

SECTION **EX** EXHAUST SYSTEM

CONTENTS

PREPARATION	2	INSTALLATION	5	F
Special Service Tools	2	INSPECTION AFTER INSTALLATION	5	
Commercial Service Tools	2	Components	6	
EXHAUST SYSTEM	3	Removal and installation	7	G
Checking Exhaust System	3	REMOVAL	7	
Components	4	INSTALLATION	7	
Removal and Installation	5	INSPECTION AFTER INSTALLATION	7	H
REMOVAL	5			

PREPARATION

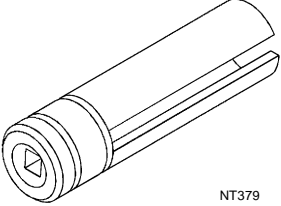
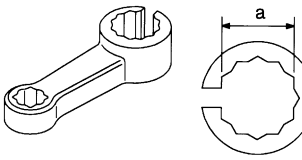
PREPARATION

PFP:00002

Special Service Tools

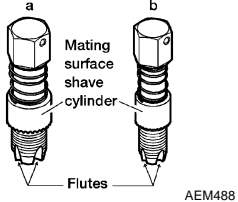

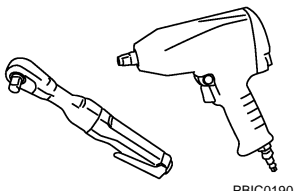
NBS005RH

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
KV10117100 (J3647-A) Heated oxygen sensor wrench	 <p style="text-align: center;">NT379</p> Loosening or tightening heated oxygen sensor 2 (VQ35DE) For 22 mm (0.87 in) width hexagon nut
KV10114400 (J38365) Heated oxygen sensor wrench	 <p style="text-align: center;">S-NT636</p> Loosening or tightening heated oxygen sensor 2 (VK45DE) For 22 mm (0.87 in) width hexagon nut

Commercial Service Tools

NBS005RI

(Kent-Moore No.) Tool name	Description
a: (J-43897-18) b: (J-43897-12) Heated oxygen sensor thread cleaner	 <p style="text-align: center;">AEM488</p> Reconditioning the exhaust system threads before installing a new heated oxygen sensor (Use with anti-seize lubricant shown below.) a: J-43897-18 (18 mm dia.) for zirconia heated oxygen sensor b: J-43897-12 (12 mm dia.) for titania heated oxygen sensor
(—) Anti-seize lubricant (Permatex 133AR or equivalent meeting MIL specification MIL-A-907)	 <p style="text-align: center;">AEM489</p> Lubricating heated oxygen sensor thread cleaner when reconditioning exhaust system threads
(—) Power tool	 <p style="text-align: center;">PBIC0190E</p> Loosening bolts and nuts

