

EXHAUST

EX(H4DO)

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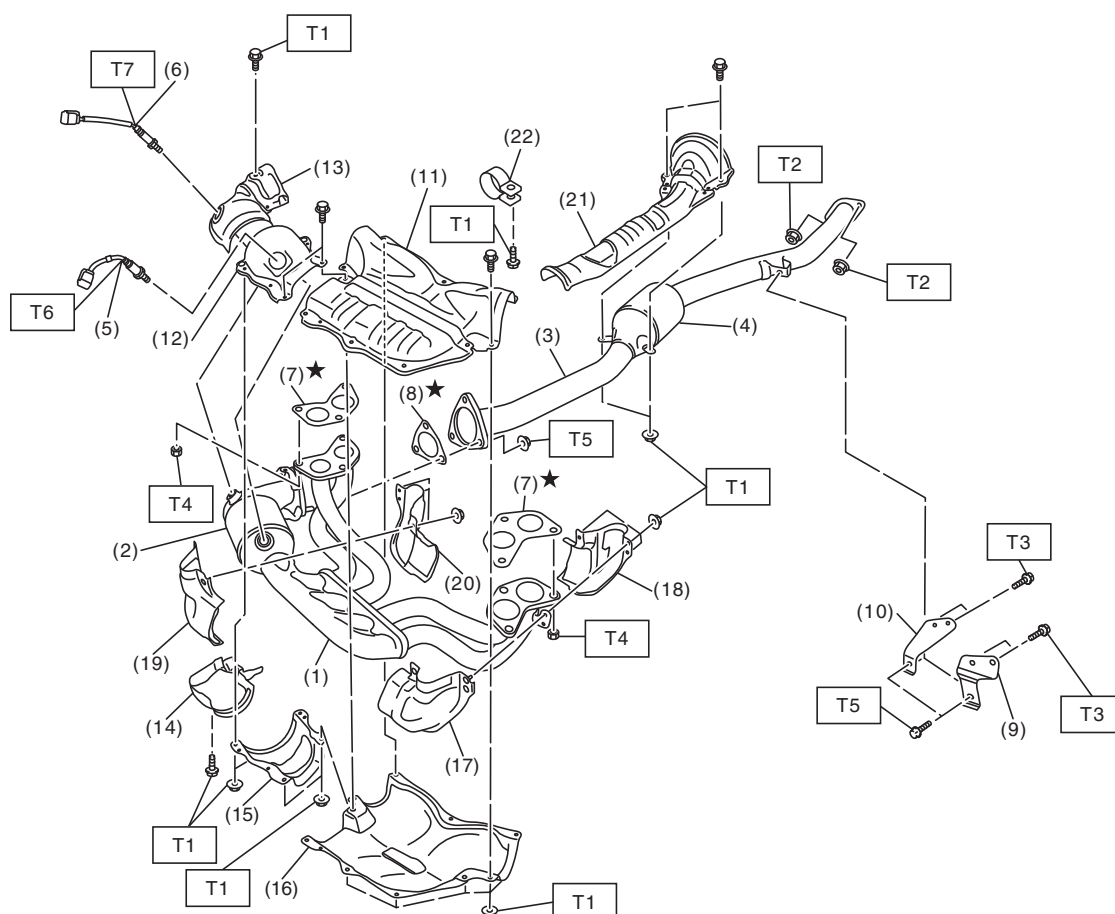
General Description

EXHAUST

1. General Description

A: COMPONENT

1. FRONT EXHAUST PIPE AND CENTER EXHAUST PIPE



EX-03017

General Description

EXHAUST

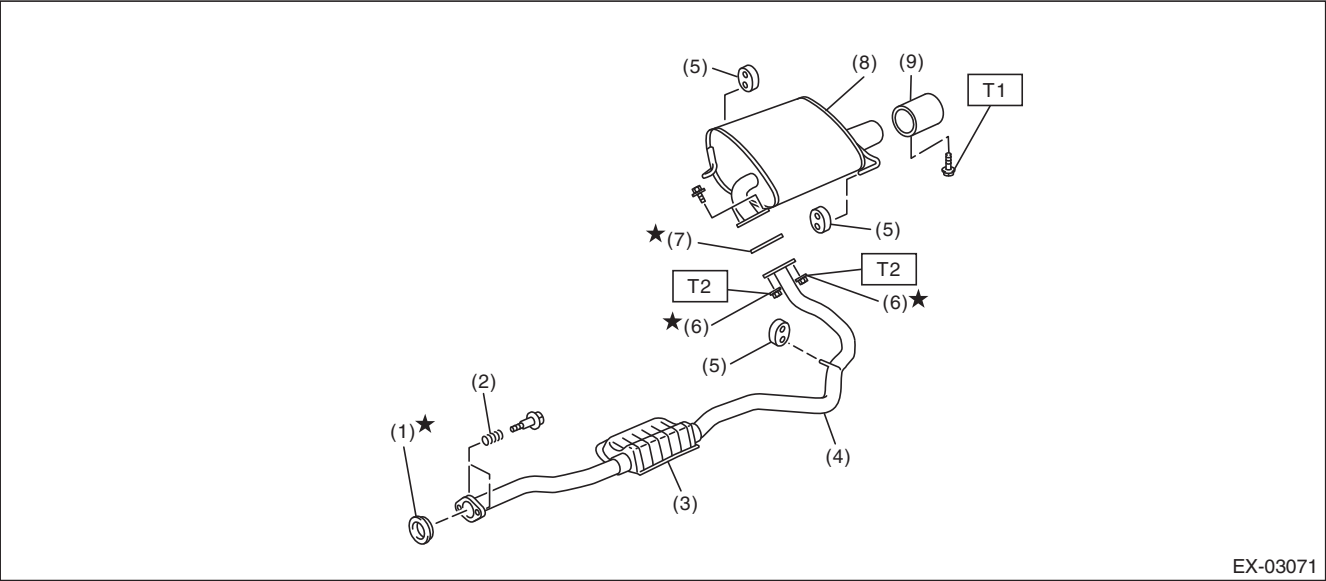
(1) Front exhaust pipe	(12) Front catalytic converter upper cover LH	(22) Band
(2) Front catalytic converter	(13) Front catalytic converter upper cover RH	
(3) Center exhaust pipe	(14) Front catalytic converter lower cover RH	<i>Tightening torque: N·m (kgf-m, ft-lb)</i>
(4) Rear catalytic converter	(15) Front catalytic converter lower cover LH	<i>T1: 13 (1.3, 9.6)</i>
(5) Front oxygen (A/F) sensor	(16) Front exhaust pipe lower cover	<i>T2: 18 (1.8, 13.3)</i>
(6) Rear oxygen sensor	(17) Front exhaust pipe side cover LH (front)	<i>T3: 23 (2.3, 17.0)</i>
(7) Gasket	(18) Front exhaust pipe side cover LH (rear)	<i>T4: 30 (3.1, 22.1)</i>
(8) Gasket	(19) Front exhaust pipe side cover RH (front)	<i>T5: 35 (3.6, 25.8)</i>
(9) Hanger bracket (CVT model)	(20) Front exhaust pipe side cover RH (rear)	<i>T6: <Ref. to FU(H4DO)-88, INSTALLATION, Front Oxygen (A/F) Sensor.></i>
(10) Hanger bracket (MT model)	(21) Center exhaust pipe upper cover	<i>T7: <Ref. to FU(H4DO)-92, INSTALLATION, Rear Oxygen Sensor.></i>
(11) Front exhaust pipe upper cover		



