

SECTION EX

EXHAUST SYSTEM

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PRECAUTION

PRECAUTIONS

Removal and Installation

INFOID:0000000010287084

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EX

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

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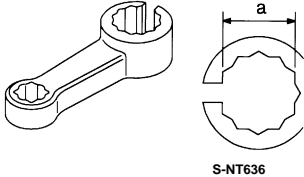
[HRA2DDT]

PREPARATION

PREPARATION

Special Service Tools

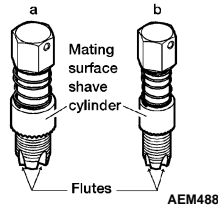
INFOID:0000000010287085

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
 <p>S-NT636</p>	

Commercial Service Tools

INFOID:0000000010287086

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
Anti-seize lubricant (Permatex 133AR or equivalent meeting MIL specification MIL-A-907)	Lubricating heated oxygen sensor thread cleaner when reconditioning exhaust system threads



PERIODIC MAINTENANCE

EXHAUST SYSTEM

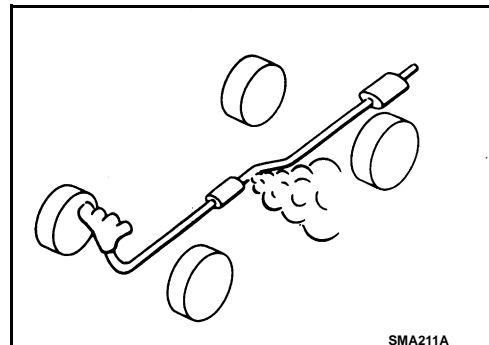
Inspection

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

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

INFOID:0000000010287087

EX



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EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

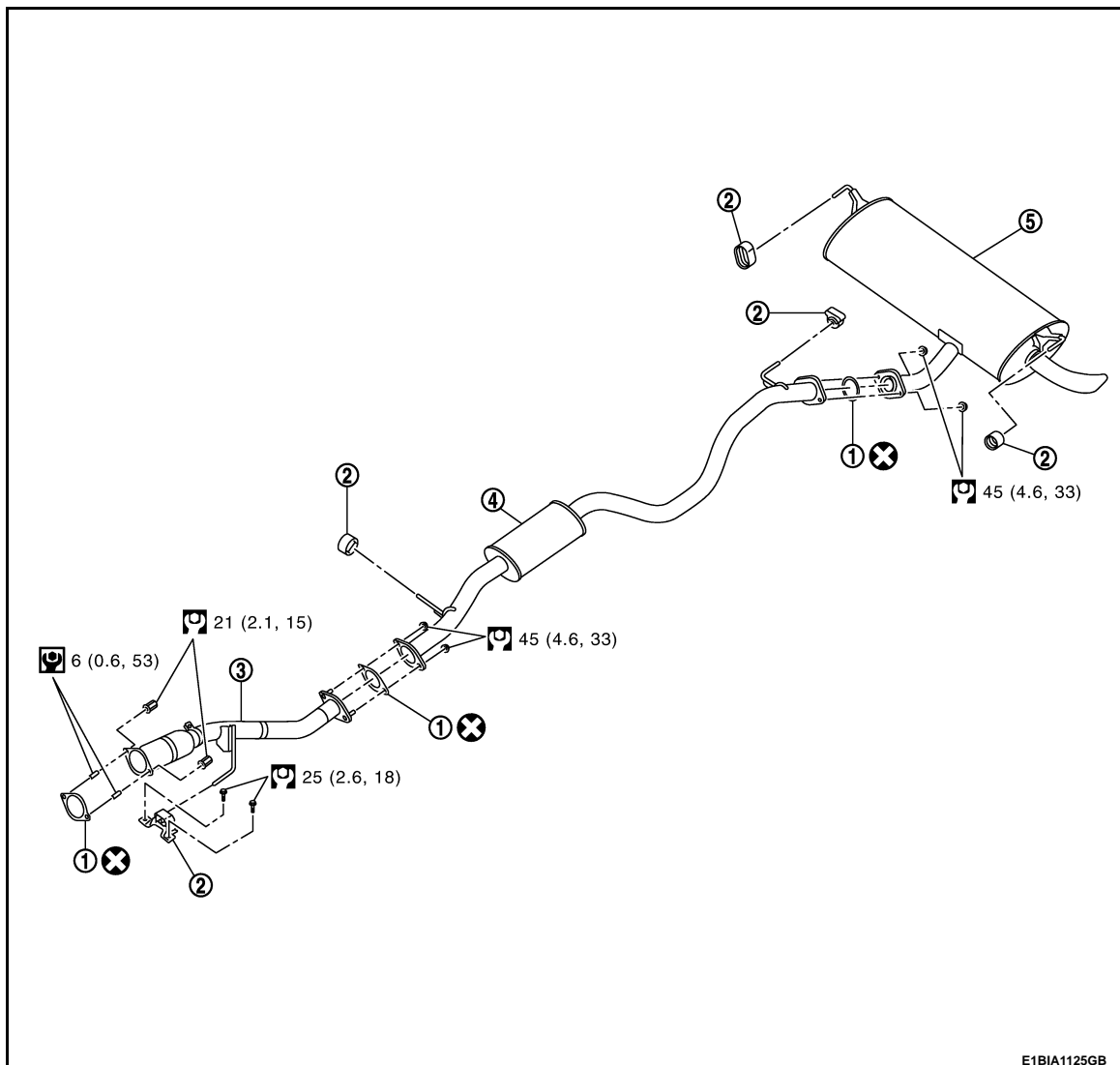
[HRA2DDT]

REMOVAL AND INSTALLATION

EXHAUST SYSTEM

Exploded View

INFOID:000000010287088



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|-------------------|--------------------|-----------------------|
| 1. Gasket | 2. Mounting rubber | 3. Exhaust front tube |
| 4. Center muffler | 5. Main muffler | |

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

Removal and Installation

INFOID:000000010287089

REMOVAL

1. Remove main muffler.
2. Remove center tube.
3. Remove front tube.

INSTALLATION

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

CAUTION:

- Always replace exhaust gaskets with new ones when reassembling.

EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

[HRA2DDT]

- 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.
- Remove desits from the sealing surface or each connection. Connect them securely to avoid gas leakage.
- If it is difficult to install mounting rubber, use mild detergent for smooth installation.
- When installing each mounting rubber, avoid twisting or unusual extension in up/down and right/left directions.
- Temporarily tighten mounting nuts. Check each part for unusual interference, and then tighten them to the specified torque.

Inspection

INFOID:0000000010287090

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:0000000010665049

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.
- Prevent rust preventives from adhering to the sensor body.

Precautions for Removing Battery Terminal

INFOID:0000000010665050

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

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.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

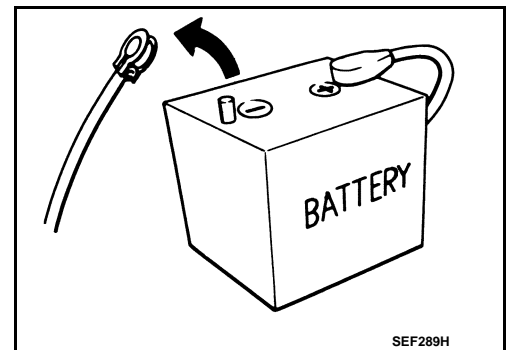
NOTE:

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.