EXHAUST SYSTEM

EXHAUST SYSTEM

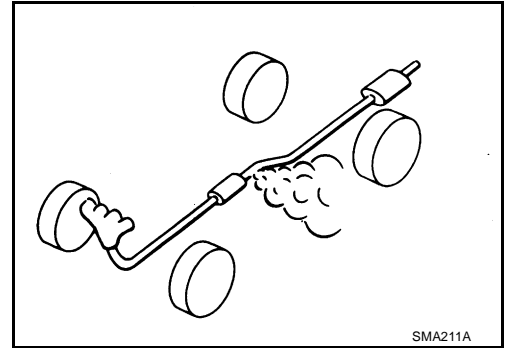
PPF:20100

Checking Exhaust System

NBS005RJ

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

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



A
EX
C
D
E
F
G
H
I
J
K
L
M

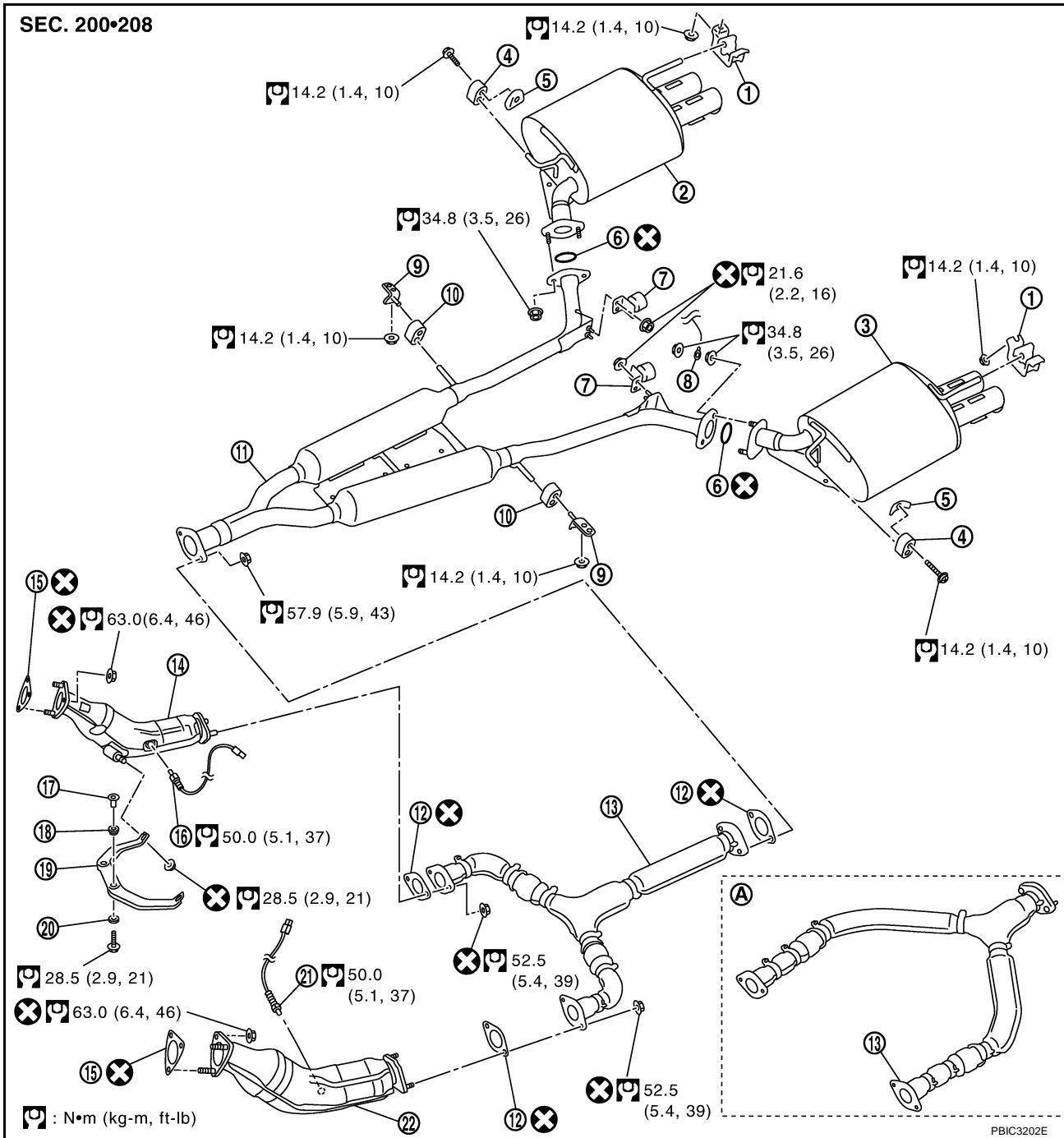
EXHAUST SYSTEM

Components

NBS005RK

VQ35DE

SEC. 200•208



- | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Mounting bracket | 2. Main muffler (RH) | 3. Main muffler (LH) |
| 4. Mounting rubber | 5. Collar | 6. Ring gasket |
| 7. Dynamic damper | 8. Wire bonding | 9. Mounting bracket |
| 10. Mounting rubber | 11. Center muffler | 12. Gasket |
| 13. Exhaust front tube | 14. Three way catalyst (right bank) | 15. Gasket |
| 16. Heated oxygen sensor 2 (bank 1) | 17. Collar | 18. Grommet |
| 19. Exhaust mounting bracket | 20. Grommet | 21. Heated oxygen sensor 2 (bank 2) |
| 22. Three way catalyst (left bank) | | |
- A. AWD

- Refer to [GI-11, "Components"](#) for symbol marks in the figure.

