

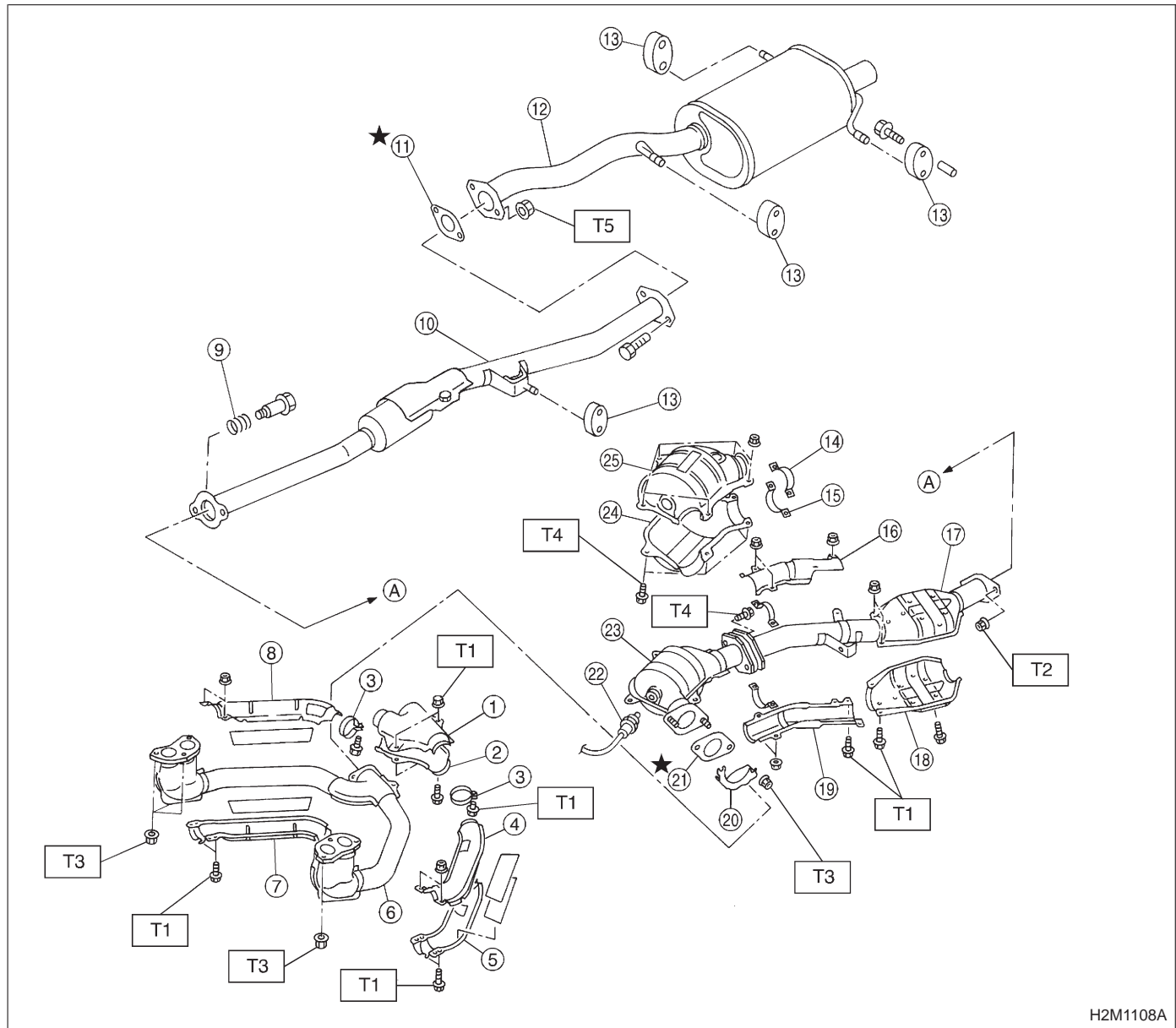
# EXHAUST SYSTEM 2-9

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## 1. Exhaust System

## 1. 1800 cc MODEL



H2M1108A

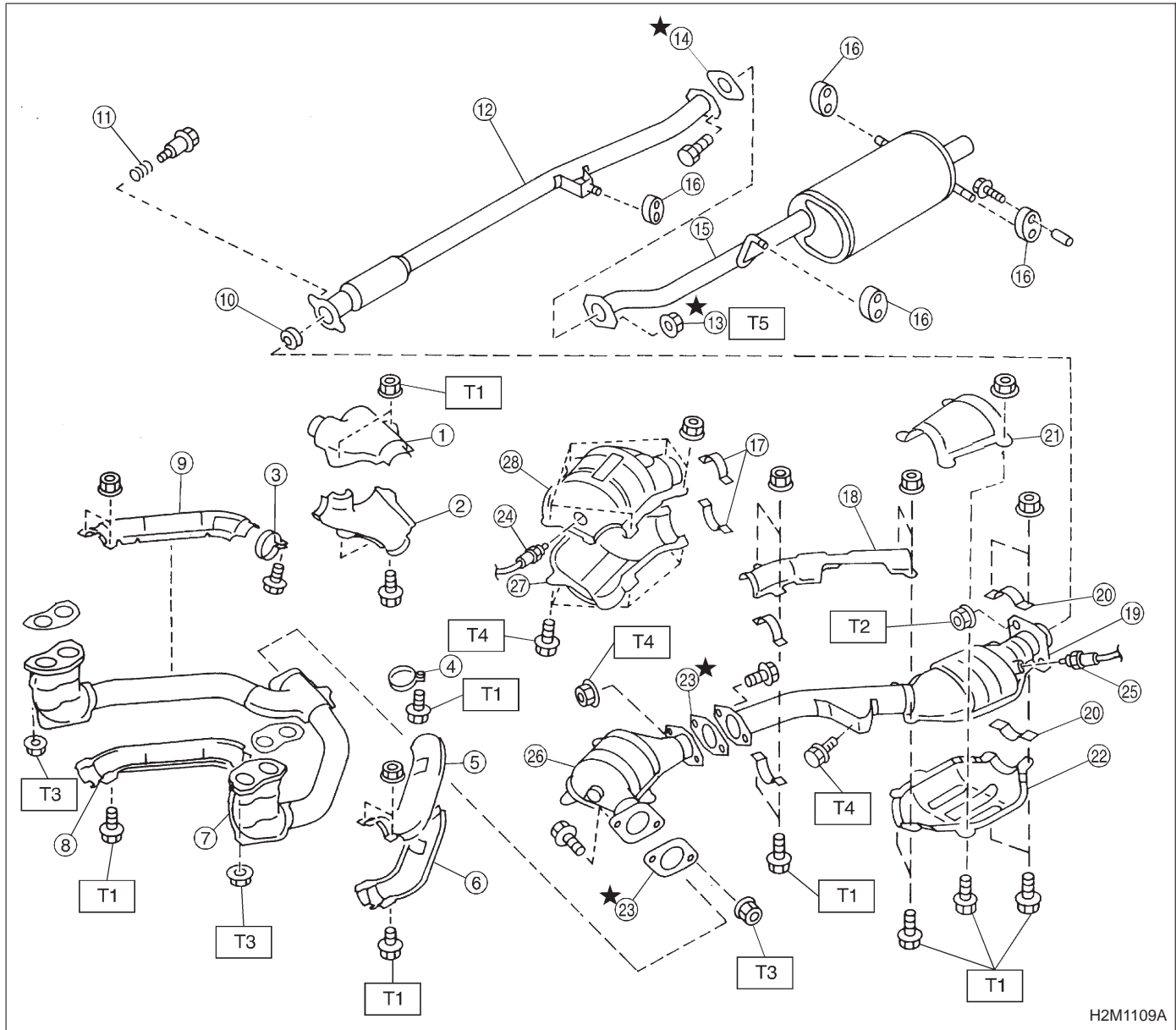
- ① Upper front exhaust pipe cover CTR
- ② Lower front exhaust pipe cover CTR
- ③ Clamp
- ④ Upper front exhaust pipe cover LH
- ⑤ Lower front exhaust pipe cover LH
- ⑥ Front exhaust pipe
- ⑦ Lower front exhaust pipe cover RH
- ⑧ Upper front exhaust pipe cover RH
- ⑨ Spring
- ⑩ Rear exhaust pipe
- ⑪ Gasket

- ⑫ Muffler
- ⑬ Cushion rubber
- ⑭ Upper clamp
- ⑮ Lower clamp
- ⑯ Upper center exhaust pipe cover
- ⑰ Center exhaust pipe
- ⑱ Lower rear catalytic converter cover
- ⑲ Lower center exhaust pipe cover
- ⑳ Protector
- ㉑ Gasket
- ㉒ Oxygen sensor

- ㉓ Front catalytic converter
- ㉔ Lower front catalytic converter cover
- ㉕ Upper front catalytic converter cover

**Tightening torque: N·m (kg-m, ft-lb)****T1: 13±3 (1.3±0.3, 9.4±2.2)****T2: 18±5 (1.8±0.5, 13.0±3.6)****T3: 30±5 (3.1±0.5, 22.4±3.6)****T4: 35±5 (3.6±0.5, 26.0±3.6)****T5: 48±5 (4.9±0.5, 35.4±3.6)**

### 2. 2200 cc MODEL



- ① Upper front exhaust pipe cover CTR