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PREPARATION

< PREPARATION >

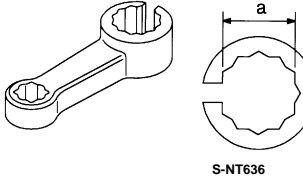
[MR20DD]

PREPARATION

PREPARATION

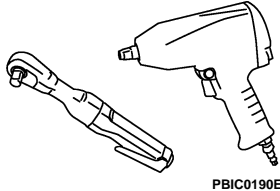
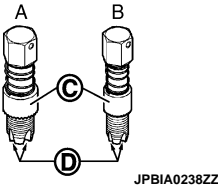
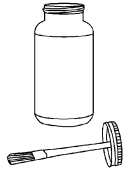
Special Service Tools

INFOID:0000000010665051

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

Commercial Service Tools

INFOID:0000000010665052

Tool name	Description
Power tool	Loosening nuts and bolts
 <p>PBIC0190E</p>	
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: J-43897-18 [18 mm (0.71 in) dia.] for zirconia heated oxygen sensor B: J-43897-12 [12 mm (0.47 in) dia.] for titania heated oxygen sensor C: Mating surface shave cylinder D: Flutes
 <p>JPBIA0238ZZ</p>	
Anti-seize lubricant (Permatex 133AR or equivalent meeting MIL specification MIL-A-907)	Lubricating heated oxygen sensor thread cleaner when reconditioning exhaust system threads
 <p>AEM489</p>	

PERIODIC MAINTENANCE

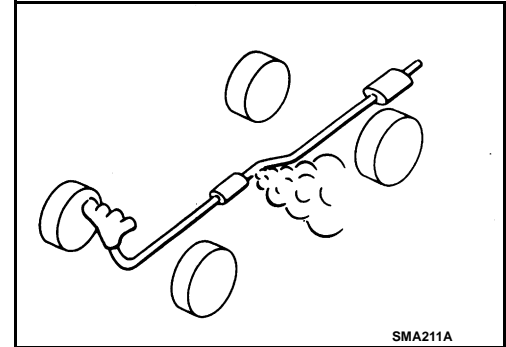
EXHAUST SYSTEM

Inspection

INFOID:0000000010665053

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

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



EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

[MR20DD]

REMOVAL AND INSTALLATION

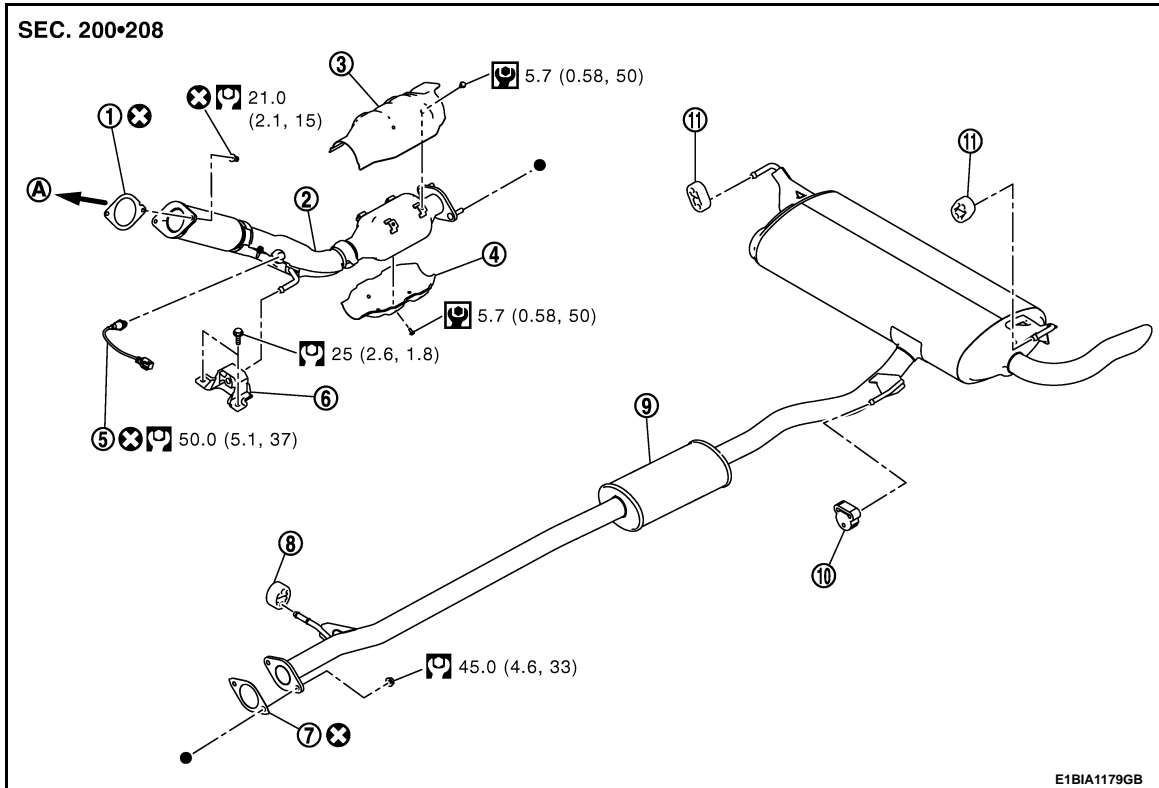
EXHAUST SYSTEM

Exploded View

INFOID:0000000010665054

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|--------------------------------|--------------------------|-------------------|
| ① Gasket | ② Exhaust front tube | ③ Heat insulator |
| ④ Heat insulator (If equipped) | ⑤ Heated oxygen sensor 2 | ⑥ Mounting rubber |
| ⑦ Gasket | ⑧ Mounting rubber | ⑨ Main muffler |
| ⑩ Mounting rubber | ⑪ Mounting rubber | |

(A) To exhaust manifold

⊗ : Always replace after every disassembly.

⊙ : N·m (kg-m, in-lb)

⊙ : N·m (kg-m, ft-lb)

Removal and Installation

INFOID:0000000010665055

REMOVAL

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

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EXHAUST SYSTEM

[MR20DD]

< REMOVAL AND INSTALLATION >

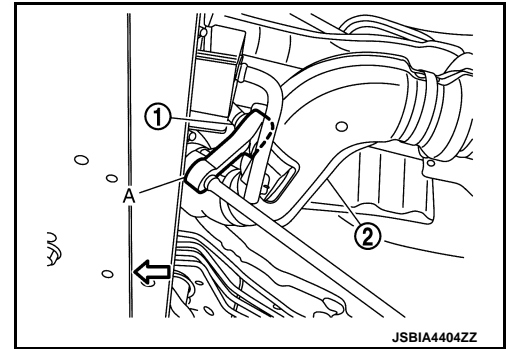
- Using heated oxygen sensor wrench [SST: KV10114400] (A), removal heated oxygen sensor 2 ①.

② : Exhaust front tube

⇐ : Vehicle front

CAUTION:

Discard any 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.



INSTALLATION

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

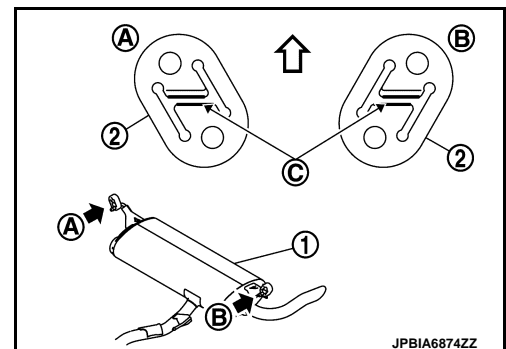
CAUTION:

- Always replace 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 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 "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 gas leakage.
- Temporarily tighten mounting nuts and bolts. Check each part for unusual interference and mounting rubber interference, and then tighten them to the specified torque.
- When installing each mounting rubber, avoid twisting or unusual extension in up/down, front/rear and right/left directions.
- Install mounting rubber, refer to the following instructions,
- Install slit of the mounting rubber ③ is in a horizontal direction.

