Permatex 133AR or equivalent meeting MIL specification MIL-A-907)	Lubricating heated oxygen sensor thread cleaner when reconditioning exhaust system threads
 AEM489	

ON-VEHICLE MAINTENANCE

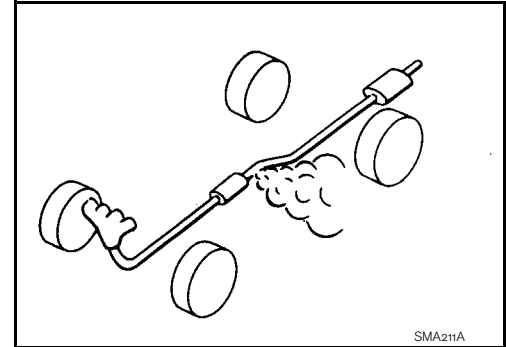
EXHAUST SYSTEM

Inspection

INFOID:000000000905773

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

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



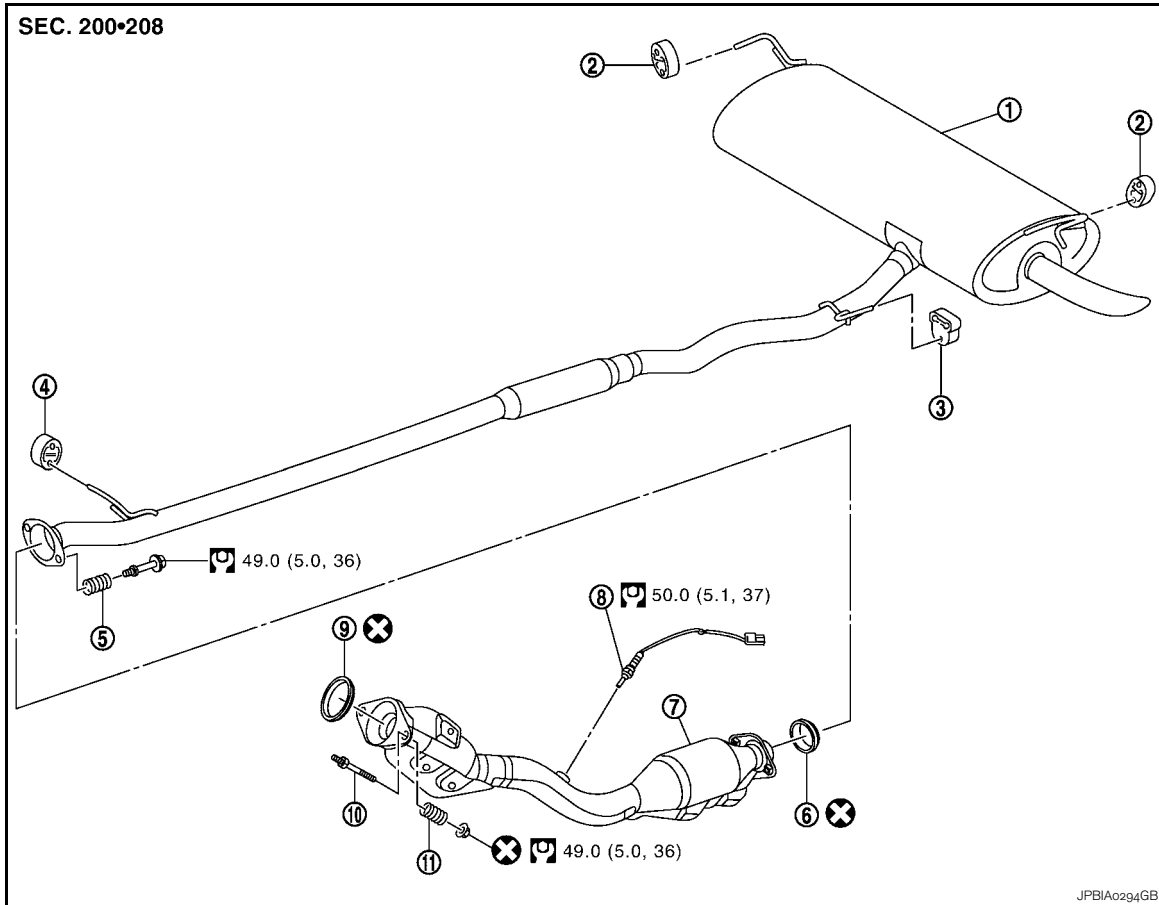
ON-VEHICLE REPAIR

EXHAUST SYSTEM

Exploded View

INFOID:000000000905774

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|-----------------------|---------------------------|--------------------|
| 1. Main muffler | 2. Mounting rubber | 3. Mounting rubber |
| 4. Mounting rubber | 5. Spring | 6. Seal bearing |
| 7. Exhaust front tube | 8. Heated oxygen sensor 2 | 9. Seal bearing |
| 10. Stud bolt | 11. Spring | |

Refer to [GI-4, "Components"](#) for symbols in the figure.

Removal and Installation

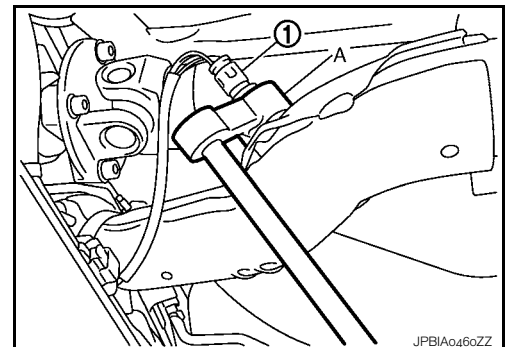
INFOID:000000000905775

REMOVAL

- Disconnect each joint and mounting.
- Remove heated oxygen sensor 2 with following procedure.
- Using heated oxygen sensor wrench [SST: KV10114400] (A), removal heated oxygen sensor 2 (1).

CAUTION:

Be careful not to damage heated oxygen sensor 2.



EXHAUST SYSTEM

< ON-VEHICLE REPAIR >

[HR16DE]

INSTALLATION