- ② Lower front exhaust pipe cover CTR
- ③ Band RH
- ④ Band LH
- ⑤ Upper front exhaust pipe cover LH
- ⑥ Lower front exhaust pipe cover LH
- ⑦ Front exhaust pipe
- ⑧ Lower front exhaust pipe cover RH
- ⑨ Upper front exhaust pipe cover RH
- ⑩ Gasket
- ⑪ Spring
- ⑫ Rear exhaust pipe

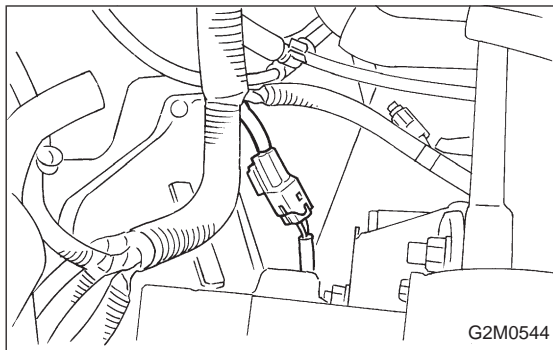
- ⑬ Self-locking nut
- ⑭ Gasket
- ⑮ Muffler
- ⑯ Cushion rubber
- ⑰ Clamp
- ⑱ Upper center exhaust pipe cover
- ⑲ Center exhaust pipe
- ⑳ Clamp B
- ㉑ Upper rear catalytic converter cover
- ㉒ Lower rear catalytic converter cover
- ㉓ Gasket
- ㉔ Front oxygen sensor

- ㉕ Rear oxygen sensor
- ㉖ Front catalytic converter
- ㉗ Lower front catalytic converter cover
- ㉘ Upper front catalytic converter cover

#### **Tightening torque: N·m (kg·m, ft·lb)**

- T1: 13±3 (1.3±0.3, 9.4±2.2)**
- T2: 18±5 (1.8±0.5, 13.0±3.6)**
- T3: 30±5 (3.1±0.5, 22.4±3.6)**
- T4: 35±5 (3.6±0.5, 26.0±3.6)**
- T5: 48±5 (4.9±0.5, 35.4±3.6)**

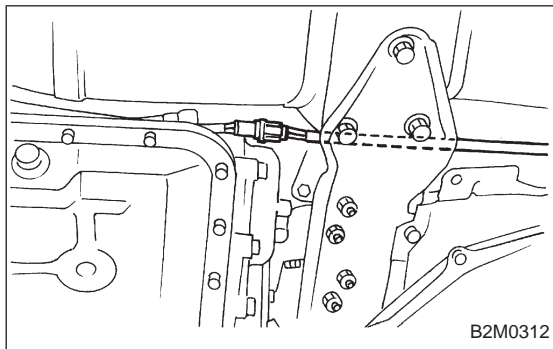
## 1. Front Exhaust Pipe and Center Exhaust Pipe



## 1. Front Exhaust Pipe and Center Exhaust Pipe

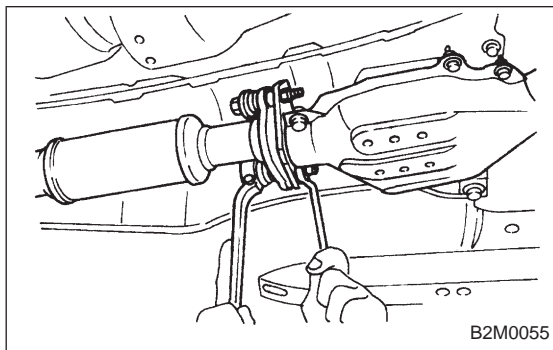
### A: REMOVAL

1) Disconnect front oxygen sensor connector.