Ⓐ : RH

Ⓑ : LH

⇐ : Vehicle upper



Inspection

INFOID:0000000010665056

INSPECTION AFTER INSTALLATION

- Check 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:0000000010427903

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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.
- Never cut your hand on the heat insulator edge.

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PERIODIC MAINTENANCE

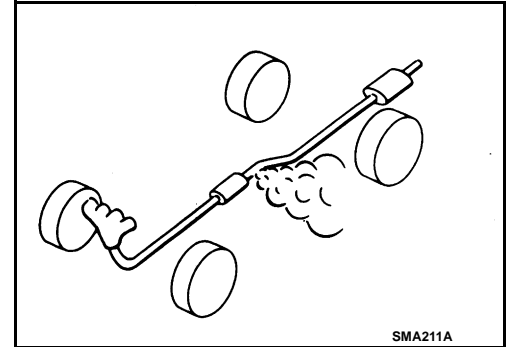
EXHAUST SYSTEM

Inspection

INFOID:0000000010427904

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 >

[K9K]

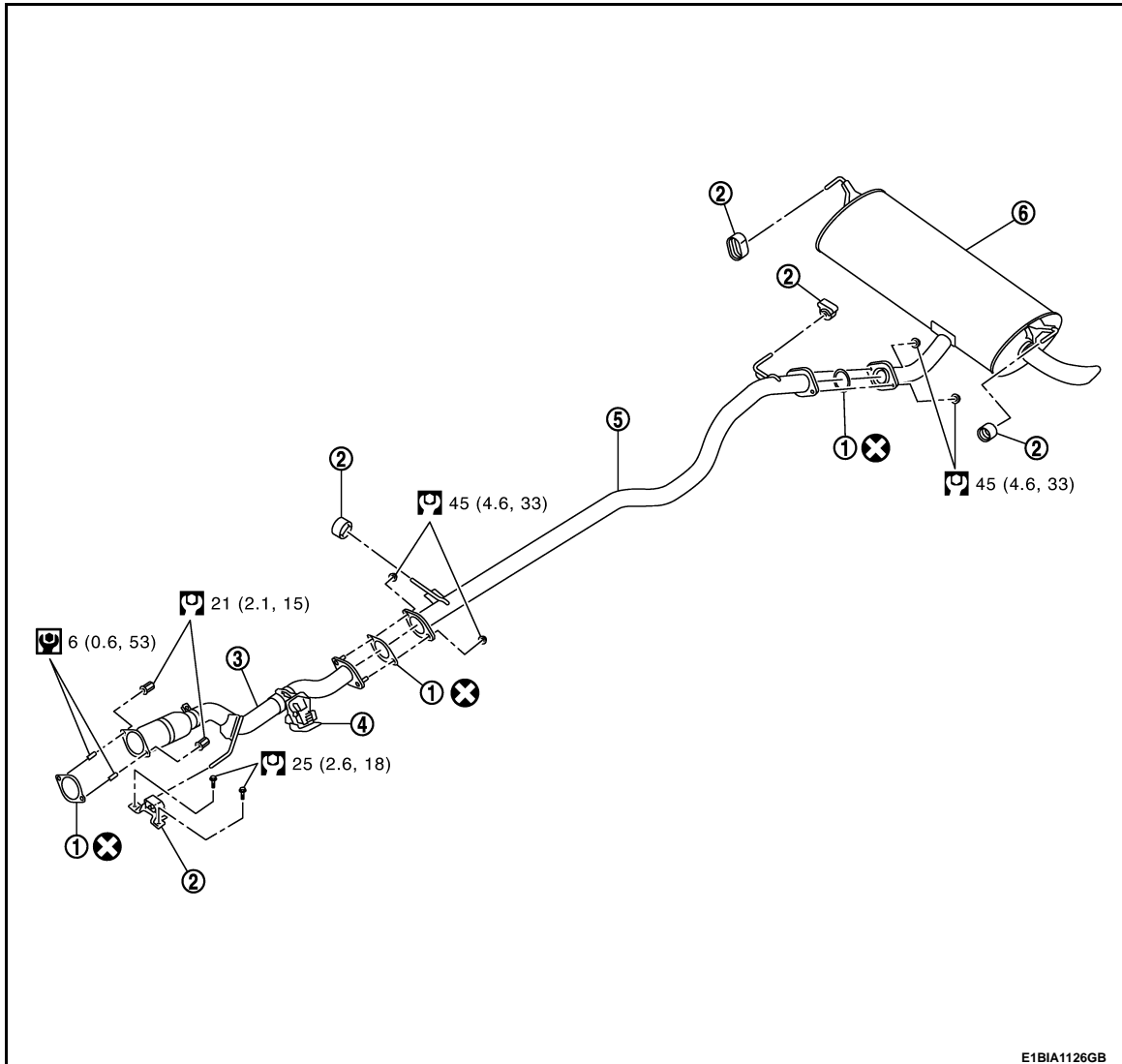
REMOVAL AND INSTALLATION

EXHAUST SYSTEM

Exploded View

INFOID:0000000010427905

EX



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|--------------------|------------------------|-----------------------|
| 1. Gasket | 2. Mounting rubber | 3. Exhaust front tube |
| 4. Exhaust shutter | 5. Exhaust center tube | 6. Main muffler |

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

Removal and Installation

INFOID:0000000010427906

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.
- Never cut your hand on the insulator edge.

REMOVAL

1. Remove main muffler.
2. Remove center tube.

EXHAUST SYSTEM

[K9K]

< REMOVAL AND INSTALLATION >

3. Disconnect exhaust throttle valve connector.
4. Unclip and move aside exhaust throttle valve harness.
5. Remove front tube.

INSTALLATION

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

Exhaust Front Tube and Main Muffler

1. When replacing the Exhaust electric throttle control actuator, this procedure must be performed. Refer to [ECK-130, "Special Repair Requirement List"](#).

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.
- Remove deposits from the sealing surface of each connection. Connect them securely to avoid gas leakage.
- If it is difficult to install mounting rubber, use mild detergent for smooth installation.
- When installing each mounting rubber, avoid twisting or unusual extension in up/down and right/left directions.
- Temporarily tighten mounting nuts. Check each part for unusual interference, and then tighten them to the specified torque.