General Description

EXHAUST

2. REAR EXHAUST PIPE AND MUFFLER

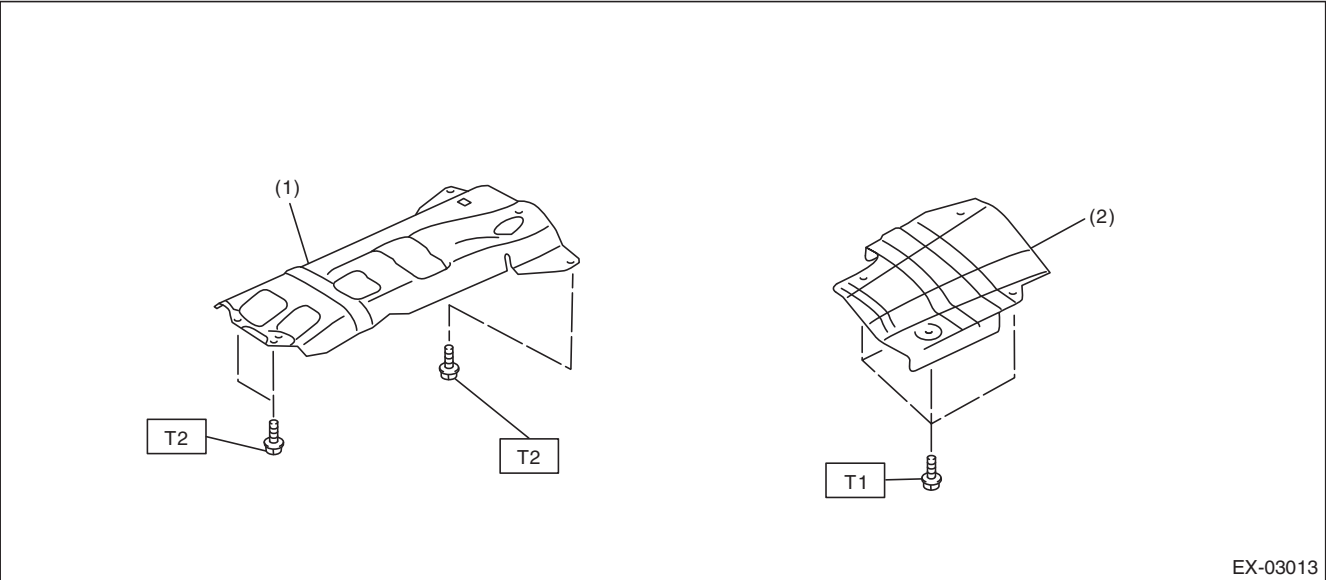


EX-03071

- | | |
|-----------------------|---|
| (1) Gasket | (6) Self-locking nut |
| (2) Spring | (7) Gasket |
| (3) Chamber | (8) Muffler |
| (4) Rear exhaust pipe | (9) Muffler cutter (models with muffler cutter) |
| (5) Cushion rubber | |

Tightening torque: N·m (kgf-m, ft-lb)
T1: 7.5 (0.8, 5.5)
T2: 48 (4.9, 35.4)

3. HEAT SHIELD COVER



EX-03013

- | | |
|--------------------------|------------------------|
| (1) Center exhaust cover | (2) Rear exhaust cover |
|--------------------------|------------------------|

Tightening torque: N·m (kgf-m, ft-lb)
T1: 10 (1.0, 7.4)
T2: 18 (1.8, 13.3)

B: CAUTION

- Prior to starting work, pay special attention to the following:
 1. Always wear work clothes, a safety cap, protective shoes. Additionally, wear a helmet, protective goggles, etc. if necessary.
 2. Protect the vehicle using a seat cover, fender cover, etc.
 3. Prepare the service tools, clean cloth, containers to catch grease and oil, etc.
- Vehicle components are extremely hot immediately after driving. Be wary of receiving burns from heated parts.
- When performing a repair, identify the cause of trouble and avoid unnecessary removal, disassembly and replacement.
- Before disconnecting connectors of sensors or units, be sure to disconnect the ground cable from battery.
- Always use the jack-up point when the shop jacks or rigid racks are used to support the vehicle.
- Remove contamination including dirt and corrosion before removal, installation, disassembly or assembly.
- Keep the removed parts in order and protect them from dust and dirt.
- All removed parts, if to be reused, should be reinstalled in the original positions with attention to the correct directions, etc.
- Bolts, nuts and washers should be replaced with new parts as required.
- Be sure to tighten the fasteners including bolts and nuts to the specified torque.
- If any fat adheres to the exhaust pipe, wipe it off. Otherwise a fire may happen.