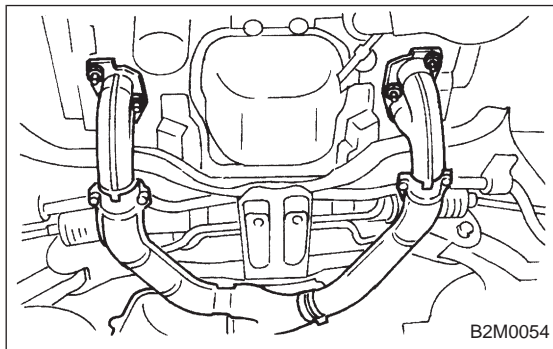


2) Lift-up the vehicle.

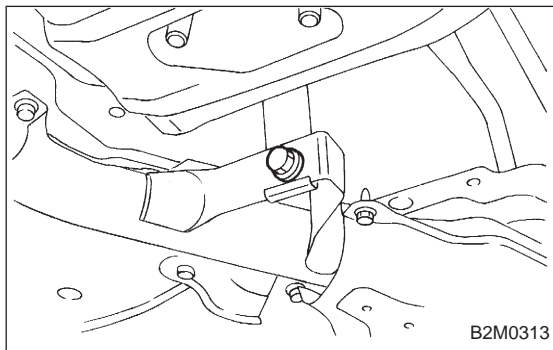
3) Disconnect rear oxygen sensor connector. (2200 cc)



4) Separate center exhaust pipe from rear exhaust pipe.



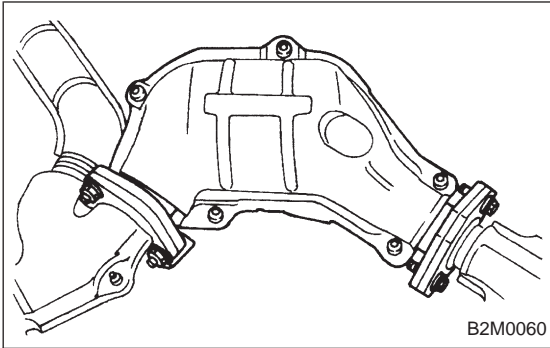
5) Remove bolts which hold front exhaust pipe onto cylinder heads.



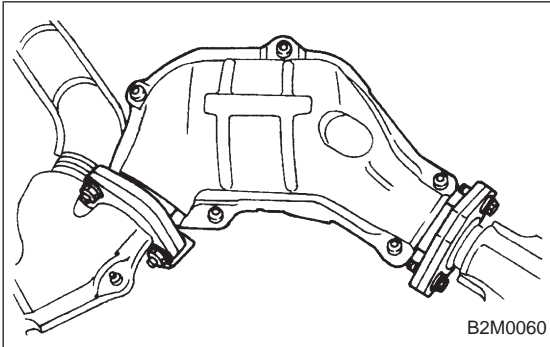
6) Remove front exhaust pipe and center exhaust pipe from hanger bracket.

**CAUTION:**

**Be careful not to pull down front exhaust pipe and center exhaust pipe.**



7) Separate front exhaust pipe from front catalytic converter.



## B: INSTALLATION

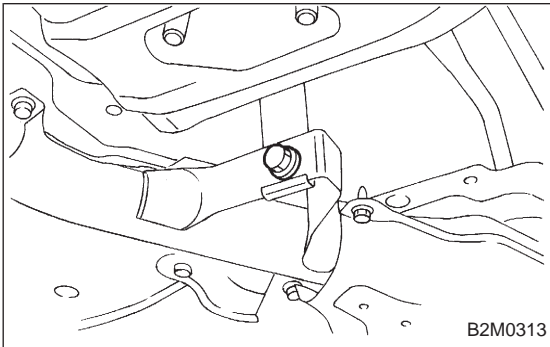
### CAUTION:

Replace gaskets with new ones.

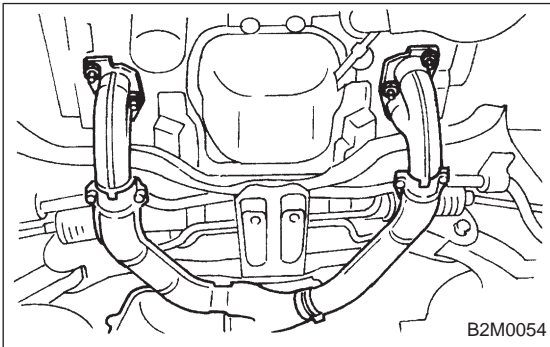
1) Install front catalytic converter to front exhaust pipe.

**Tightening torque:**

**$30 \pm 5 \text{ N}\cdot\text{m}$  ( $3.1 \pm 0.5 \text{ kg}\cdot\text{m}$ ,  $22.4 \pm 3.6 \text{ ft}\cdot\text{lb}$ )**



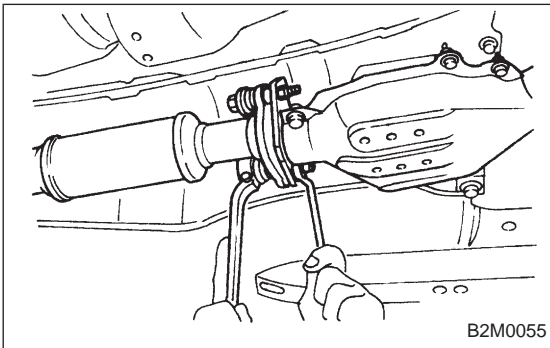
2) Install front exhaust pipe and center exhaust pipe. And temporarily tighten bolt which installs center exhaust pipe to hanger bracket.