Inspection

INFOID:0000000010427907

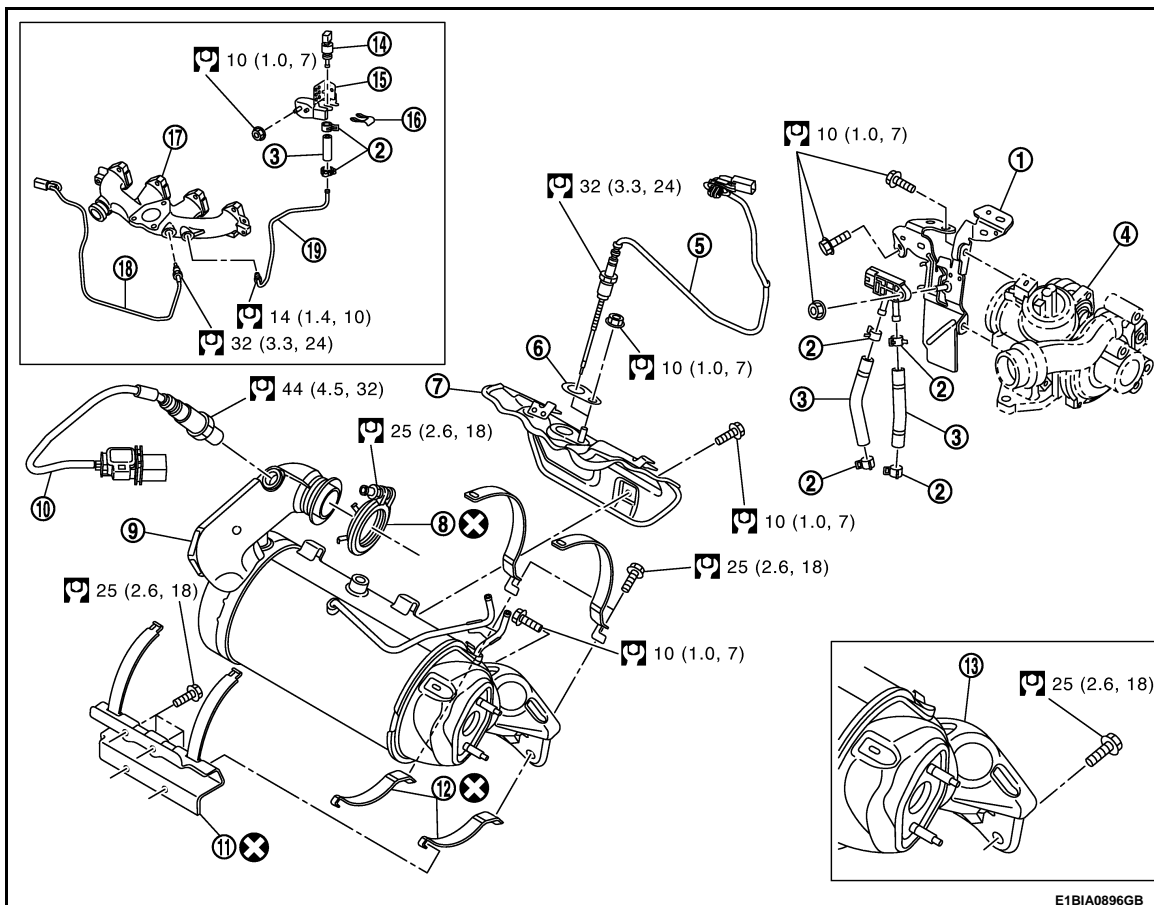
INSPECTION AFTER INSTALLATION

- 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.

PARTICLE FILTER

Exploded View

INFOID:0000000010427908



- | | | |
|--------------------------------------|---------------------------------|---|
| 1. DPF pressure sensor bracket | 2. Clamp | 3. Hose |
| 4. Turbocharger | 5. DPF temperature sensor | 6. Gasket |
| 7. DPF heat insulator | 8. V-band clamp | 9. Diesel Particle Filter |
| 10. DPF oxygen sensor | 11. DPF Bracket | 12. DPF bracket strip |
| 13. DPF exhaust gas exit | 14. Exhaust gas pressure sensor | 15. Exhaust gas pressure sensor bracket |
| 16. Lock plate | 17. Exhaust manifold | 18. Exhaust gas temperature sensor |
| 19. Exhaust gas pressure sensor tube | | |

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

Removal and Installation

INFOID:0000000010427909

- 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

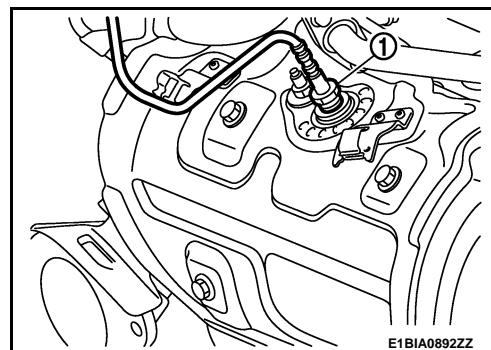
1. Remove exhaust front tube. Refer to [EX-15, "Exploded View"](#).
2. Remove front suspension member. Refer to [FSU-21, "Removal and Installation"](#)
3. Unclip and move aside:
 - exhaust gas temperature sensor harness. Refer to [EX-17, "Exploded View"](#).
 - DPF temperature sensor harness. Refer to [EX-17, "Exploded View"](#).

PARTICLE FILTER

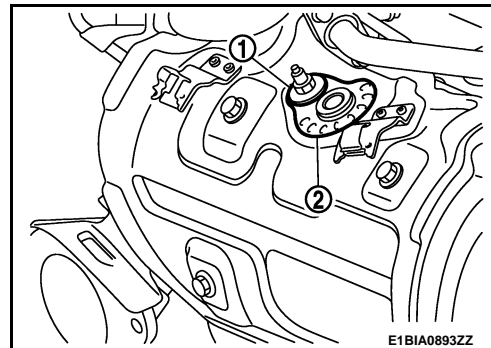
< REMOVAL AND INSTALLATION >

[K9K]

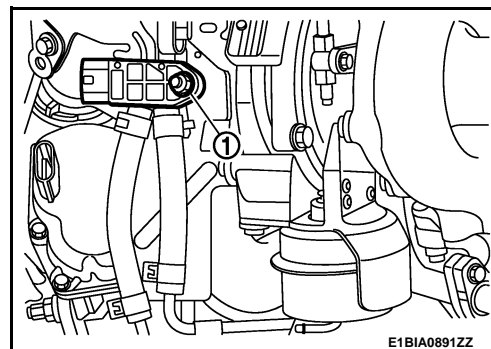
4. Remove DPF temperature sensor (1).



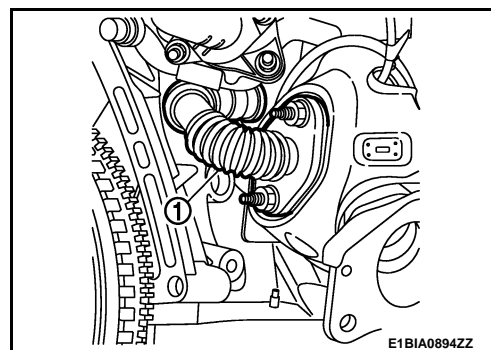
5. Remove:
- DPF temperature sensor gasket nut (1).
 - DPF temperature sensor gasket (2).



6. Remove DPF pressure sensor fixing nut (1).



7. Remove EGR cooler tube nut (1) from DPF.

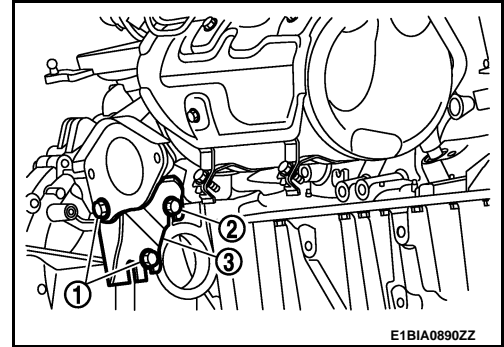


PARTICLE FILTER

[K9K]

< REMOVAL AND INSTALLATION >

8. Remove bolts (1), nut (2) and DPF bracket (3).



9. Remove:
- DPF heat insulator. Refer to [EX-17. "Exploded View"](#).
 - DPF bracket strip. Refer to [EX-17. "Exploded View"](#).
 - DPF from turbocharger. Refer to [EX-17. "Exploded View"](#).
10. Remove oxygen sensor on the workbench using [SST: — (Mot.1495)].
11. Remove DPF pressure sensor hose from DPF.

INSTALLATION

1. When replacing the differential pressure sensor, this procedure must be performed. Refer to [ECK-130. "Special Repair Requirement List"](#).
 2. When replacing the diesel particle filter, this procedure must be performed. Refer to [ECK-130. "Special Repair Requirement List"](#).
- Install in the reverse order of removal.

Inspection

INFOID:0000000010427910

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.