Front Exhaust Pipe

EXHAUST

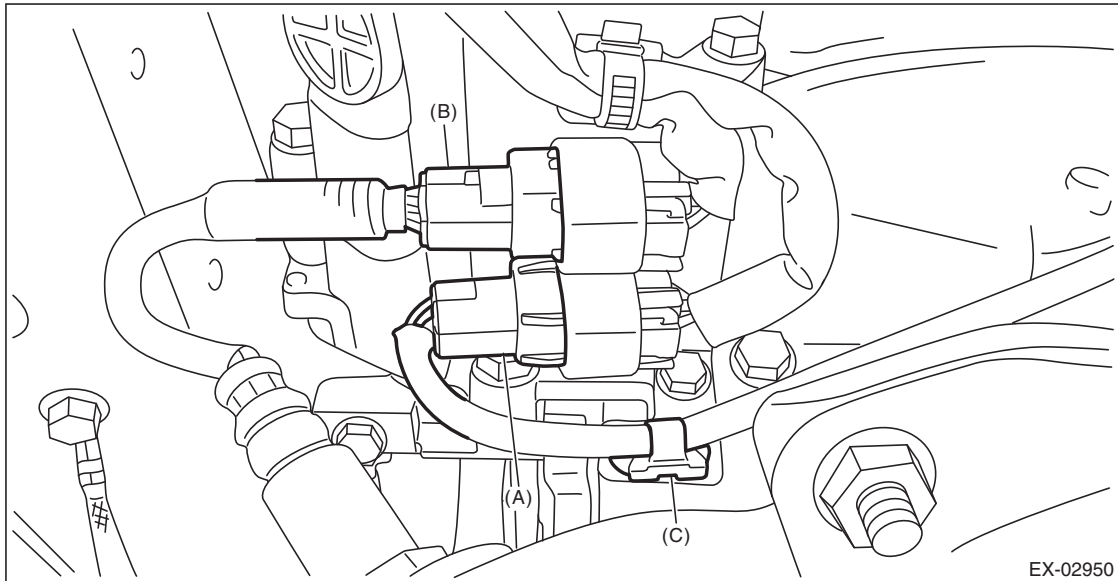
2. Front Exhaust Pipe

A: REMOVAL

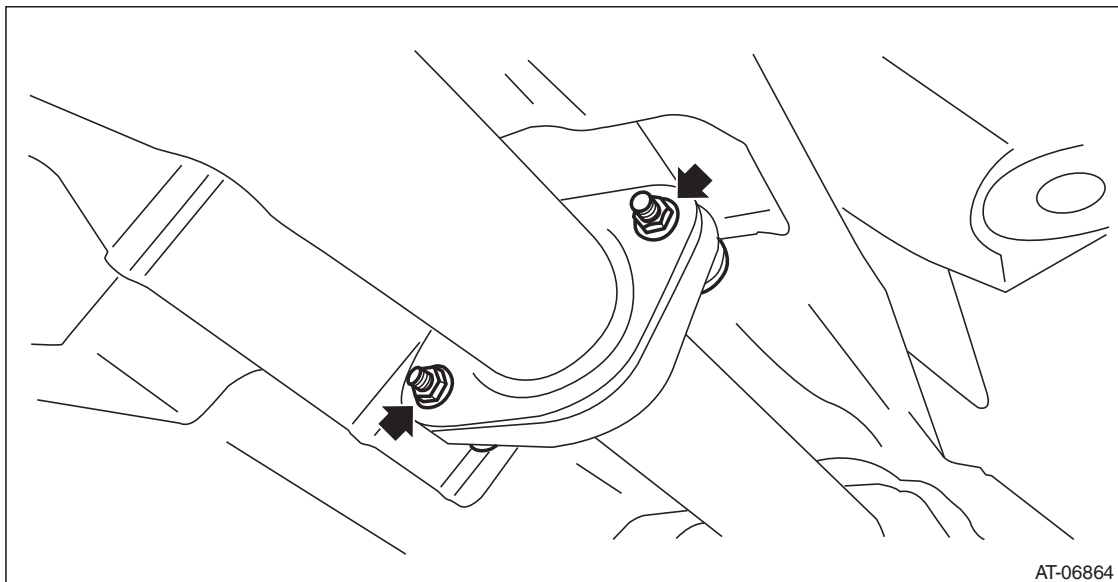
CAUTION:

Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.

- 1) Disconnect the ground cable from battery.
- 2) Lift up the vehicle.
- 3) Remove the under cover. <Ref. to EI-22, REMOVAL, Front Under Cover.>
- 4) Disconnect the front oxygen (A/F) sensor connector (A) and rear oxygen sensor connector (B) and remove the clip (C) fastening the harness.



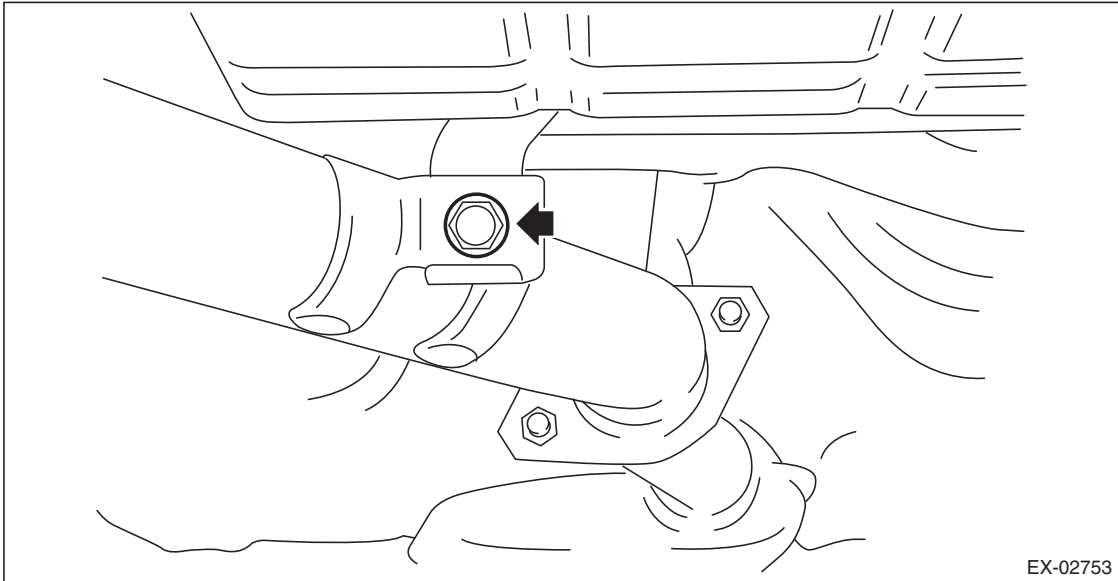
- 5) Remove the bolts, springs, and nuts securing the rear exhaust pipe to the center exhaust pipe.



Front Exhaust Pipe

EXHAUST

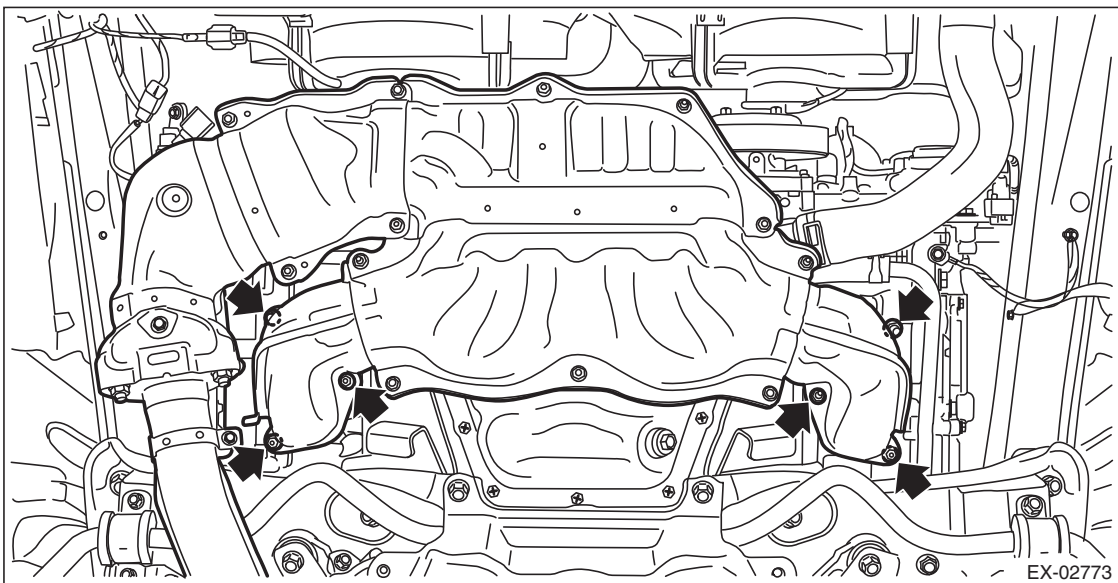
- 6) Remove the bolt which holds center exhaust pipe to hanger bracket.



- 7) Remove the front exhaust pipe and center exhaust pipe from vehicle as a unit.

CAUTION:

- The front exhaust pipe and center exhaust pipe assembly are very heavy. Be careful not to drop the exhaust pipes when removing.
- After removing the front exhaust pipe and center exhaust pipe assembly, do not pull the rear exhaust pipe with excessive force.