3) Tighten bolts which hold front exhaust pipe onto cylinder heads.

**Tightening torque:**

**$30 \pm 5 \text{ N}\cdot\text{m}$  ( $3.1 \pm 0.5 \text{ kg}\cdot\text{m}$ ,  $22.4 \pm 3.6 \text{ ft}\cdot\text{lb}$ )**

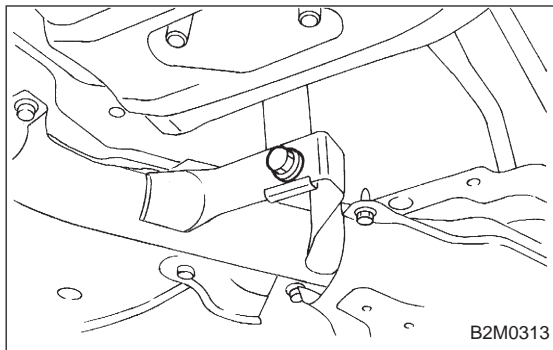


4) Install center exhaust pipe to rear exhaust pipe.

**Tightening torque:**

**$18 \pm 5 \text{ N}\cdot\text{m}$  ( $1.8 \pm 0.5 \text{ kg}\cdot\text{m}$ ,  $13.0 \pm 3.6 \text{ ft}\cdot\text{lb}$ )**

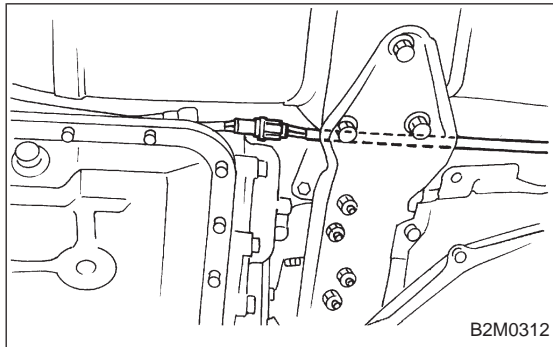
## 2. Rear Exhaust Pipe



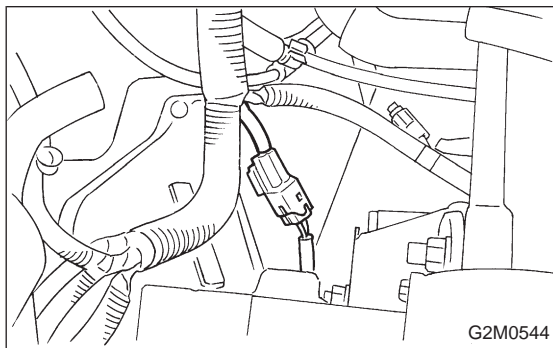
5) Tighten bolt which holds center exhaust pipe to hanger bracket.

**Tightening torque:**

**$35\pm5$  N·m ( $3.6\pm0.5$  kg-m,  $26.0\pm3.6$  ft-lb)**

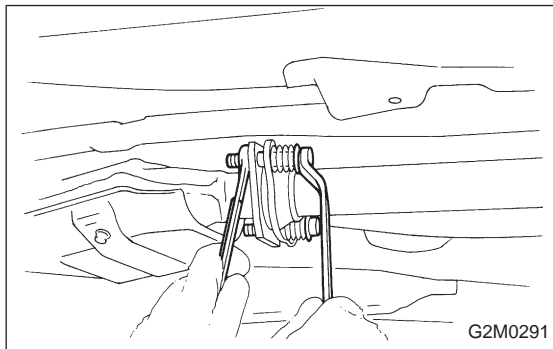


6) Connect rear oxygen sensor connector. (2200 cc)



7) Lower the vehicle.

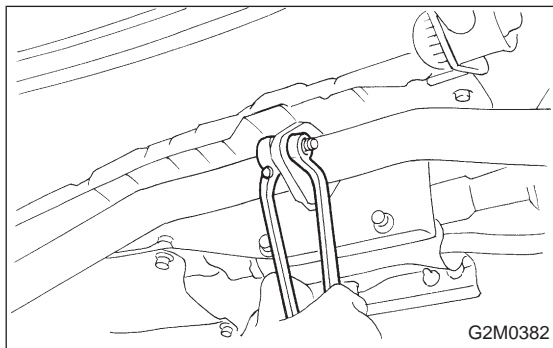
8) Connect front oxygen sensor connector.



## 2. Rear Exhaust Pipe

### A: REMOVAL

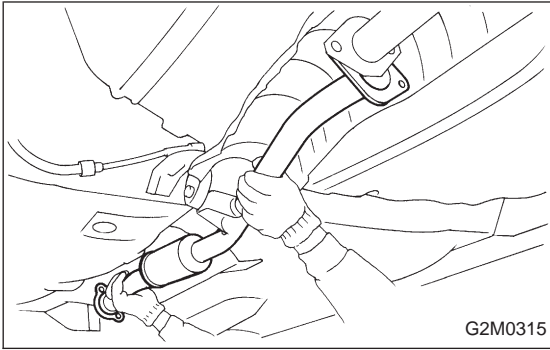
1) Separate rear exhaust pipe from front catalytic converter.



2) Separate rear exhaust pipe from muffler.

**CAUTION:**

**Be careful not to pull down front exhaust pipe and front catalytic converter.**

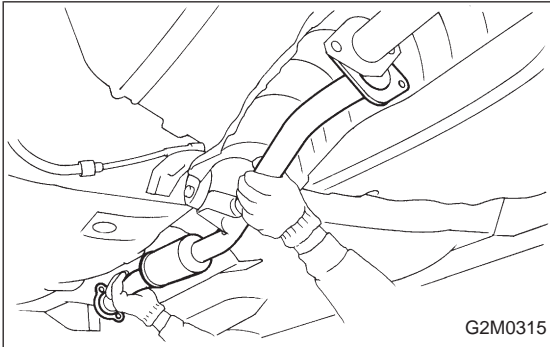


3) Remove rear exhaust pipe bracket from rubber cushion.