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

CAUTION:

- Always replace seal bearings with new ones when reassembling.
- Discard any heated oxygen sensor 2 which has been dropped onto a hard surface such as a concrete floor; use a new one.
- Before installing a new heated oxygen sensor 2, clean exhaust system threads using the heated oxygen sensor thread cleaner and apply anti-seize lubricant (commercial service tool).
- Never over torque heated oxygen sensor 2. Doing so may cause damage to the heated oxygen sensor 2, resulting in the "MI" coming on.
- Remove deposits from the sealing surface of each connection. Connect them securely to avoid gas leakage.
- When installing each mounting rubber, avoid twisting or unusual extension in up/down and right/left directions.
- Temporarily tighten mounting nuts and bolts. Check each part for unusual interference, and then tighten them to the specified torque.

Exhaust Manifold to Exhaust Front Tube

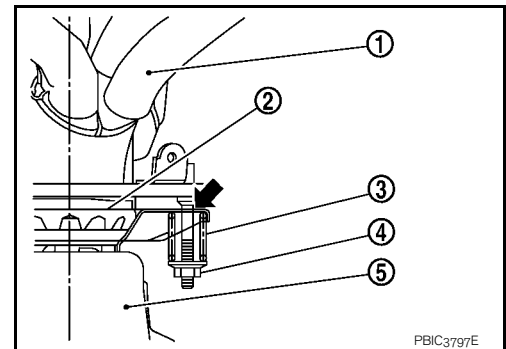
1. Securely insert seal bearing (2) into exhaust manifold (1) side in the direction shown in figure.

- 3 : Spring
- 4 : Mounting nut
- 5 : Exhaust front tube

CAUTION:

Be careful not to damage seal bearing surface when installing.

2. With spring, tighten mounting nut.
 - Be careful that mounting nut does not interfere with flanged area (↔), and tighten it.



