

SECTION **EX**  
EXHAUST SYSTEM

A  
EX

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

#### Removal and Installation

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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.
- 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

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## PREPARATION

### PREPARATION

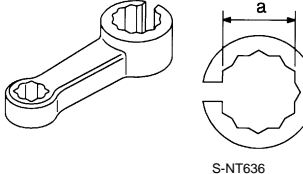
#### Special Service Tool

INFOID:000000009235854

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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
KV10114400 (J-38365) Heated oxygen sensor wrench  	Loosening or tightening heated oxygen sensor 2 <b>For 22 mm (0.87 in) (a) width hexagon nut</b>

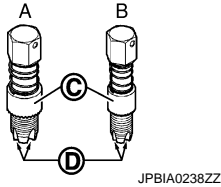
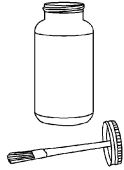
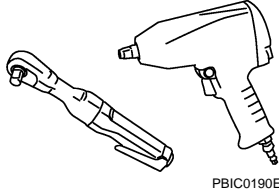
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#### Commercial Service Tool

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(Kent-Moore No.) Tool name	Description
A: (J-43897-18) B: (J-43897-12) Heated oxygen sensor thread cleaner  	Reconditioning the exhaust system threads before installing a new heated oxygen sensor (Use with anti-seize lubricant shown below.) <b>A: J-43897-18 [18 mm (0.71 in) dia.] for zirconia heated oxygen sensor</b> <b>B: J-43897-12 [12 mm (0.47 in) dia.] for titania heated oxygen sensor</b> <b>C: Mating surface shave cylinder</b> <b>D: Flutes</b>
( — ) Anti-seize lubricant (Permatex 133AR or equivalent meeting MIL specification MIL-A-907)  	Lubricating heated oxygen sensor thread cleaner when reconditioning exhaust system threads
( — ) Power tool  	Loosening bolts and nuts