**NOTE:**

To facilitate removal, apply a coat of SUBARU CRC to pipe bracket in advance.

**SUBARU CRC (Part No. 004301003)**



## B: INSTALLATION

**CAUTION:**

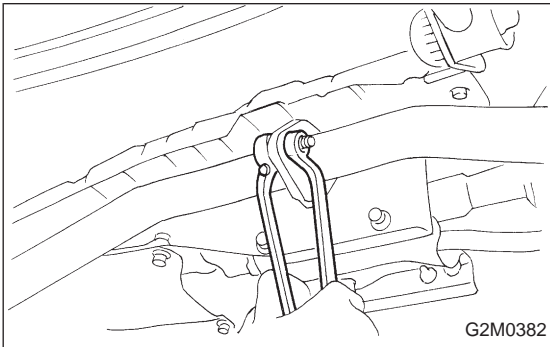
**Replace gaskets with new ones.**

1) Install rear exhaust pipe bracket to rubber cushion.

**NOTE:**

To facilitate installation, apply a coat of SUBARU CRC to mating area of rubber cushion in advance.

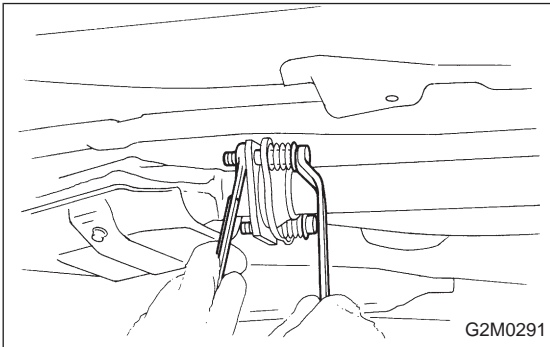
**SUBARU CRC (Part No. 004301003)**



2) Install rear exhaust pipe to muffler.

**Tightening torque:**

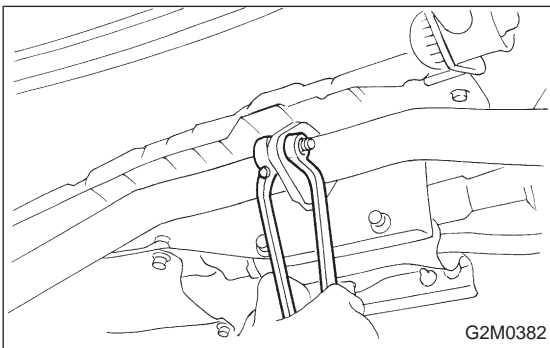
**$48 \pm 5 \text{ N} \cdot \text{m}$  ( $4.9 \pm 0.5 \text{ kg} \cdot \text{m}$ ,  $35.4 \pm 3.6 \text{ ft} \cdot \text{lb}$ )**



3) Install rear exhaust pipe to front catalytic converter.

**Tightening torque:**

**$18 \pm 5 \text{ N} \cdot \text{m}$  ( $1.8 \pm 0.5 \text{ kg} \cdot \text{m}$ ,  $13.0 \pm 3.6 \text{ ft} \cdot \text{lb}$ )**

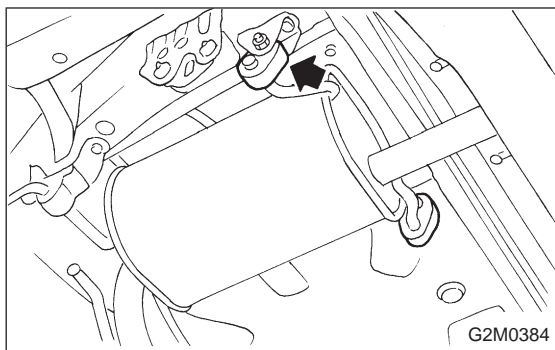


## 3. Muffler

### A: REMOVAL AND INSTALLATION

1) Separate muffler from rear exhaust pipe.

## 4. Front Catalytic Converter



2) Remove left and right rubber cushions.

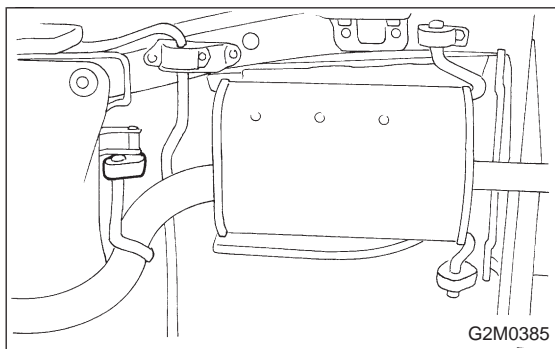
**CAUTION:**

**Be careful not to pull down front exhaust pipe and front catalytic converter.**

**NOTE:**

To facilitate removal, apply a coat of SUBARU CRC to mating area of rubber cushions in advance.

**SUBARU CRC (Part No. 004301003)**

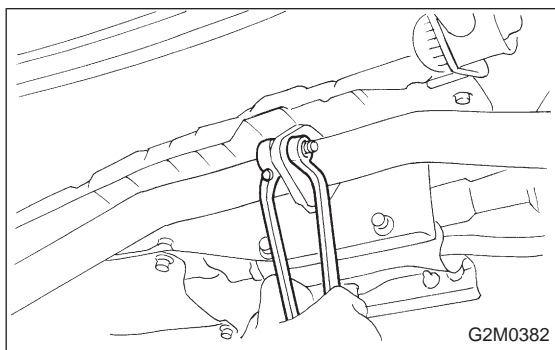


3) Remove front rubber cushion, and detach muffler assembly.

**NOTE:**

To facilitate removal, apply a coat of SUBARU CRC to mating area of rubber cushion in advance.

**SUBARU CRC (Part No. 004301003)**



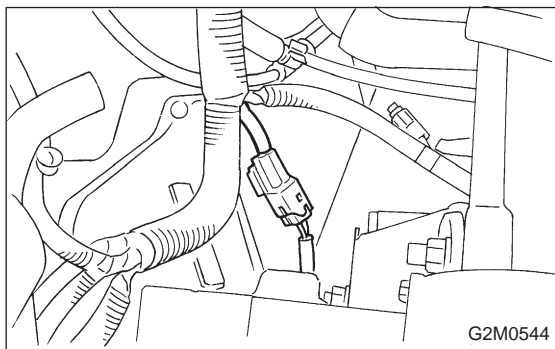
4) Installation is in the reverse order of removal.