Exhaust Front Tube to Main Muffler

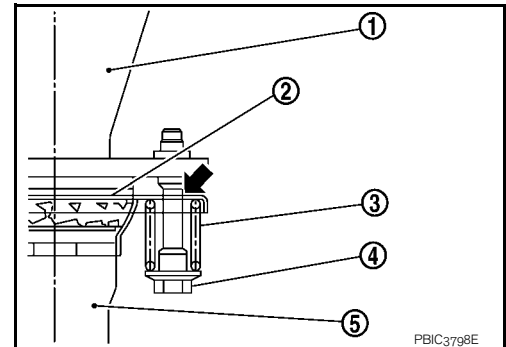
1. Securely insert seal bearing (2) into exhaust front tube (1) side in the direction shown in figure.

- 3 : Spring
- 4 : Mounting bolt
- 5 : Main muffler

CAUTION:

Be careful not to damage seal bearing surface when installing.

2. With spring, tighten mounting bolt.
 - Be careful that mounting bolt does not interfere with flanged area (↔), and tighten it.



Inspection

INFOID:000000000905776

INSPECTION AFTER INSTALLATION

- Make sure clearance between tail tube and rear bumper is even.
- With engine running, check exhaust tube joints for gas leakage and unusual noises.
- 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

Removal and Installation

INFOID:000000000905816

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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.

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PREPARATION

< PREPARATION >

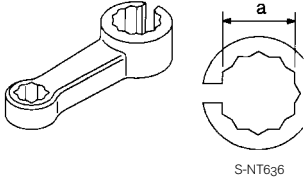
[MR20DE]

PREPARATION

PREPARATION

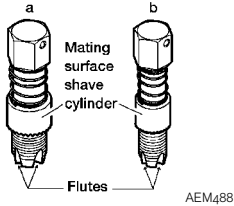
Special Service Tools

INFOID:000000000905819

Tool number Tool name	Description
KV10114400 Heated oxygen sensor wrench	Loosening or tightening heated oxygen sensor 2 For 22 mm (0.87 in) width hexagon nut
 S-NT636	

Commercial Service Tools

INFOID:000000000905821

Tool name	Description
Heated oxygen sensor thread cleaner	Reconditioning the exhaust system threads before installing a new heated oxygen sensor (Use with anti-seize lubricant shown below.) a: 18 mm (0.71 in) dia. for zirconia heated oxygen sensor b: 12 mm (0.47 in) dia. for titania heated oxygen sensor
 AEM488	
Anti-seize lubricant (Permatex 133AR or equivalent meeting MIL specification MIL-A-907)	Lubricating heated oxygen sensor thread cleaner when reconditioning exhaust system threads
 AEM489	