Front Exhaust Pipe

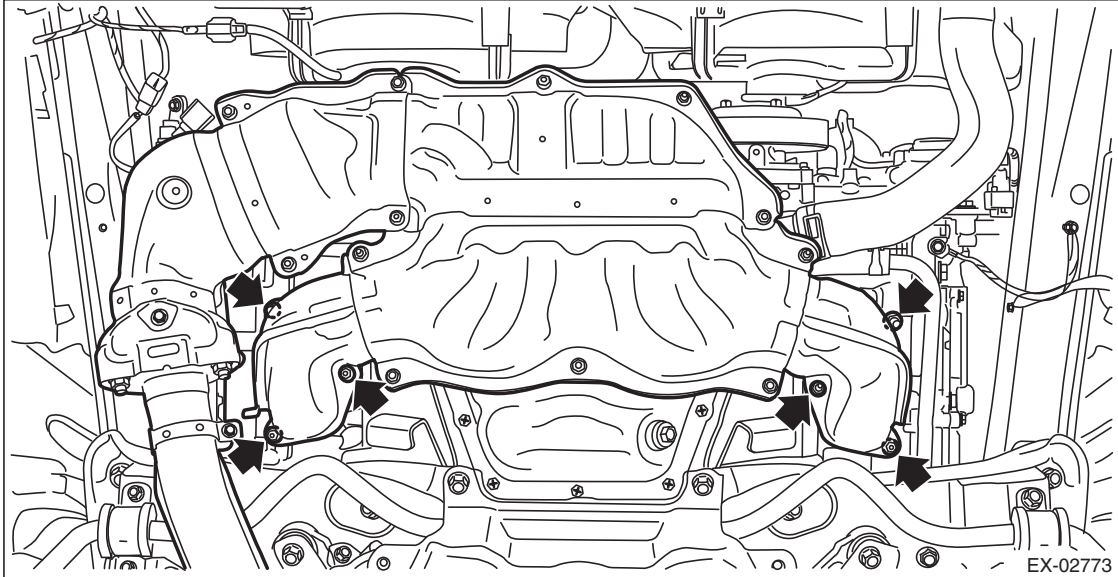
EXHAUST

B: INSTALLATION

1) Set the front exhaust pipe and center exhaust pipe to the vehicle, and temporarily tighten the nuts which secure the front exhaust pipe to cylinder head.

NOTE:

Use a new gasket.



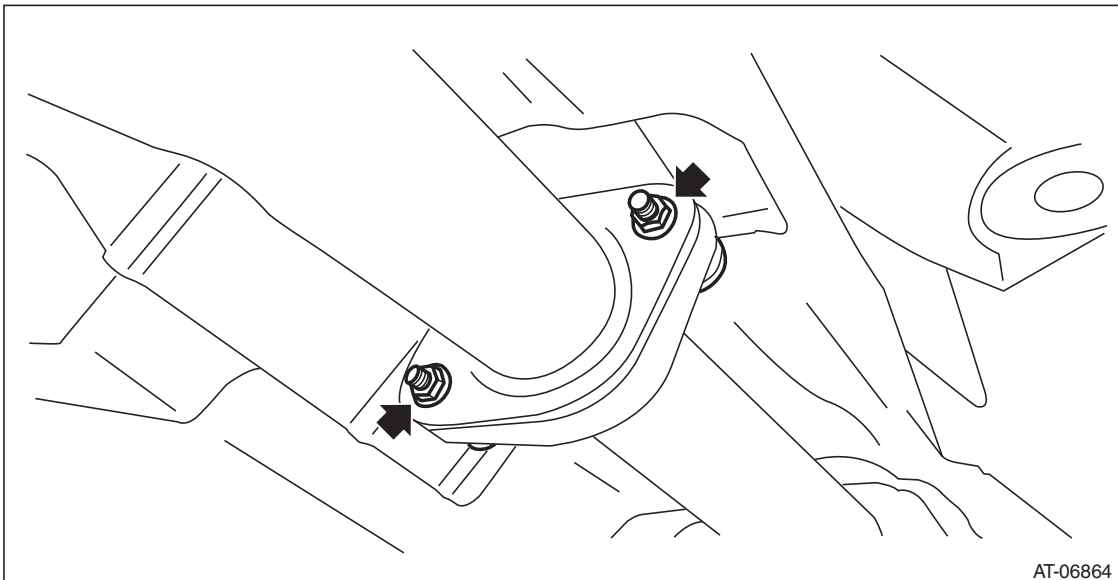
2) Install the bolts, springs, and nuts which secure the center exhaust pipe to the rear exhaust pipe.

NOTE:

Use a new gasket.

Tightening torque:

18 N·m (1.8 kgf-m, 13.3 ft-lb)



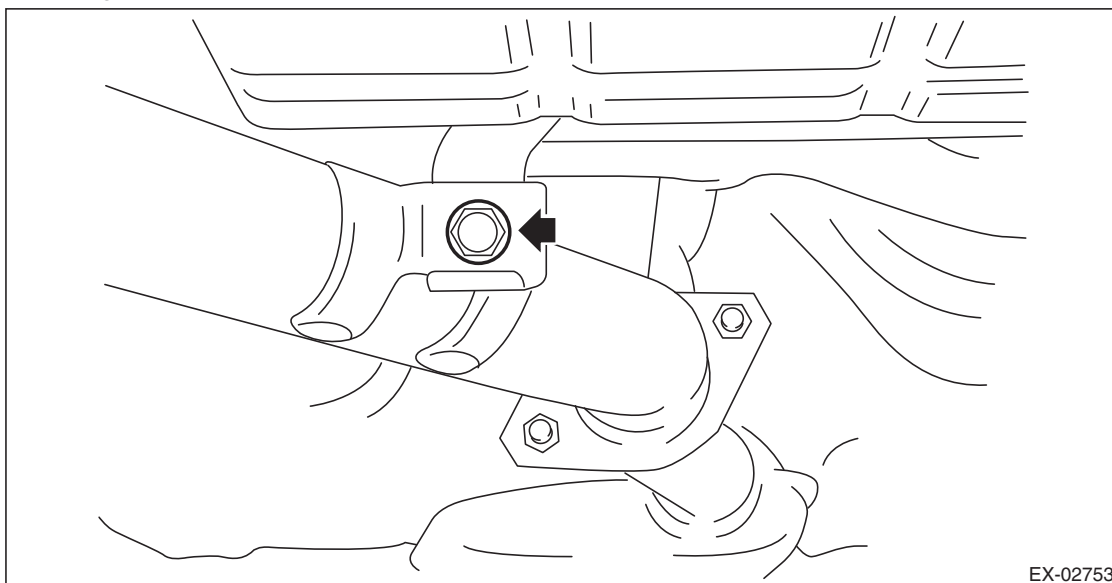
Front Exhaust Pipe

EXHAUST

- 3) Tighten the bolts which secure the center exhaust pipe to the hanger bracket.