**CAUTION:**

**Replace gasket with a new one.**

**Tightening torque:**

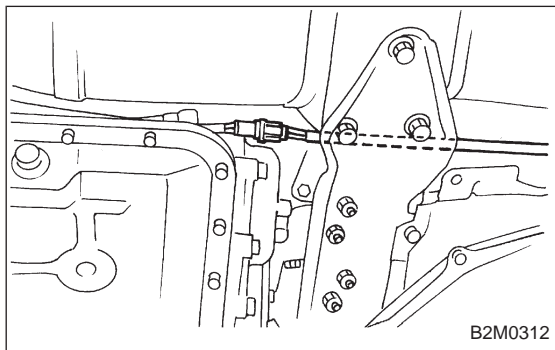
**$48 \pm 5 \text{ N} \cdot \text{m}$  ( $4.9 \pm 0.5 \text{ kg} \cdot \text{m}$ ,  $35.4 \pm 3.6 \text{ ft} \cdot \text{lb}$ )**



## 4. Front Catalytic Converter

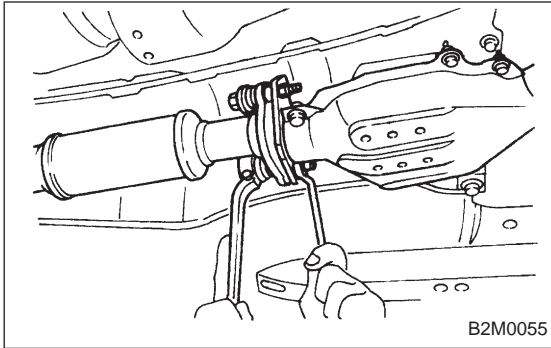
### A: REMOVAL

1) Disconnect front oxygen sensor connector.

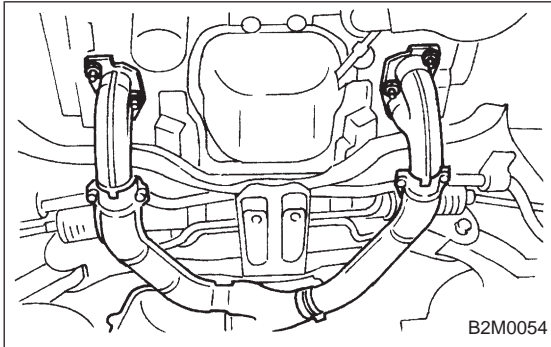


2) Lift-up the vehicle.

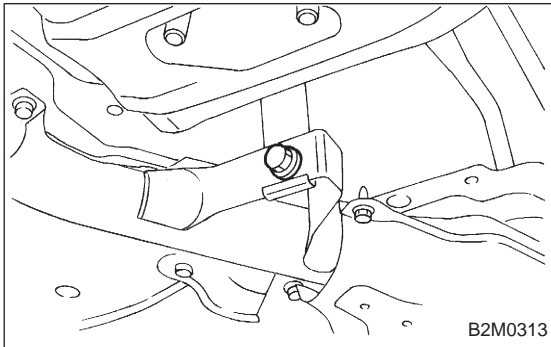
3) Disconnect rear oxygen sensor connector. (2200 cc)



4) Separate center exhaust pipe from rear exhaust pipe.



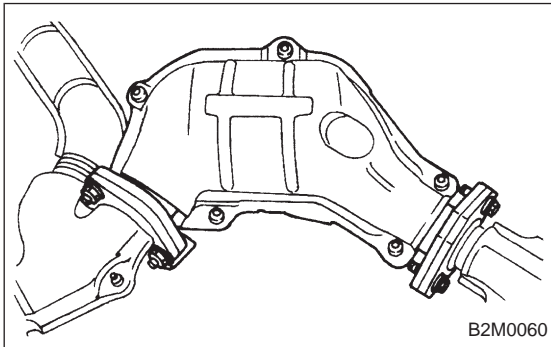
5) Remove bolts which hold front exhaust pipe onto cylinder heads.



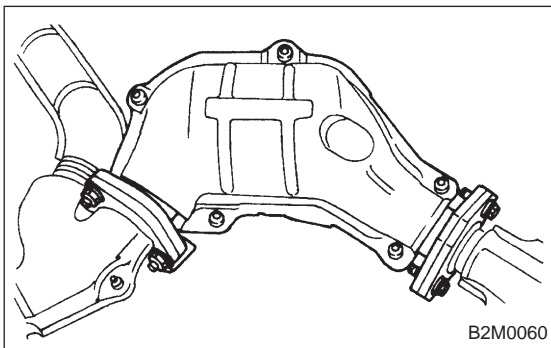
6) Remove front exhaust pipe and center exhaust pipe from hanger bracket.

### CAUTION:

**Be careful not to pull down front exhaust pipe and center exhaust pipe.**



7) Separate front catalytic converter from front exhaust pipe and center exhaust pipe.



## B: INSTALLATION

### CAUTION:

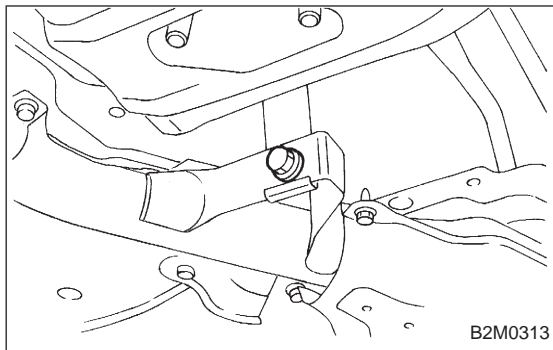
**Replace gaskets with new ones.**

1) Install front catalytic converter to front exhaust pipe and center exhaust pipe.