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ON-VEHICLE MAINTENANCE

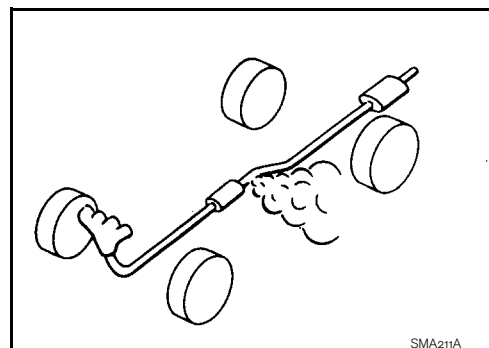
EXHAUST SYSTEM

Inspection

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

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

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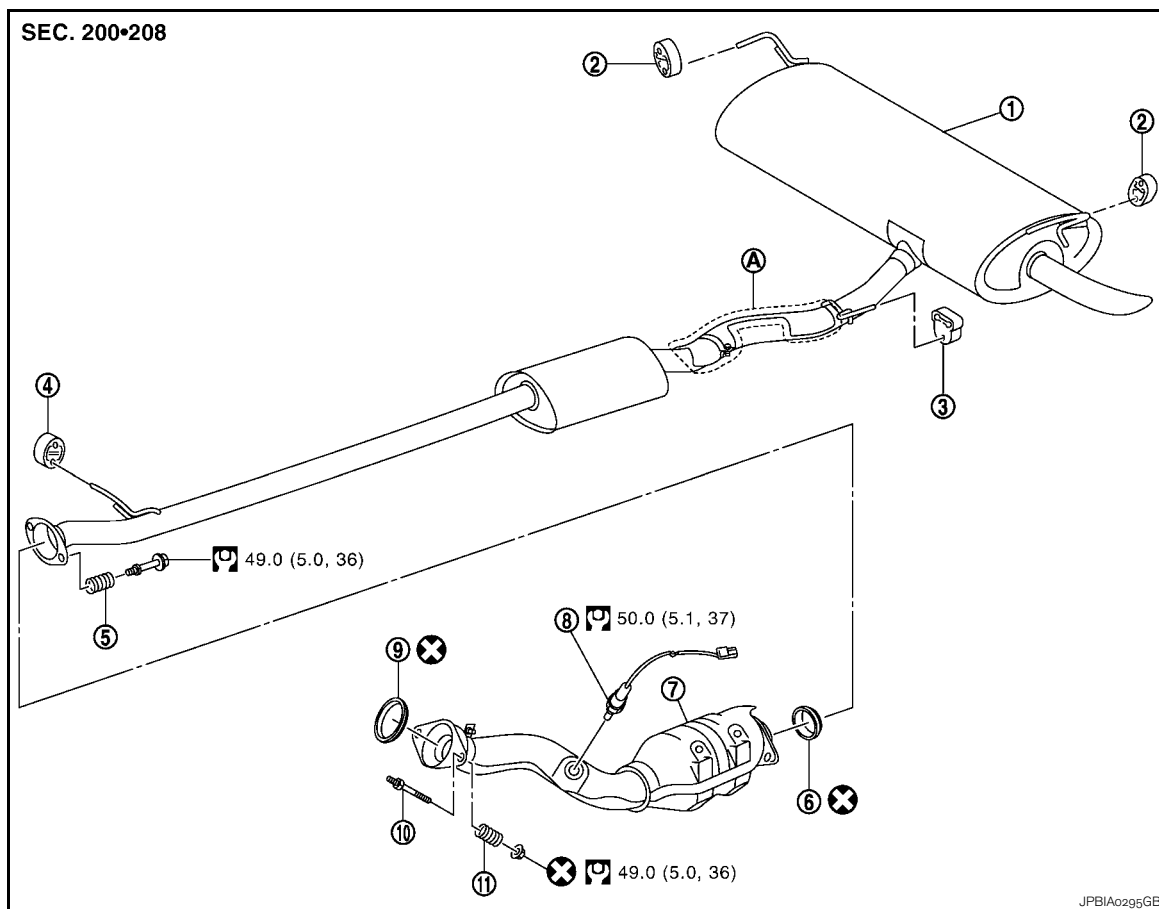
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INFOID:0000000000905825



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|---------------------------|---------------------------|--------------------|
| 1. Main muffler | 2. Mounting rubber | 3. Mounting rubber |
| 4. Mounting rubber | 5. Spring | 6. Seal bearing |
| 7. Exhaust front tube | 8. Heated oxygen sensor 2 | 9. Seal bearing |
| 10. Stud bolt | 11. Spring | |
| A. Insulator (4WD models) | | |

Refer to GI-4, "Components" for symbols in the figure.

INFOID:0000000000905826

- Disconnect each joint and mounting.
- Remove heated oxygen sensor 2 with following procedure.

EXHAUST SYSTEM

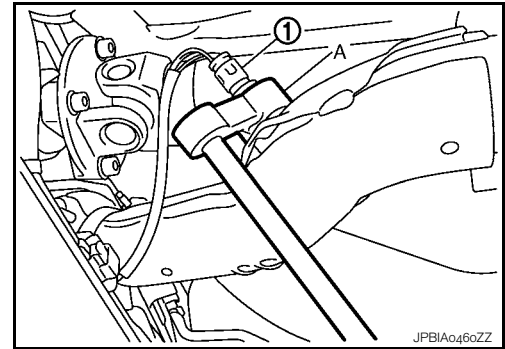
< ON-VEHICLE REPAIR >

[MR20DE]

- Using heated oxygen sensor wrench [SST: KV10114400] (A), removal heated oxygen sensor 2 (1).

CAUTION:

Be careful not to damage heated oxygen sensor 2.