Tightening torque:

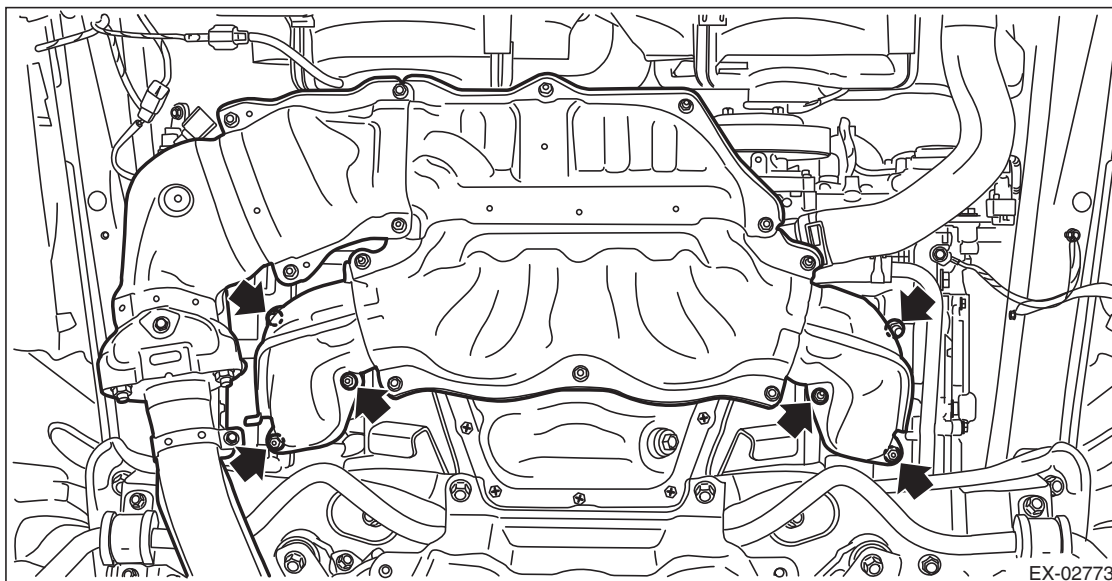
35 N·m (3.6 kgf-m, 25.8 ft-lb)



- 4) Tighten the nuts which hold front exhaust pipe to cylinder heads.

Tightening torque:

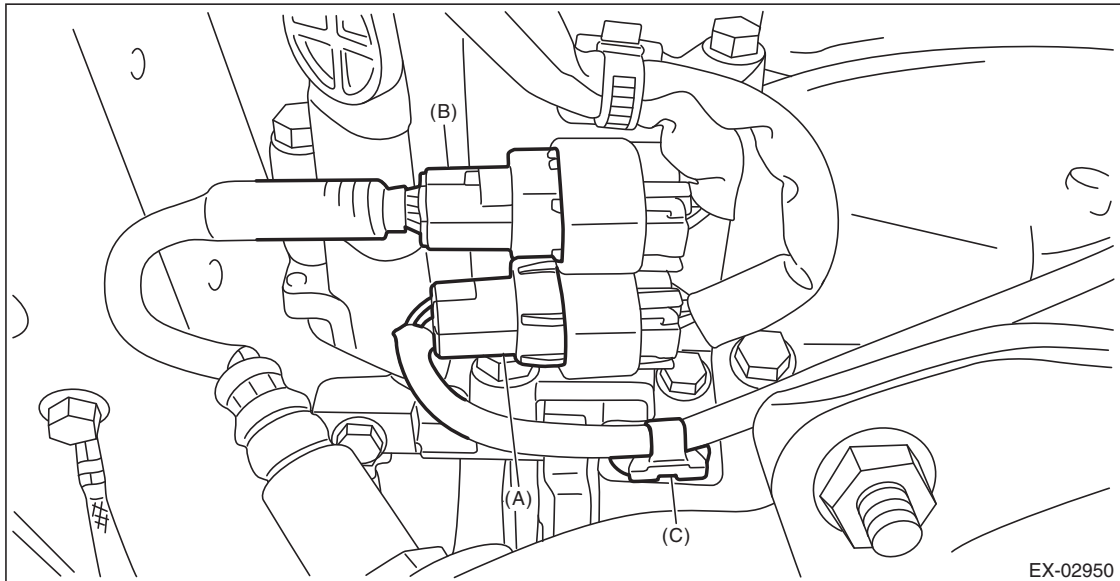
30 N·m (3.1 kgf-m, 22.1 ft-lb)



Front Exhaust Pipe

EXHAUST

5) Connect the front oxygen (A/F) sensor connector (A) and rear oxygen sensor connector (B), and fasten the harness with the clip (C).



EX-02950

6) Install the under cover. <Ref. to EI-22, INSTALLATION, Front Under Cover.>

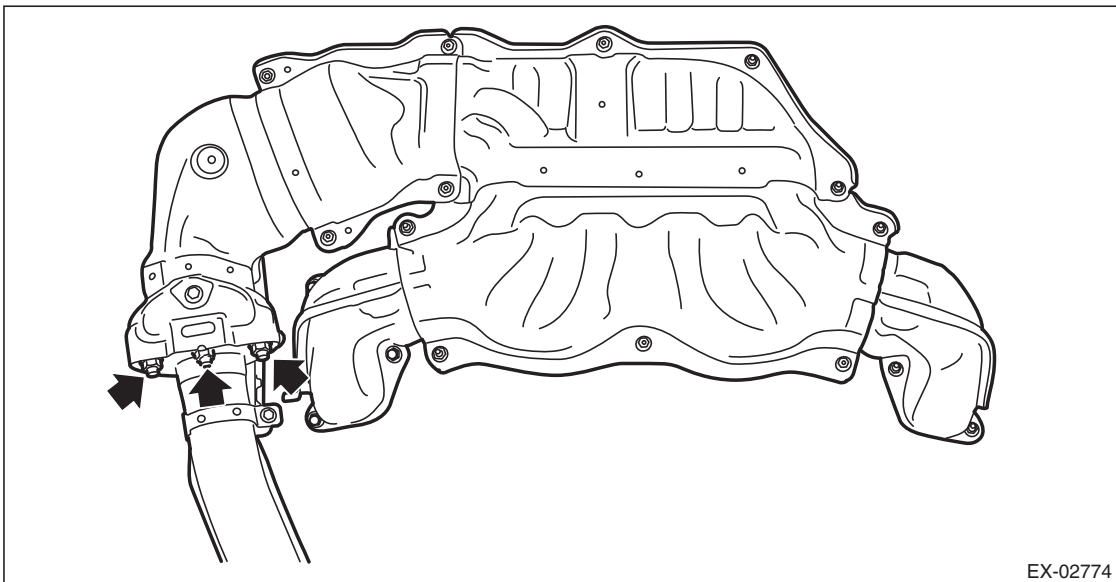
7) Lower the vehicle.

8) Connect the battery ground terminal.

C: DISASSEMBLY

1) Remove the front oxygen (A/F) sensor and rear oxygen sensor from front exhaust pipe. <Ref. to FU(H4DO)-87, REMOVAL, Front Oxygen (A/F) Sensor.> <Ref. to FU(H4DO)-91, REMOVAL, Rear Oxygen Sensor.>

2) Remove the center exhaust pipe from the front exhaust pipe.