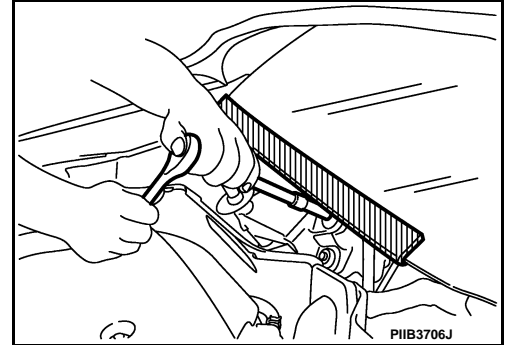
PRECAUTION

PRECAUTIONS

Precaution for Procedure without Cowl Top Cover

INFOID:0000000010502618

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



Removal and Installation

INFOID:0000000010287091

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.

PERIODIC MAINTENANCE

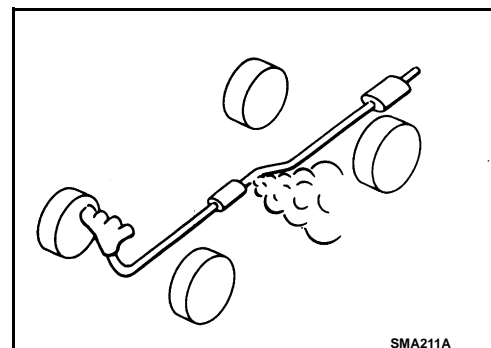
EXHAUST SYSTEM

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:0000000010287092



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EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

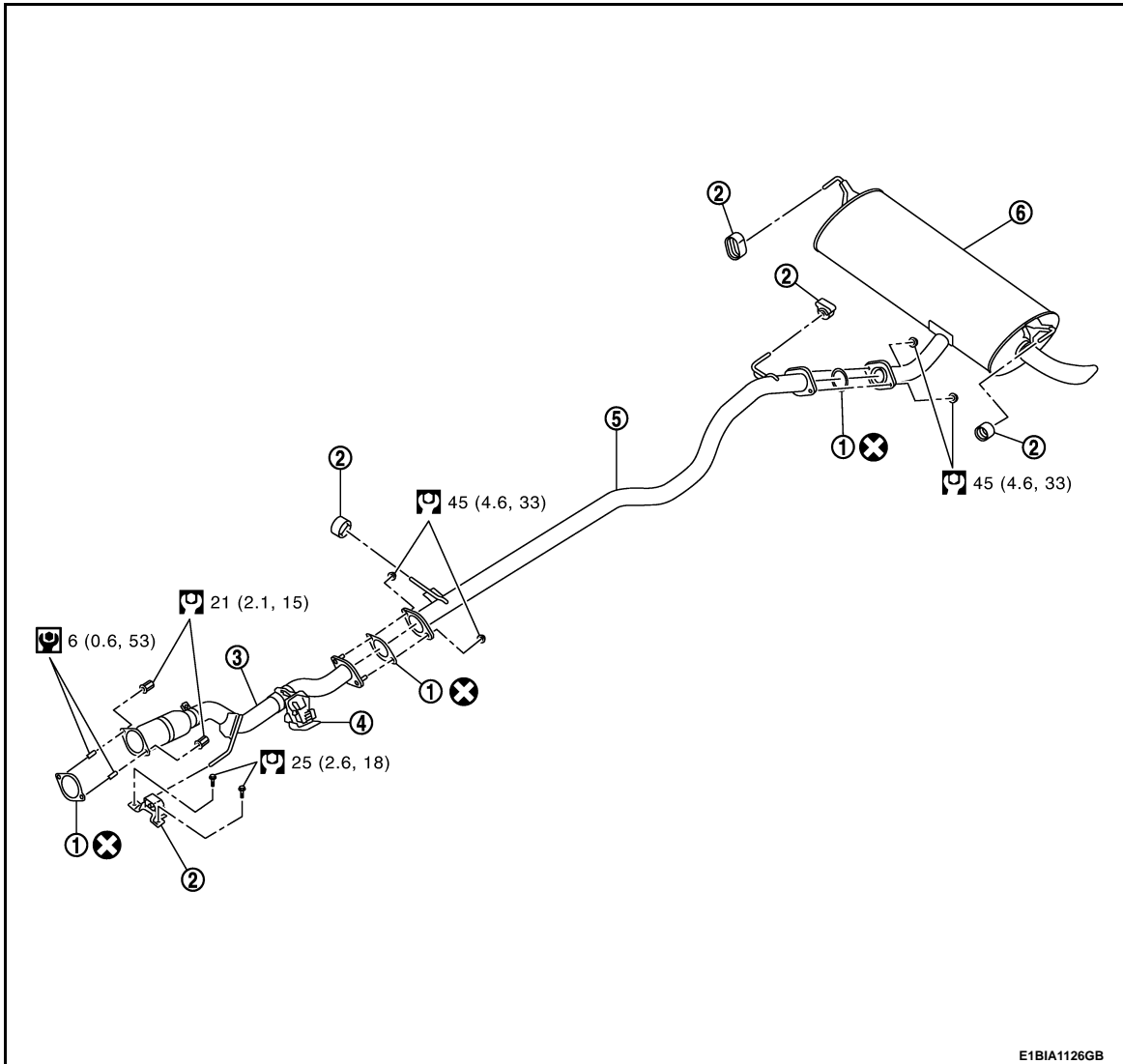
[R9M]

REMOVAL AND INSTALLATION

EXHAUST SYSTEM

Exploded View

INFOID:000000010287093



E1BIA1126GB

- | | | |
|--------------------|------------------------|-----------------------|
| 1. Gasket | 2. Mounting rubber | 3. Exhaust front tube |
| 4. Exhaust shutter | 5. Exhaust center tube | 6. Main muffler |

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

Removal and Installation

INFOID:000000010287094

REMOVAL

1. Remove main muffler.
2. Disconnect exhaust valve.
3. Unclip and move aside harness of exhaust throttle valve.
4. Remove exhaust front tube.

INSTALLATION

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

Exhaust Front Tube and Main Muffler

EXHAUST SYSTEM

< REMOVAL AND INSTALLATION >

[R9M]

1. Perform "Exhaust throttle valve position learning". Refer to [EC9-150, "Work Procedure"](#). when replacing or removing exhaust throttle valve. Refer to [EC9-143, "Special Repair Requirement List"](#).

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.
- Remove deposits from the sealing surface of each connection. Connect them securely to avoid gas leakage.
- If it is difficult to install mounting rubber, use mild detergent for smooth installation.
- When installing each mounting rubber, avoid twisting or unusual extension in up/down and right/left directions.
- Temporarily tighten mounting nuts. Check each part for unusual interference, and then tighten them to the specified torque.

Inspection

INFOID:0000000010287095

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.