INSTALLATION

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

CAUTION:

- Always replace seal bearings with new ones when reassembling.
- Discard any heated oxygen sensor 2 which has been dropped onto a hard surface such as a concrete floor; use a new one.
- Before installing a new heated oxygen sensor 2, clean exhaust system threads using the heated oxygen sensor thread cleaner and apply anti-seize lubricant (commercial service tool).
- Never over torque heated oxygen sensor 2. Doing so may cause damage to the heated oxygen sensor 2, resulting in the "MI" coming on.
- Remove deposits from the sealing surface of each connection. Connect them securely to avoid gas leakage.
- Temporarily tighten mounting nuts and bolts. 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 Manifold to Exhaust Front Tube

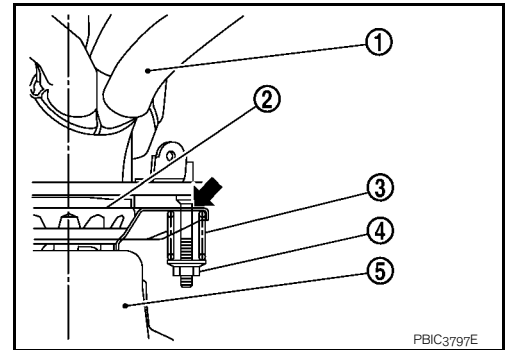
1. Securely insert seal bearing (2) into exhaust manifold (1) side in the direction shown in figure.

- 3 : Spring
- 4 : Mounting nut
- 5 : Exhaust front tube

CAUTION:

Be careful not to damage seal bearing surface when installing.

2. With spring, tighten mounting nut.
 - Be careful that mounting nut does not interfere with flanged area (←), and tighten it.



Exhaust Front Tube to Main Muffler

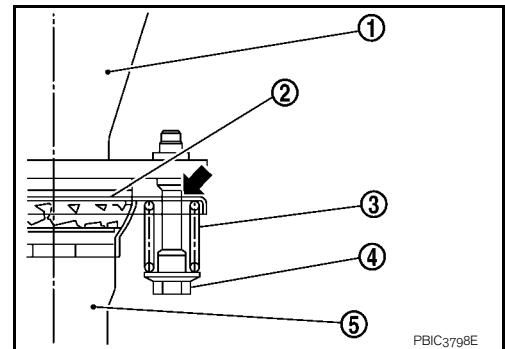
1. Securely insert seal bearing (2) into exhaust front tube (1) side in the direction shown in figure.

- 3 : Spring
- 4 : Mounting bolt
- 5 : Main muffler

CAUTION:

Be careful not to damage seal bearing surface when installing.

2. With spring, tighten mounting bolt.
 - Be careful that mounting bolt does not interfere with flanged area (←), and tighten it.



Inspection

INFOID:0000000000905827

INSPECTION AFTER INSTALLATION

- Make sure clearance between tail tube and rear bumper is even.
- With engine running, check exhaust tube joints for gas leakage 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

Removal and Installation

INFOID:000000001062578

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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.