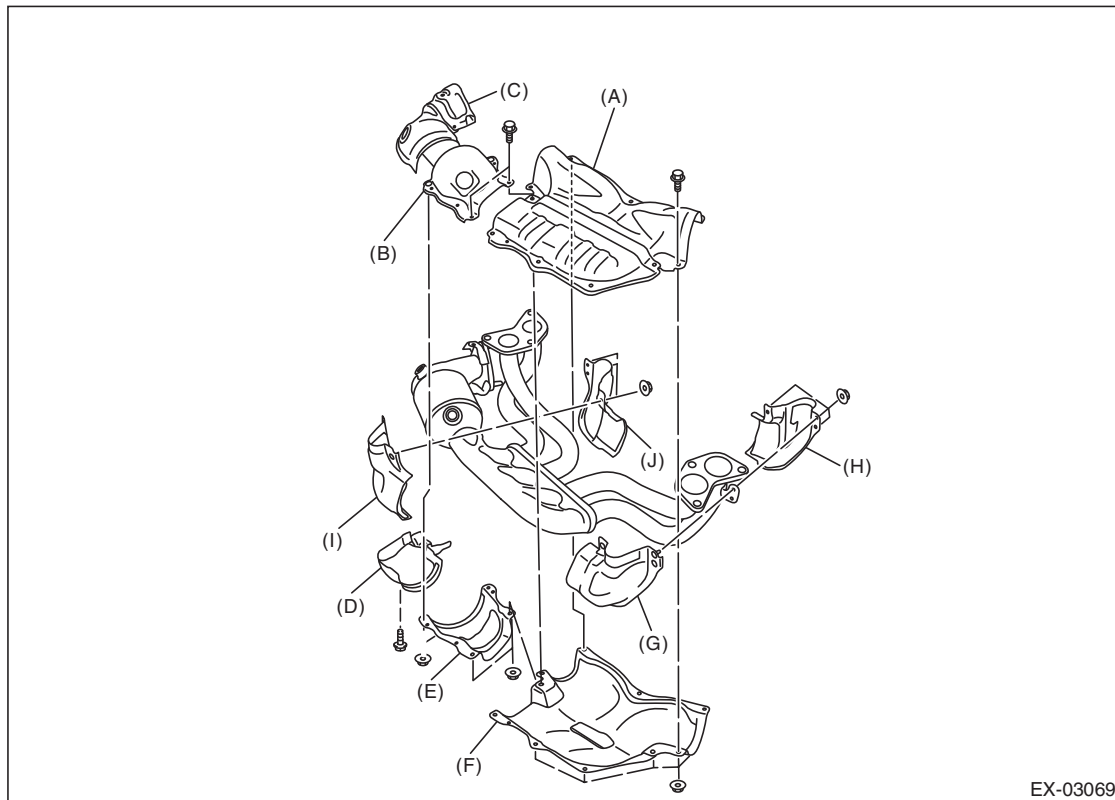


EX-02774

Front Exhaust Pipe

EXHAUST

3) Remove each cover from the front exhaust pipe.



- | | | |
|--|--|--|
| (A) Front exhaust pipe upper cover | (E) Front catalytic converter lower cover LH | (H) Front exhaust pipe side cover LH (rear) |
| (B) Front catalytic converter upper cover LH | (F) Front exhaust pipe lower cover | (I) Front exhaust pipe side cover RH (front) |
| (C) Front catalytic converter upper cover RH | (G) Front exhaust pipe side cover LH (front) | (J) Front exhaust pipe side cover RH (rear) |
| (D) Front catalytic converter lower cover RH | | |

Front Exhaust Pipe

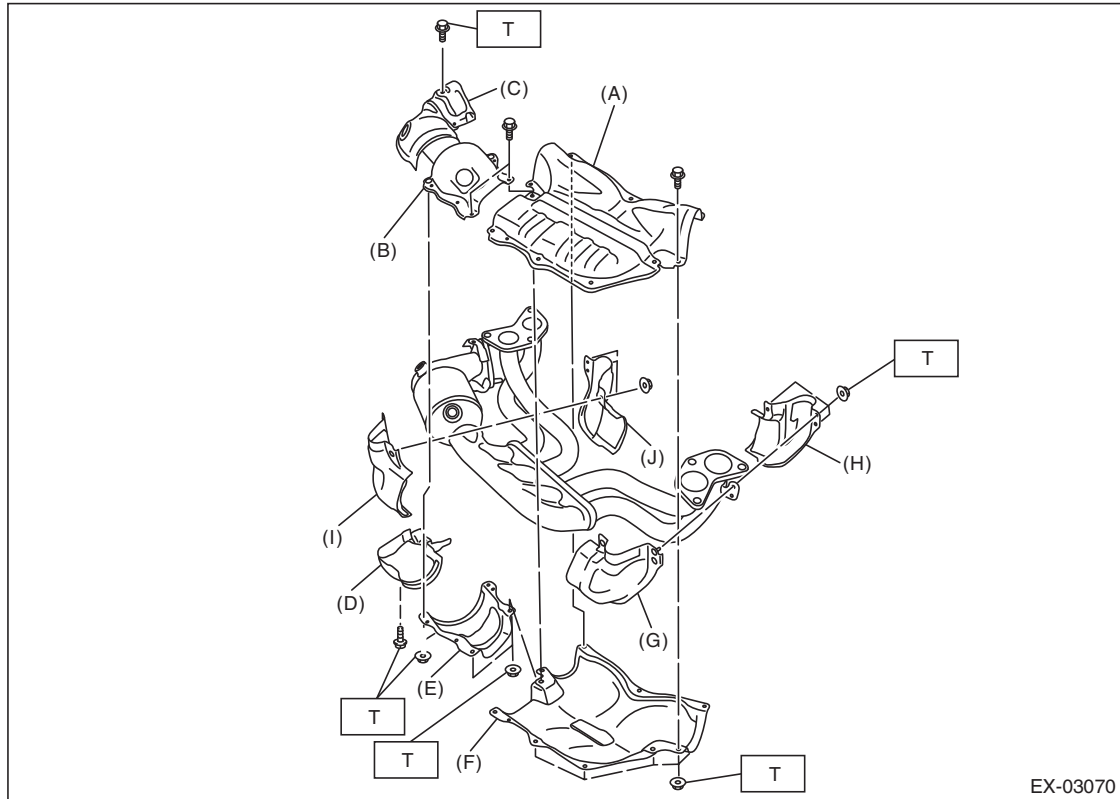
EXHAUST

D: ASSEMBLY

1) Install each cover to the front exhaust pipe.