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# EXHAUST SYSTEM

< PERIODIC MAINTENANCE >

## PERIODIC MAINTENANCE

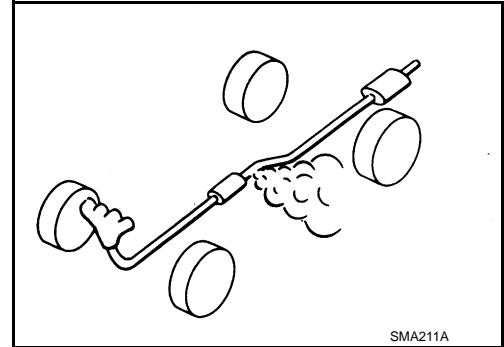
### EXHAUST SYSTEM

#### Inspection

INFOID:000000009235856

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

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



# EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### EXHAUST SYSTEM

Exploded View

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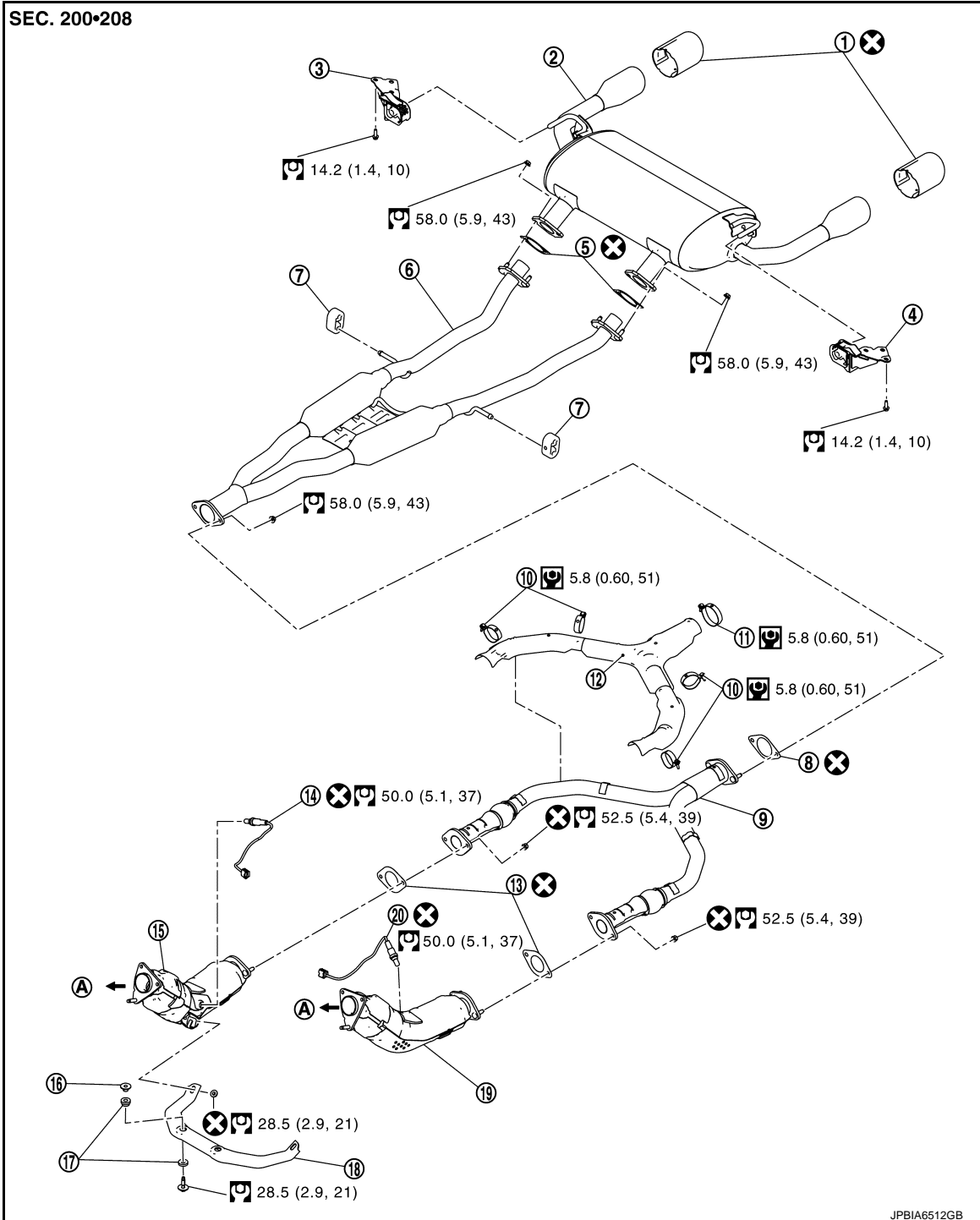
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- |                        |                |                        |
|------------------------|----------------|------------------------|
| ① Exhaust diffuser     | ② Main muffler | ③ Mounting rubber (RH) |
| ④ Mounting rubber (LH) | ⑤ Gasket   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


# EXHAUST SYSTEM

## < REMOVAL AND INSTALLATION >

- |                               |                                   |                               |
|-------------------------------|-----------------------------------|-------------------------------|
| ⑬ Gasket                      | ⑭ Heated oxygen sensor 2 (bank 1) | ⑮ Three way catalyst (bank 1) |
| ⑯ Collar                      | ⑰ Grommet                         | ⑱ Exhaust mounting bracket    |
| ⑲ Three way catalyst (bank 2) | ⑳ Heated oxygen sensor 2 (bank 2) |                               |

 : N·m (kg·m, in·lb)

 : N·m (kg·m, ft·lb)

 : Always replace after every disassembly.

## Removal and Installation

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### REMOVAL

- Disconnect each joint and mounting using power tool.
- Remove heated oxygen sensor 2 as follows:
  - Using heated oxygen sensor wrench [SST: KV10114400 (J-38365)] (C), removal heated oxygen sensor 2.