PARTICLE FILTER

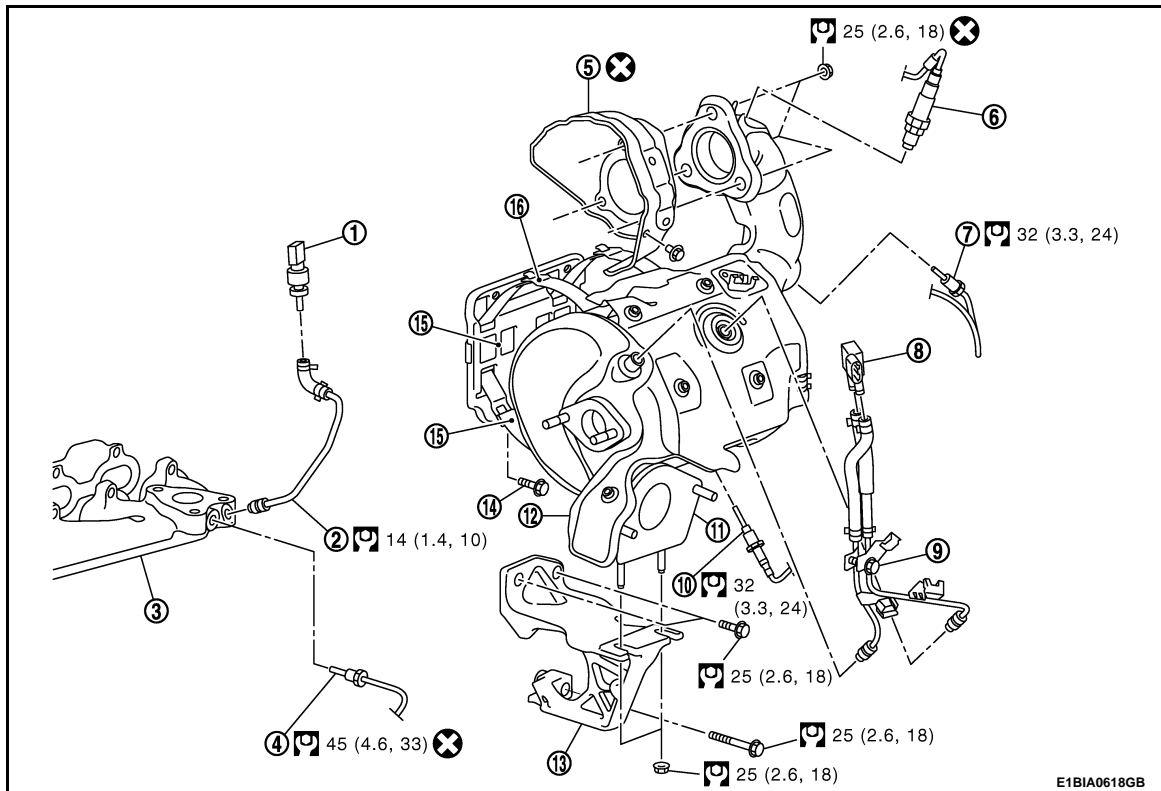
< REMOVAL AND INSTALLATION >

[R9M]

PARTICLE FILTER

Exploded View

INFOID:000000010287096



E1BIA0618GB

- | | | |
|--|--|----------------------------------|
| 1. Exhaust gas pressure sensor | 2. Exhaust gas pressure sensor take-off pipe | 3. Exhaust manifold pipe |
| 4. Exhaust gas temperature sensor | 5. Turbocharger heat shield gasket | 6. Oxygen sensor |
| 7. Particle filter temperature sensor | 8. Particle filter pressure sensor | 9. Particle filter pressure pipe |
| 10. Particle filter temperature sensor | 11. Diesel particle filter | 12. Particle filter heat shield |
| 13. Particle filter bracket | 14. Particle filter mounting | 15. Particle filter mounting |

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

Removal and installation

INFOID:000000010287097

CAUTION:

- Perform the operation with the exhaust system fully cooled down because the system is still hot just after engine stops.
- Be careful not to cut your hand on the insulator edge.

REMOVAL

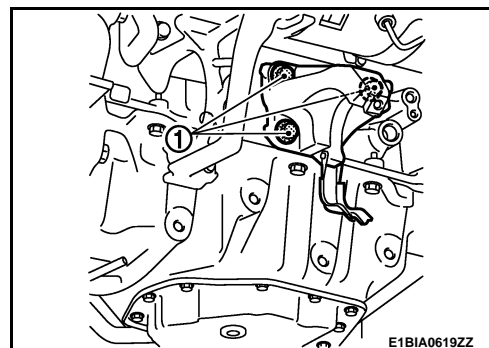
1. Disconnect the batterie negative terminal.
2. Remove cowl top cover and extension cowl top. Refer to [EXT-29, "Exploded View"](#)
3. Remove the air inlet pipe
4. Remove the air duct inlet.
5. Drain the manuel gearbox. Refer to [TM-81, "Draining"](#) (2WD) or [TM-140, "4WD : Draining"](#) (4WD)
6. Remove the front wheels.
7. Remove the drive shaft (right side). Refer to [FAX-22, "Removal and Installation \(LH\)"](#) and [FAX-26, "Removal and Installation \(RH\)"](#) (2WD) or [FAX-60, "Removal and Installation \(LH\)"](#) and [FAX-63, "Removal and Installation \(RH\)"](#) (4WD)

PARTICLE FILTER

< REMOVAL AND INSTALLATION >

[R9M]

8. Remove the drive shaft relay bearing nut (1) and the drive shaft relay bearing.



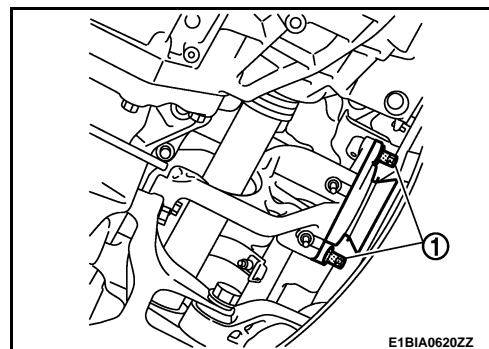
9. Remove the rear torque rod. Refer to [EM-429, "Exploded View"](#)

10. Remove the rear engine mounting bracket.

11. Remove transfer assembly. (if equipped). Refer to [DLN-155, "Removal and Installation"](#)

12. Remove front suspension member. Refer to [FSU-21, "Removal and Installation"](#).

13. Remove exhaust tube bracket nuts.

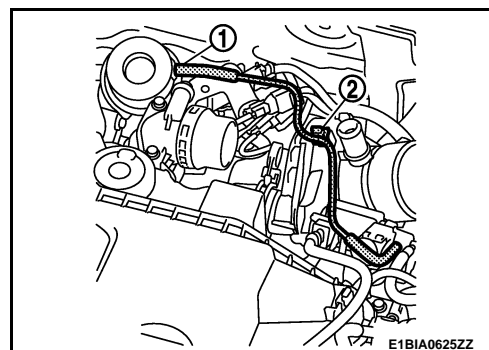


14. Remove the particle filter bracket. Refer to [EX-24, "Exploded View"](#)

15. Remove the oxygen sensor. Refer to [EX-24, "Exploded View"](#)

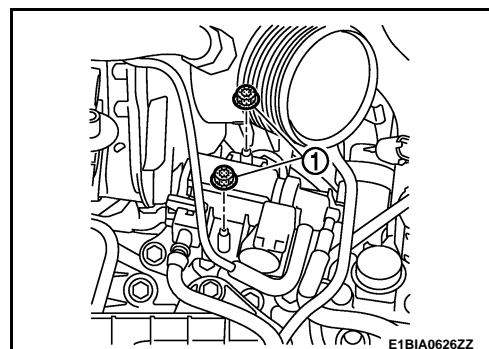
16. Disconnect the turbocharging pressure regulation vacuum hose from turbocharger (1).