Tightening torque:

13 N·m (1.3 kgf-m, 9.6 ft-lb)



- (A) Front exhaust pipe upper cover
- (B) Front catalytic converter upper cover LH
- (C) Front catalytic converter upper cover RH
- (D) Front catalytic converter lower cover RH

- (E) Front catalytic converter lower cover LH
- (F) Front exhaust pipe lower cover
- (G) Front exhaust pipe side cover LH (front)

- (H) Front exhaust pipe side cover LH (rear)
- (I) Front exhaust pipe side cover RH (front)
- (J) Front exhaust pipe side cover RH (rear)

Front Exhaust Pipe

EXHAUST

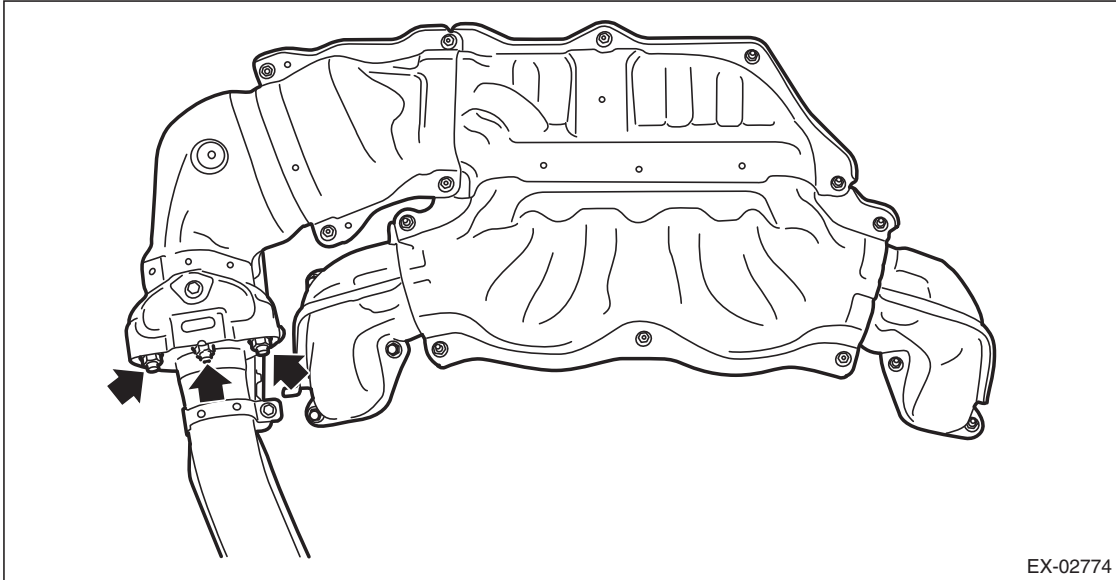
2) Install the center exhaust pipe to front exhaust pipe.

NOTE:

Use a new gasket.

Tightening torque:

35 N·m (3.6 kgf-m, 25.8 ft-lb)



3) Install the front oxygen (A/F) sensor and rear oxygen sensor to the front exhaust pipe. <Ref. to FU(H4DO)-88, INSTALLATION, Front Oxygen (A/F) Sensor.> <Ref. to FU(H4DO)-92, INSTALLATION, Rear Oxygen Sensor.>

E: INSPECTION

- 1) Check the connections and welded parts for exhaust leaks.
- 2) Make sure there are no holes or rusting.

Center Exhaust Pipe

EXHAUST

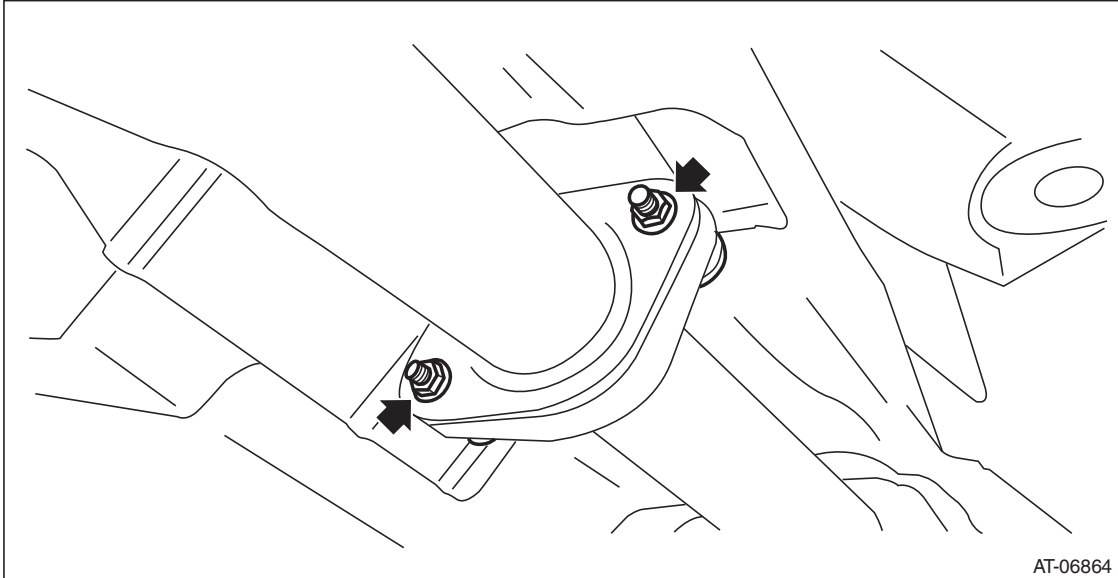
3. Center Exhaust Pipe

A: REMOVAL

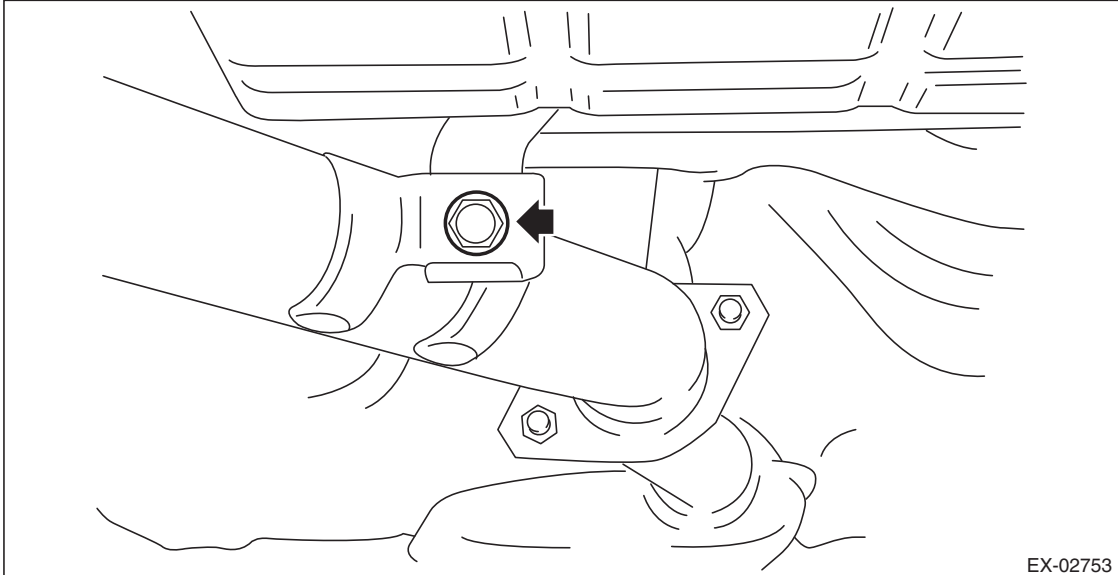
CAUTION:

Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.

- 1) Lift up the vehicle.
- 2) Remove the bolts, springs, and nuts securing the rear exhaust pipe to the center exhaust pipe.