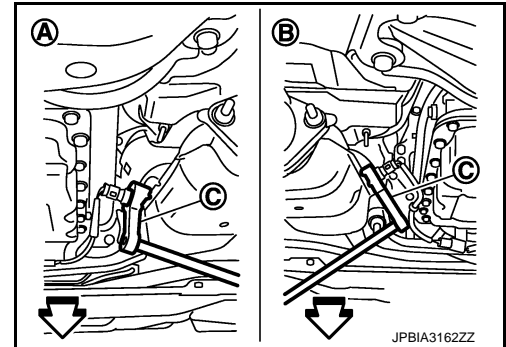
Ⓐ : Bank 1

Ⓑ : Bank 2

⇐ : Vehicle front

### CAUTION:

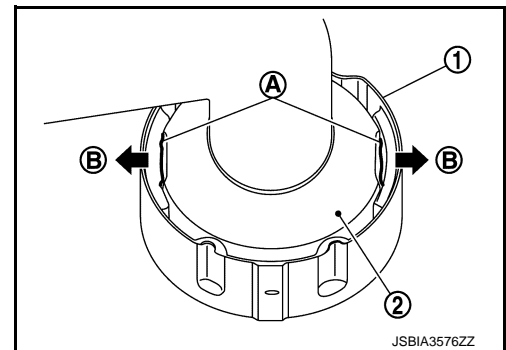
- Discard any heated oxygen sensor which has been dropped from a height of more than 0.5 m (19.7 in) onto a hard surface such as a concrete floor; use a new one.
- Before installing new heated oxygen sensor, clean exhaust system threads using Oxygen Sensor Thread Cleaner (commercial service tool) and approved Anti-seize lubricant (commercial service tool).



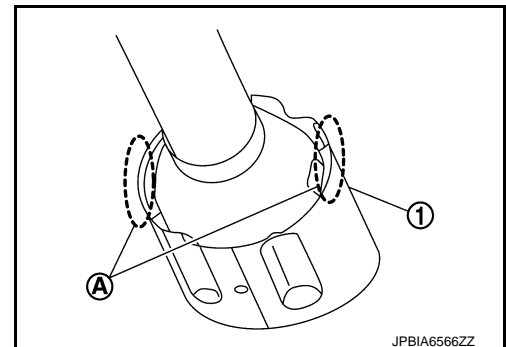
### Diffuser

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

② : Main muffler



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



### INSTALLATION

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

- Check for deformation of the grommets (17 of Components).
- Insert the collar (16 of Components) vertically.

# EXHAUST SYSTEM

## < REMOVAL AND INSTALLATION >

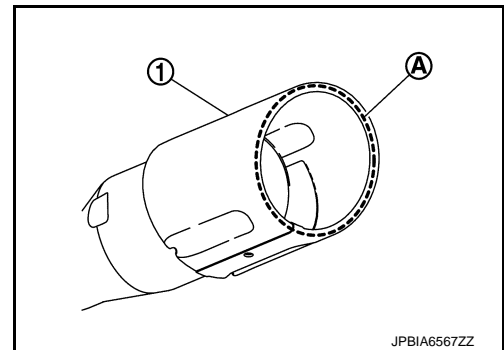
- Temporarily tighten nuts and bolts when installing exhaust pipe assembly. Tighten them to the specified torque when connecting the vehicle rear to the vehicle front.

### Diffuser

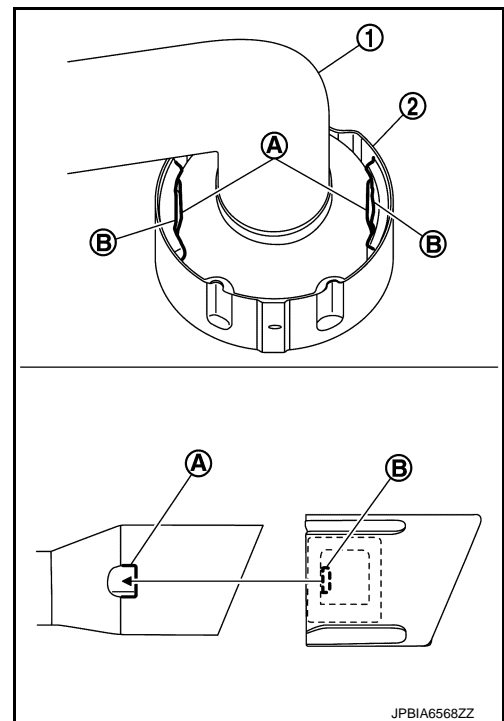
- Insert diffuser ① by using a plastic hammer.

**CAUTION:**

Never damage the portion ① of the diffuser.



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



**CAUTION:**

- Always replace exhaust tube gaskets 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 (commercial service tool: J-43897-18 or J-43897-12), and apply the anti-seize lubricant (commercial service tool).
- Never over torque heated oxygen sensor 2. Doing so may cause damage to heated oxygen sensor 2, resulting in the “MIL” coming on.
- Prevent rust preventives from adhering to the sensor body.
- 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.

# EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

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## Inspection

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### 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.