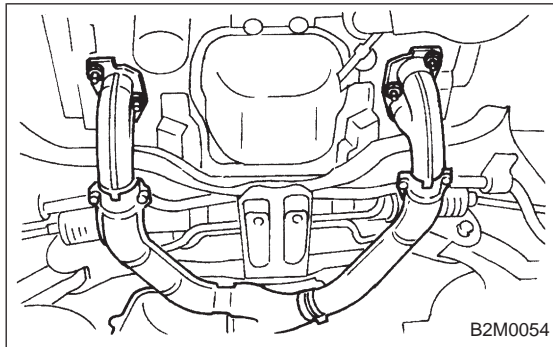
### Tightening torque:

**$30 \pm 5$  N·m ( $3.1 \pm 0.5$  kg·m,  $22.4 \pm 3.6$  ft·lb)**

## 4. Front Catalytic Converter



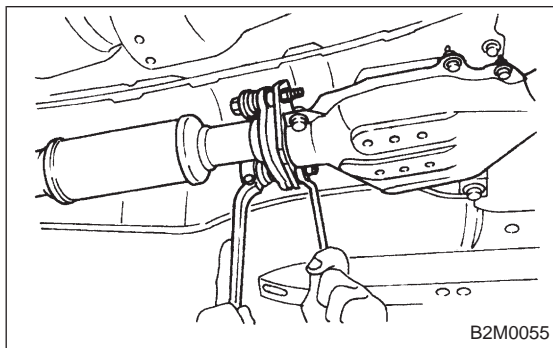
- 2) Install front exhaust pipe and center exhaust pipe. And temporarily tighten bolt which installs center exhaust pipe to hanger bracket.



- 3) Tighten bolts which hold front exhaust pipe onto cylinder heads.

**Tightening torque:**

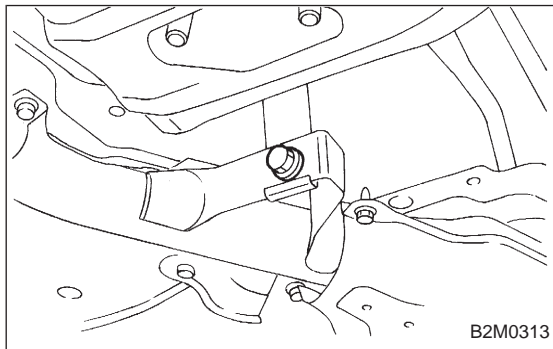
**$30 \pm 5 \text{ N-m}$  ( $3.1 \pm 0.5 \text{ kg-m}$ ,  $22.4 \pm 3.6 \text{ ft-lb}$ )**



- 4) Install center exhaust pipe to rear exhaust pipe.

**Tightening torque:**

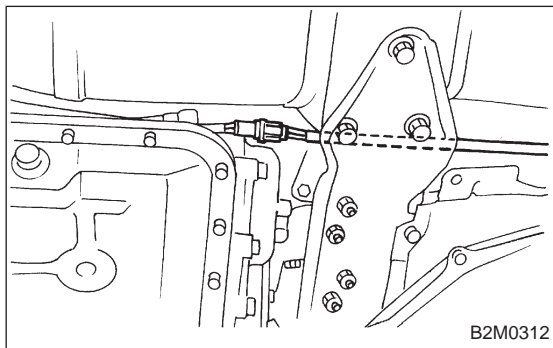
**$18 \pm 5 \text{ N-m}$  ( $1.8 \pm 0.5 \text{ kg-m}$ ,  $13.0 \pm 3.6 \text{ ft-lb}$ )**



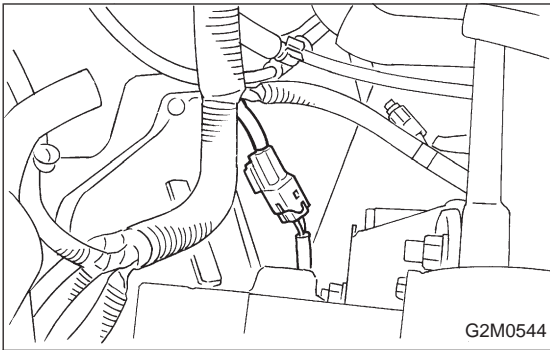
- 5) Tighten bolt which holds center exhaust pipe to hanger bracket.

**Tightening torque:**

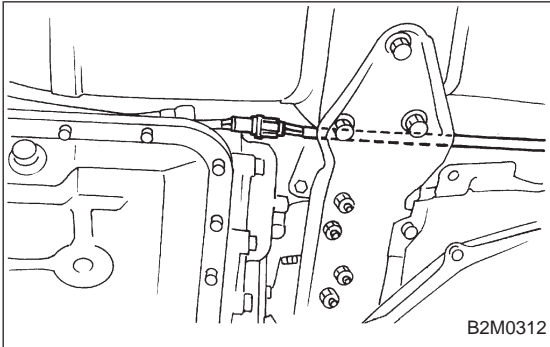
**$35 \pm 5 \text{ N-m}$  ( $3.6 \pm 0.5 \text{ kg-m}$ ,  $26.0 \pm 3.6 \text{ ft-lb}$ )**



- 6) Connect rear oxygen sensor connector. (2200 cc)



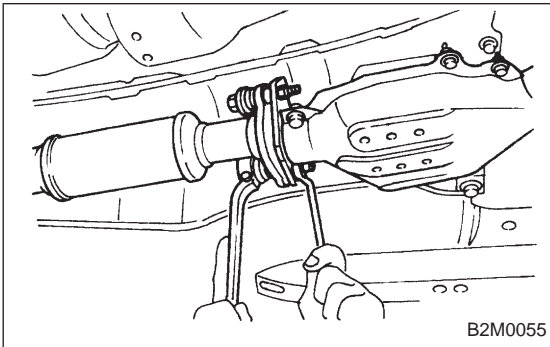
- 7) Lower the vehicle.
- 8) Connect front oxygen sensor connector.