17. Unclip the turbocharging pressure regulation vacuum hose (2)



18. Remove the turbocharging pressure regulation solenoid valve nuts (1)

19. Move aside the turbocharging pressure regulation solenoid valve

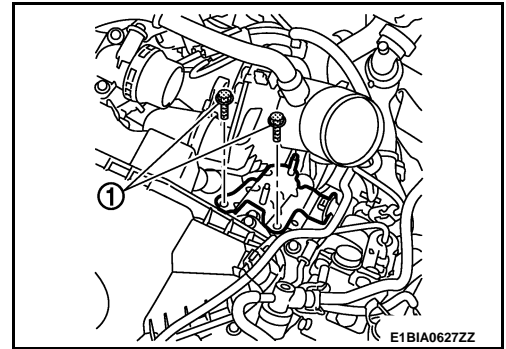


PARTICLE FILTER

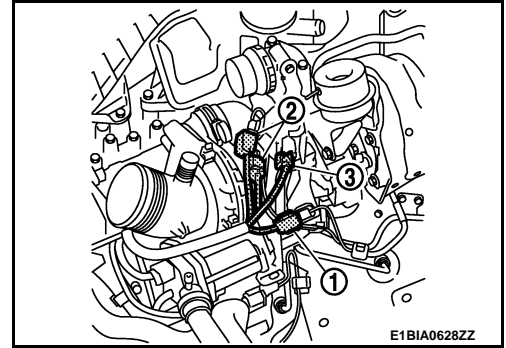
[R9M]

< REMOVAL AND INSTALLATION >

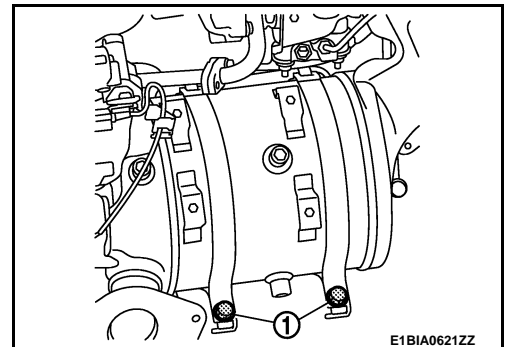
20. Remove the turbocharging pressure regulation solenoid valve bracket bolts (1)
21. Remove the turbocharging pressure regulation solenoid valve bracket.



22. Disconnect the particle filter sensor (1), (2) and (3).
23. Remove the particle sensor connector bracket.



24. Remove the bolts (1) of the particle filter straps and the straps.



25. Move the engine forward and remove the particle filter from under.

CAUTION:

Be careful not to impact or damage particle filter pressure sensor.

INSTALLATION

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

CAUTION:

- **Be careful not to impact or damage particle filter sensor.**
- **When installing never use such tools as an air impact wrench.**

1. Perform "Diesel particulate filter data clear". Refer to [EC9-157, "Description"](#), when replacing diesel particulate filter. Refer to [EC9-143, "Special Repair Requirement List"](#)

EXHAUST GAS TEMPERATURE SENSOR

< REMOVAL AND INSTALLATION >

[R9M]

EXHAUST GAS TEMPERATURE SENSOR

EXHAUST GAS TEMPERATURE SENSOR UPSTREAM OF THE TURBOCHARGER

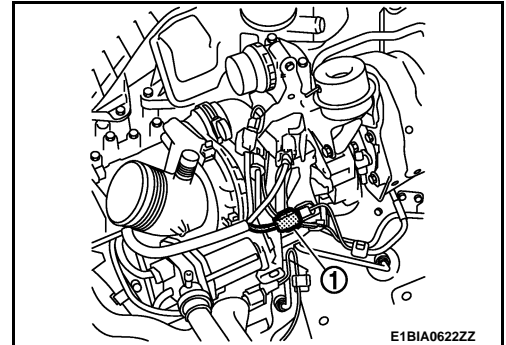
EXHAUST GAS TEMPERATURE SENSOR UPSTREAM OF THE TURBOCHARGER

: Removal and installation

INFOID:000000010287098

REMOVAL

1. Disconnect the batterie negative cable.
2. Remove cowl top cover and extension cowl top. Refer to [EXT-29, "Removal and Installation"](#).
3. Remove engine undercover.
4. Remove the diesel particle filter. Refer to [EX-24, "Removal and installation"](#).
5. Disconnect the exhaust gas temperature sensor upstream of the turbocharger (1).



6. Remove the exhaust gas temperature sensor upstream of the turbocharger. Refer to [EX-27, "EXHAUST GAS TEMPERATURE SENSOR UPSTREAM OF THE TURBOCHARGER : Removal and installation"](#).

CAUTION:

Be careful not to impact or damage exhaust gas temperature sensor.

INSTALLATION

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

CAUTION:

- Before installing a new exhaust gas temperature sensor, clean exhaust manifold thread.
- Be careful not to impact or damage exhaust gas temperature sensor.
- When installing, never use such tools as an air impact wrench

EXHAUST GAS TEMPERATURE SENSOR ON THE EXHAUST GAS COOLER

EXHAUST GAS TEMPERATURE SENSOR ON THE EXHAUST GAS COOLER : Removal and installation

INFOID:000000010287099

REMOVAL

1. Disconnect the batterie negative cable.
2. Remove cowl top cover and extension cowl top. Refer to [EXT-29, "Removal and Installation"](#).
3. Remove engine undercover.
4. Remove the injector rail protector.
5. Remove the oil separator. Refer to [EM-402, "Exploded View"](#)
6. Remove the exhaust gas recirculation low pressure solenoid valve. Refer to [EM-385, "Exploded View"](#)
7. Remove the exhaust gas cooler. Refer to [EM-385, "Exploded View"](#)

CAUTION:

Be careful not to impact or damage exhaust gas temperature sensor.

8. Remove the exhaust gas temperature sensor from the exhaust gas cooler on the workbench using the tool [SST: — (Mot.1807)]. Refer to [EX-24, "Exploded View"](#).

INSTALLATION

EXHAUST GAS TEMPERATURE SENSOR

[R9M]

< REMOVAL AND INSTALLATION >

- Install the exhaust gas temperature sensor on the exhaust gas cooler on the workbench using the tool [SST: — (Mot.1807)] and the tool [SST: — (Ms.1973)].
- Note the following, and install in the reverse order of removal.

CAUTION:

- Before installing a new exhaust gas temperature sensor, clean exhaust gas cooler thread.
- Be careful not to impact or damage exhaust gas temperature sensor.
- When installing, never use such tools as an air impact wrench

EXHAUST GAS PRESSURE SENSOR

< REMOVAL AND INSTALLATION >

[R9M]

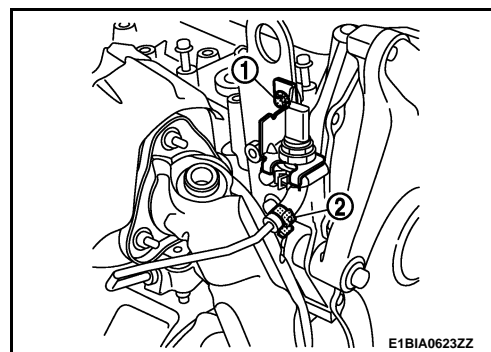
EXHAUST GAS PRESSURE SENSOR

Removal and installation

INFOID:0000000010287100

REMOVAL

1. Disconnect the batterie negative terminal.
2. Remove cowl top cover and extension cowl top. Refer to [EXT-29, "Exploded View"](#)
3. Remove the oxygen sensor. Refer to [EX-24, "Exploded View"](#)
4. Disconnect the exhaust gas pressure sensor connector.
5. Remove:
 - the bolt (1) from the exhaust gas pressure sensor bracket.
 - the clip (2) between the exhaust gas pressure sensor hose and take-off pipe.
6. Remove the exhaust gas pressure sensor and hose assembly.
7. Remove the exhaust gas pressure sensor clamp. Refer to [EX-24, "Exploded View"](#)
8. Separate the exhaust gas pressure sensor from hose. Refer to [EX-24, "Exploded View"](#)
9. Separate the exhaust gas pressure sensor from bracket.



INSTALLATION

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

NOTE:

Always replace the clamp between the exhaust gas pressure sensor hose and the take-off pipe.