EXHAUST SYSTEM

NBS005RL

Removal and Installation

CAUTION:

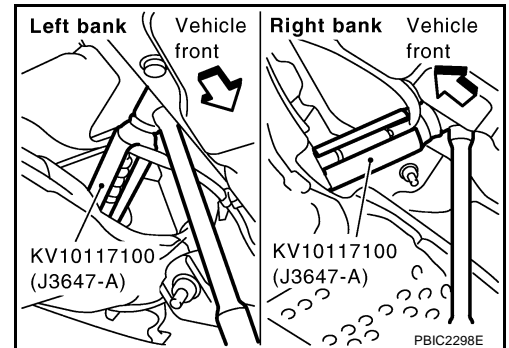
- Be sure to use genuine exhaust system parts or equivalents which are specially designed for heat resistance, corrosion resistance, and shape.
- Perform the operation with the exhaust system fully cooled down because the system will be hot just after engine stops.
- Be careful not to cut your hand on the heat insulator edge.

REMOVAL

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

CAUTION:

Be careful not to damage heated oxygen sensor 2.



INSTALLATION

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

- When installing, heated oxygen sensor 2 is identified by the color of the connector.

Bank 1 : Blue

Bank 2 : Green

- Check for deformation of the grommets (18 and 20 of Components).
- Insert the collar (17 of Components) vertically.
- Install the collar (5 of Components) with its lower surface horizontal.
- 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.
- Discard any heated oxygen sensor which has been dropped onto a hard surface such as a concrete floor; use a new one.
- Before installing a new heated oxygen sensor, 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).
- Do not over torque heated oxygen sensor. Doing so may cause damage to heated oxygen sensor, resulting in the "MIL" coming on.
- 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.

INSPECTION AFTER INSTALLATION

- Make sure clearance between tail tube and rear bumper is even.

EXHAUST SYSTEM

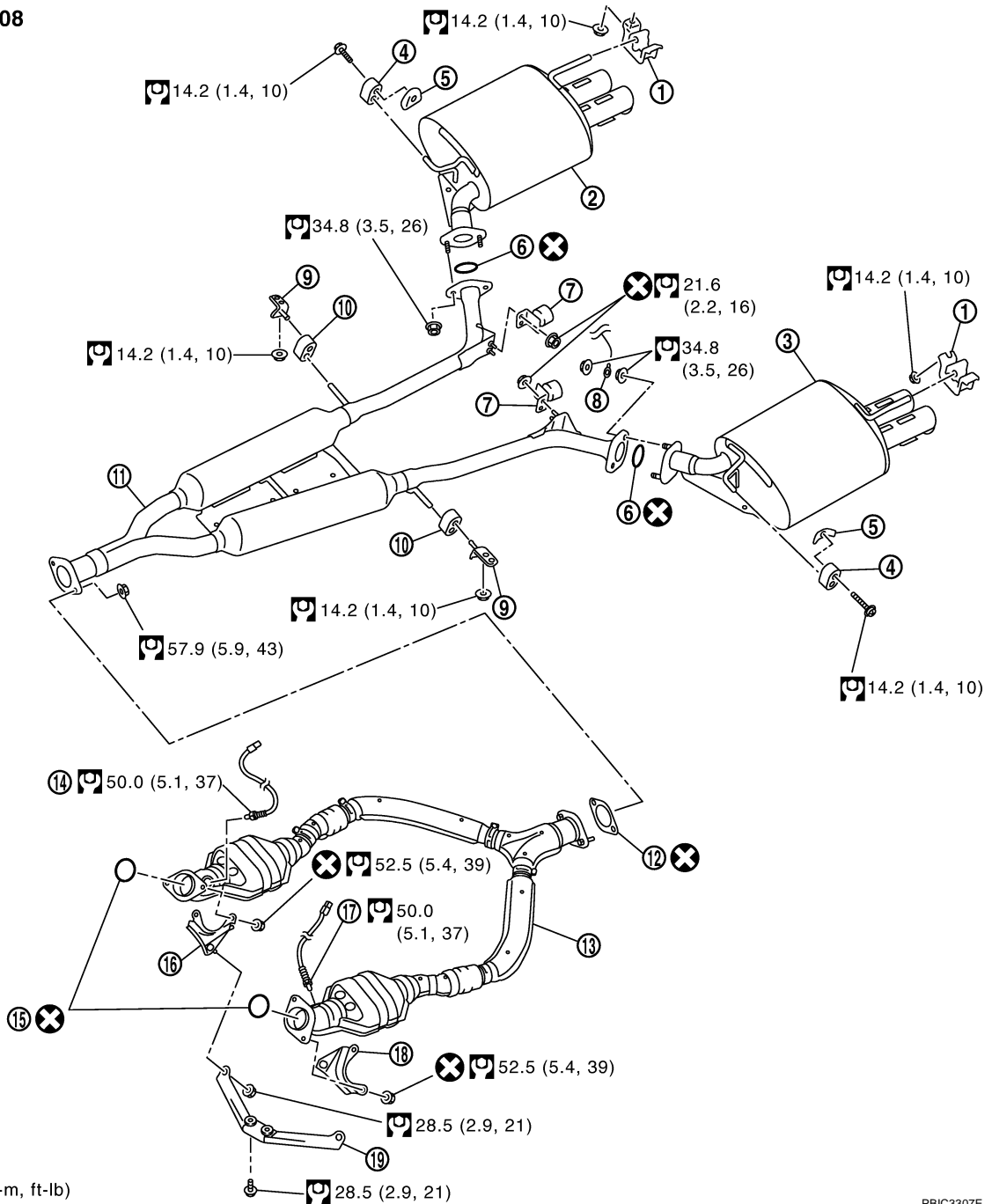
- With engine running, check exhaust tube joints for gas leakage and unusual noises.
- Check to ensure that mounting brackets and mounting rubbers are installed properly and free from undue stress. Improper installation could result in excessive noise and vibration.