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ON-VEHICLE MAINTENANCE

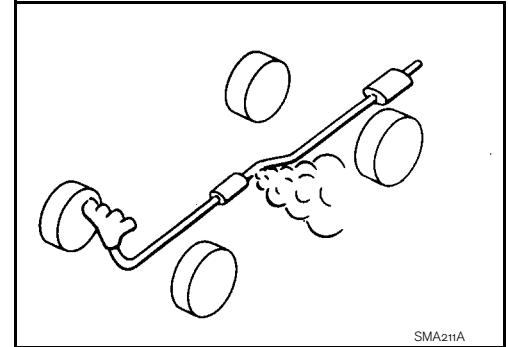
EXHAUST SYSTEM

Inspection

INFOID:000000001062581

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

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

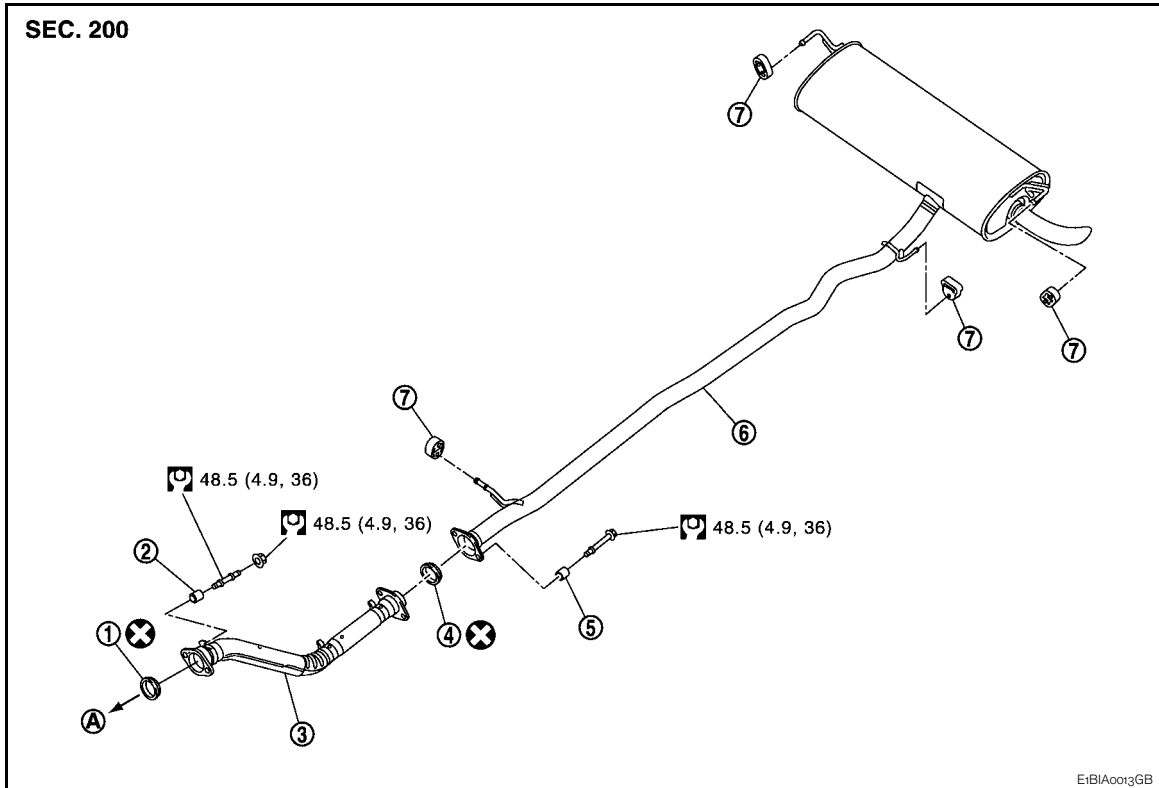


ON-VEHICLE REPAIR

EXHAUST SYSTEM

Exploded View

INFOID:000000001062582



- | | | |
|--------------------|-----------|-----------------------|
| 1. Seal bearing | 2. Spring | 3. Exhaust front tube |
| 4. Seal bearing | 5. Spring | 6. Muffler |
| 7. Mounting rubber | | |
| A. To catalyst | | |

Refer to [GI-4. "Components"](#) for symbols not described on the above.

Removal and Installation

INFOID:000000001062587

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 is still hot just after the engine stops.
- Be careful not to cut your hand on the insulator edge.

REMOVAL

- Disconnect each joint and mounting.

INSTALLATION

- Install in the reverse order of removal.

CAUTION:

- Always replace exhaust gaskets with new ones when reassembling.
- If the insulator is badly deformed, repair or replace it. If deposits such as mud pile up on the insulator, remove them.
- When installing the insulator avoid large gaps or interference between the insulator and each exhaust pipe.

EXHAUST SYSTEM

< ON-VEHICLE REPAIR >

[K9K]

- Remove deposits from the sealing surface of each connection. Connect them securely to avoid gas 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.

Inspection

INFOID:000000001062584

INSPECTION AFTER INSTALLATION

- With the engine running, check exhaust tube joints for gas leakage and unusual noises.
- Check to ensure that mounting brackets and mounting insulators are installed properly and free from undue stress. Improper installation could result in excessive noise and vibration.