PARTICLE FILTER PRESSURE SENSOR

< REMOVAL AND INSTALLATION >

[R9M]

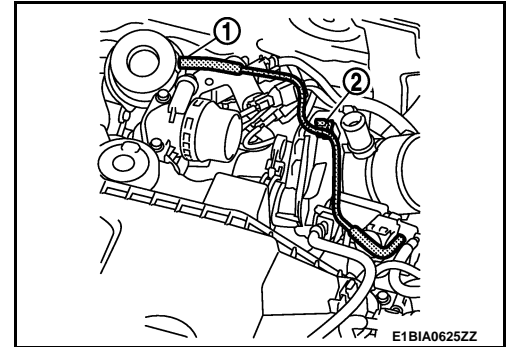
PARTICLE FILTER PRESSURE SENSOR

Removal and installation

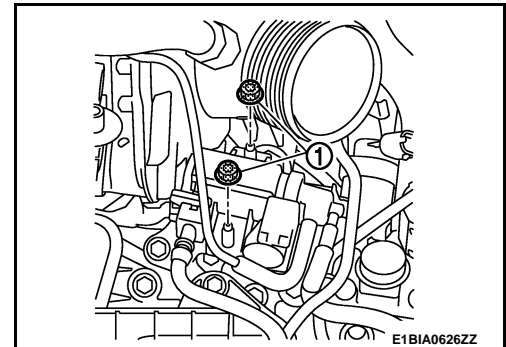
INFOID:000000010287101

REMOVAL

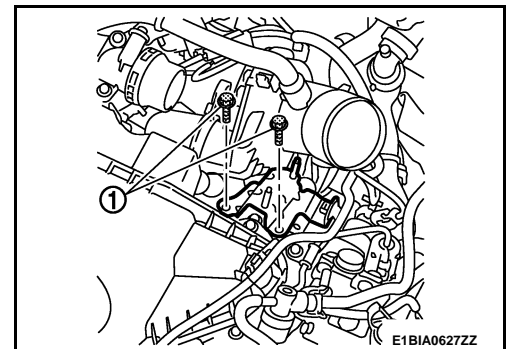
1. Disconnect the batterie negative terminal.
2. Remove cowl top cover and extension cowl top. Refer to [EXT-29, "Exploded View"](#)
3. Remove the air inlet pipe
4. Remove the air duct inlet.
5. Disconnect the turbocharging pressure regulation vacuum hose from turbocharger (1).
6. Unclip the turbocharging pressure regulation vacuum hose (2)



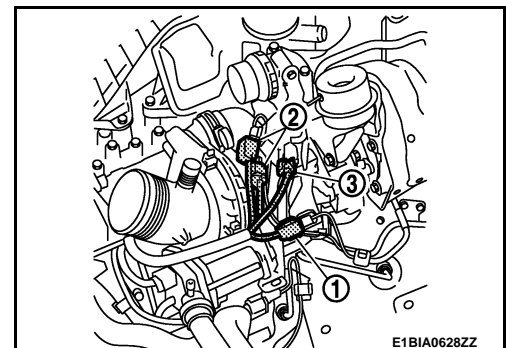
7. Remove the turbocharging pressure regulation solenoid valve nuts (1)
8. Move aside the turbocharging pressure regulation solenoid valve



9. Remove the turbocharging pressure regulation solenoid valve bracket bolts (1)
10. Remove the turbocharging pressure regulation solenoid valve bracket.



11. Disconnect the particle filter sensor (1), (2) and (3).
12. Remove the particle sensor connector bracket.



PARTICLE FILTER PRESSURE SENSOR

< REMOVAL AND INSTALLATION >

[R9M]

13. Remove the particle filter. Refer to [EX-24, "Removal and installation"](#).
14. Remove the particle filter pressure sensor from the Particle filter on the workbench Refer to [EX-24, "Exploded View"](#).

INSTALLATION

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

CAUTION:

- Before installing particle filter pressure sensor, clean particle filter thread.
- Be careful not to impact or damage particle filter pressure sensor.
- When installing never use such tools as an air impact wrench.

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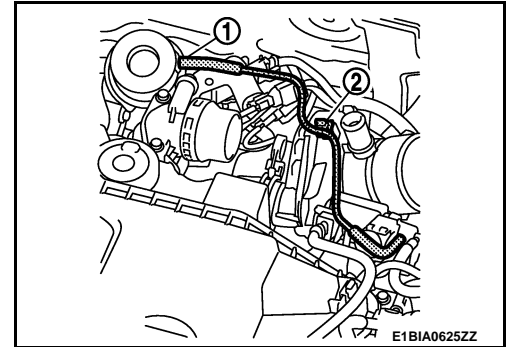
PARTICLE FILTER TEMPERATURE SENSORS

Removal and installation

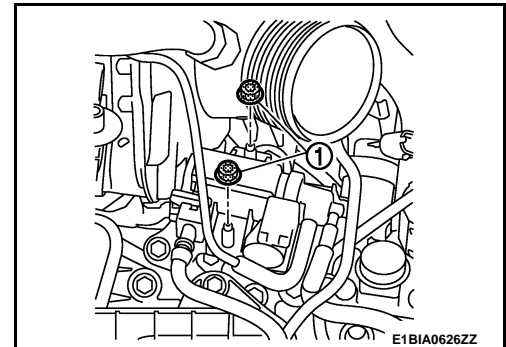
INFOID:000000010287102

REMOVAL

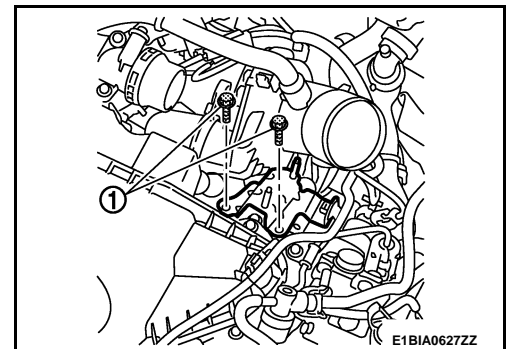
1. Disconnect the batterie negative terminal.
2. Remove cowl top cover and extension cowl top. Refer to [EXT-29, "Exploded View"](#)
3. Remove the air inlet pipe
4. Remove the air duct inlet.
5. Disconnect the turbocharging pressure regulation vacuum hose from turbocharger (1).
6. Unclip the turbocharging pressure regulation vacuum hose (2)



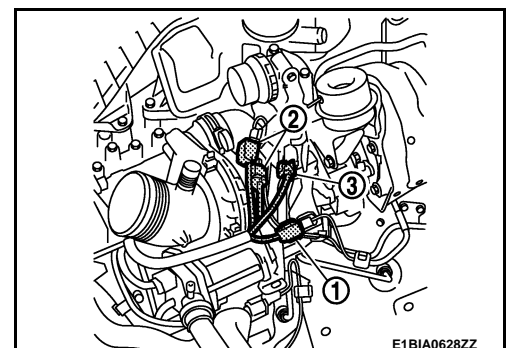
7. Remove the turbocharging pressure regulation solenoid valve nuts (1)
8. Move aside the turbocharging pressure regulation solenoid valve



9. Remove the turbocharging pressure regulation solenoid valve bracket bolts (1)
10. Remove the turbocharging pressure regulation solenoid valve bracket.



11. Disconnect the particle filter sensor (1), (2) and (3).
12. Remove the particle sensor connector bracket.



PARTICLE FILTER TEMPERATURE SENSORS

< REMOVAL AND INSTALLATION >

[R9M]

13. Remove the particle filter. Refer to [EX-24, "Removal and installation"](#).
14. Remove the particle filter pressure sensor from the Particle filter on the workbench Refer to [EX-24, "Exploded View"](#).

INSTALLATION

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

CAUTION:

- Before installing particle filter pressure sensor, clean particle filter thread.
- Be careful not to impact or damage particle filter pressure sensor.
- When installing never use such tools as an air impact wrench.

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