Components

NBS005RM

VK45DE

SEC. 200•208



PBIC3307E

- | | | |
|------------------------------|-------------------------------------|----------------------|
| 1. Mounting bracket | 2. Main muffler (RH) | 3. Main muffler (LH) |
| 4. Mounting rubber | 5. Collar | 6. Ring gasket |
| 7. Dynamic damper | 8. Wire bonding | 9. Mounting bracket |
| 10. Mounting rubber | 11. Center muffler | 12. Gasket |
| 13. Exhaust front tube | 14. Heated oxygen sensor 2 (bank 2) | 15. Ring gasket |
| 16. Mounting bracket | 17. Heated oxygen sensor 2 (bank 1) | 18. Mounting bracket |
| 19. Exhaust mounting bracket | | |

- Refer to [GI-11, "Components"](#) for symbol marks in the figure.

EXHAUST SYSTEM

NBS005RN

Removal and installation

CAUTION:

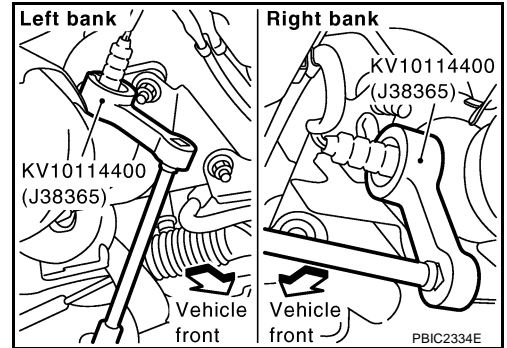
- Be sure to use genuine exhaust system parts or equivalents which are specially designed for heat resistance, corrosion resistance, and shape.
- Perform the operation with the exhaust system fully cooled down because the system will be hot just after engine stops.
- Be careful not to cut your hand on the heat insulator edge.

REMOVAL

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

CAUTION:

Be careful not to damage heated oxygen sensor 2.



INSTALLATION

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

- When installing, heated oxygen sensor 2 is identified by the color of the connector.

Bank 1 : Green

Bank 2 : Blue

- Install the collar (5 of Components) with its lower surface horizontal.
- 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.
- Discard any heated oxygen sensor which has been dropped onto a hard surface such as a concrete floor; use a new one.
- Before installing a new heated oxygen sensor, 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).
- Do not over torque heated oxygen sensor. Doing so may cause damage to heated oxygen sensor, resulting in the "MIL" coming on.
- 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.
- 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 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.

EXHAUST SYSTEM