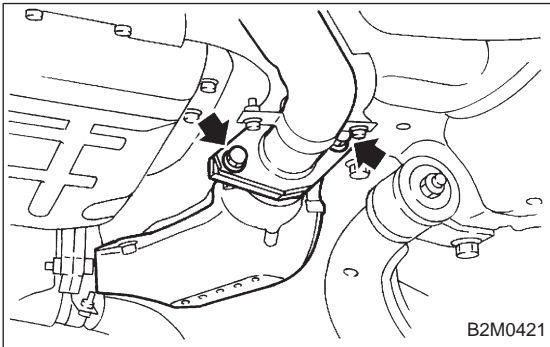
## 5. Rear Catalytic Converter

### A: REMOVAL

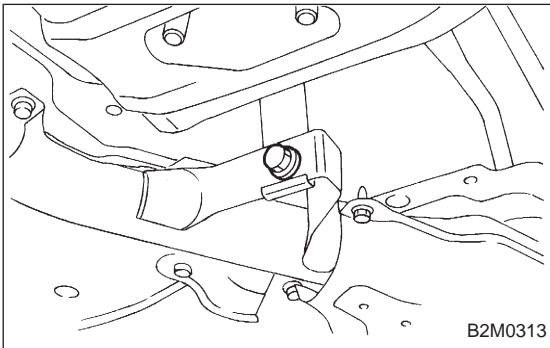
- 1) Lift-up the vehicle.
- 2) Disconnect rear oxygen sensor connector. (2200 cc)



- 3) Separate center exhaust pipe and rear catalytic converter assembly from rear exhaust pipe.



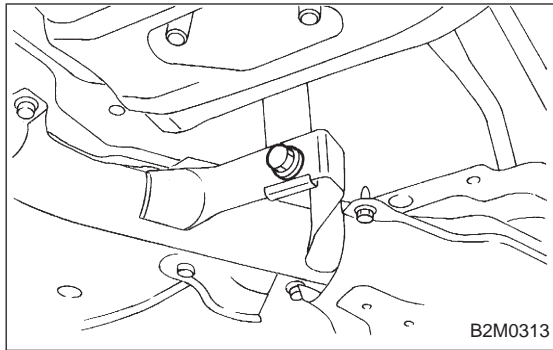
- 4) Separate center exhaust pipe and rear catalytic converter assembly from front catalytic converter.



- 5) Remove center exhaust pipe and rear catalytic converter assembly from hanger bracket.

### CAUTION:

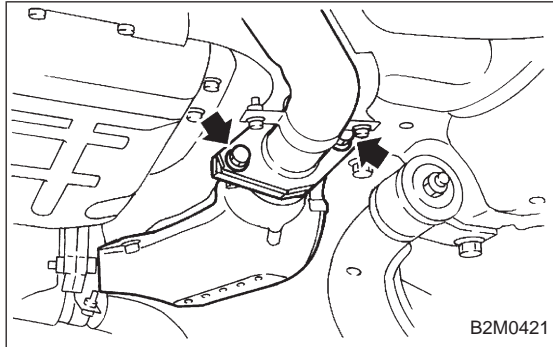
- Be careful not to pull down center exhaust pipe.
- After removing center exhaust pipe, do not apply excessive pulling force on front catalytic converter and front exhaust pipe.

**B: INSTALLATION****CAUTION:**

**Replace gaskets with new ones.**

- 1) Install center exhaust pipe and rear catalytic converter assembly.

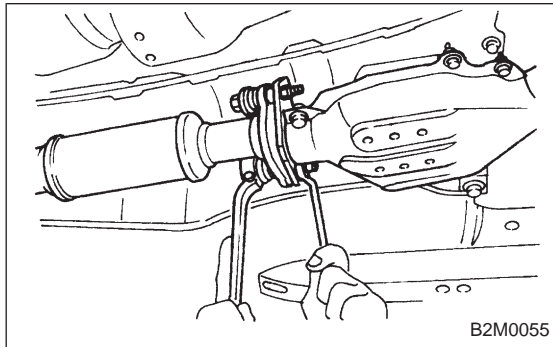
Temporarily tighten bolt which installs center exhaust pipe to hanger bracket.



- 2) Install center exhaust pipe to front catalytic converter.

**Tightening torque:**

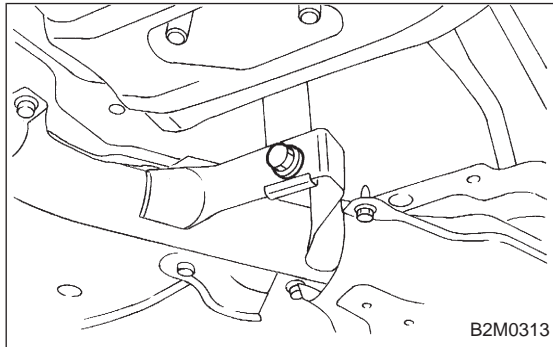
**$35 \pm 5 \text{ N} \cdot \text{m}$  ( $3.6 \pm 0.5 \text{ kg} \cdot \text{m}$ ,  $26.0 \pm 3.6 \text{ ft} \cdot \text{lb}$ )**



- 3) Install center exhaust pipe to rear exhaust pipe.

**Tightening torque:**

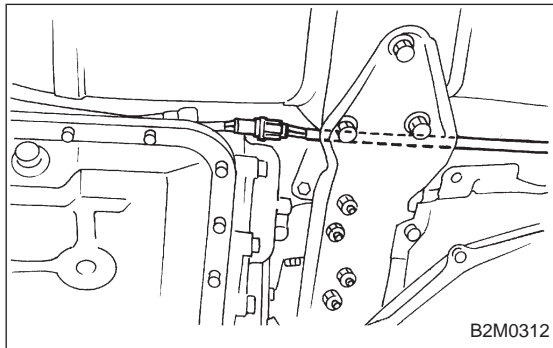
**$18 \pm 5 \text{ N} \cdot \text{m}$  ( $1.8 \pm 0.5 \text{ kg} \cdot \text{m}$ ,  $13.0 \pm 3.6 \text{ ft} \cdot \text{lb}$ )**



- 4) Tighten bolt which holds center exhaust pipe to hanger bracket.

**Tightening torque:**

**$35 \pm 5 \text{ N} \cdot \text{m}$  ( $3.6 \pm 0.5 \text{ kg} \cdot \text{m}$ ,  $26.0 \pm 3.6 \text{ ft} \cdot \text{lb}$ )**



- 5) Connect rear oxygen sensor connector. (2200 cc)