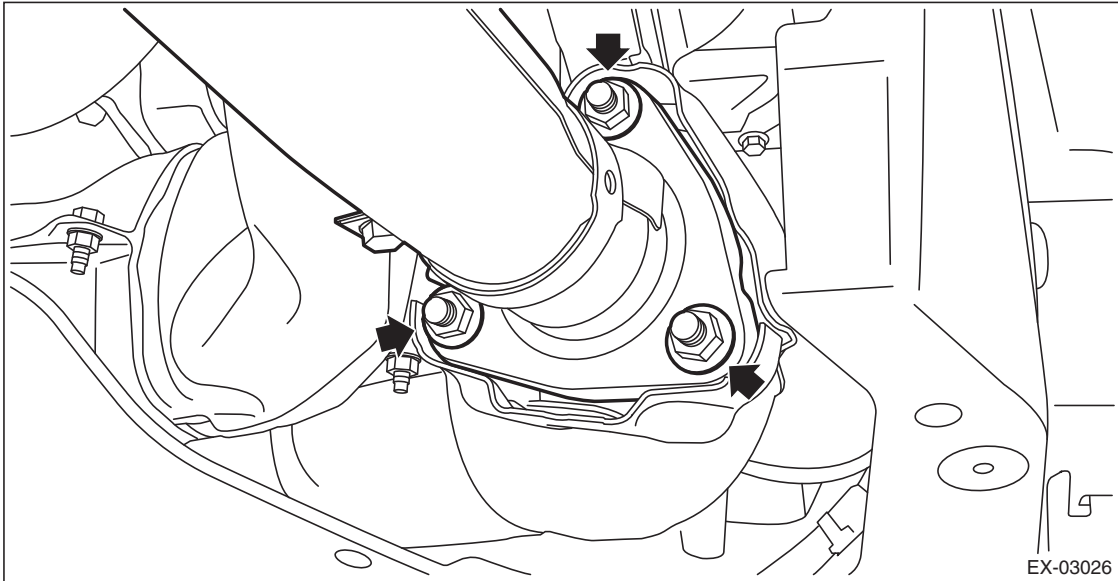
- 3) Remove the bolt which holds center exhaust pipe to hanger bracket.



Center Exhaust Pipe

EXHAUST

- 4) Remove the center exhaust pipe from the front exhaust pipe.



- 5) Remove the center exhaust pipe upper cover from the center exhaust pipe.

B: INSTALLATION

- 1) Install the center exhaust pipe upper cover to the center exhaust pipe.

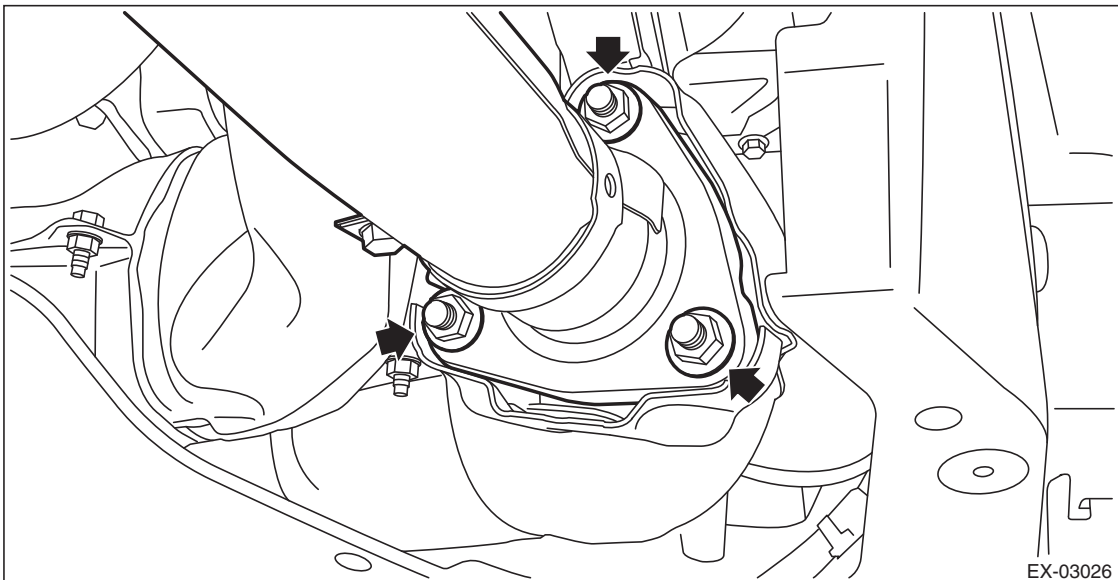
Tightening torque:

13 N·m (1.3 kgf-m, 9.6 ft-lb)

- 2) Temporarily tighten the nuts which secure the center exhaust pipe to the front exhaust pipe.

NOTE:

Use a new gasket.



Center Exhaust Pipe

EXHAUST

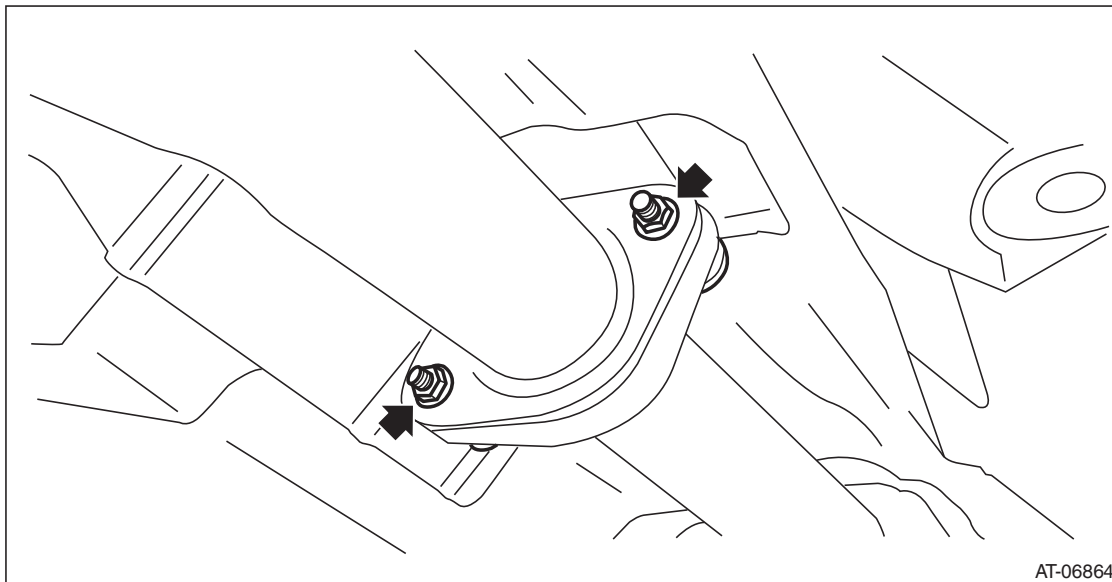
3) Install the bolts, springs, and nuts which secure the rear exhaust pipe to the center exhaust pipe.

NOTE:

Use a new gasket.

Tightening torque:

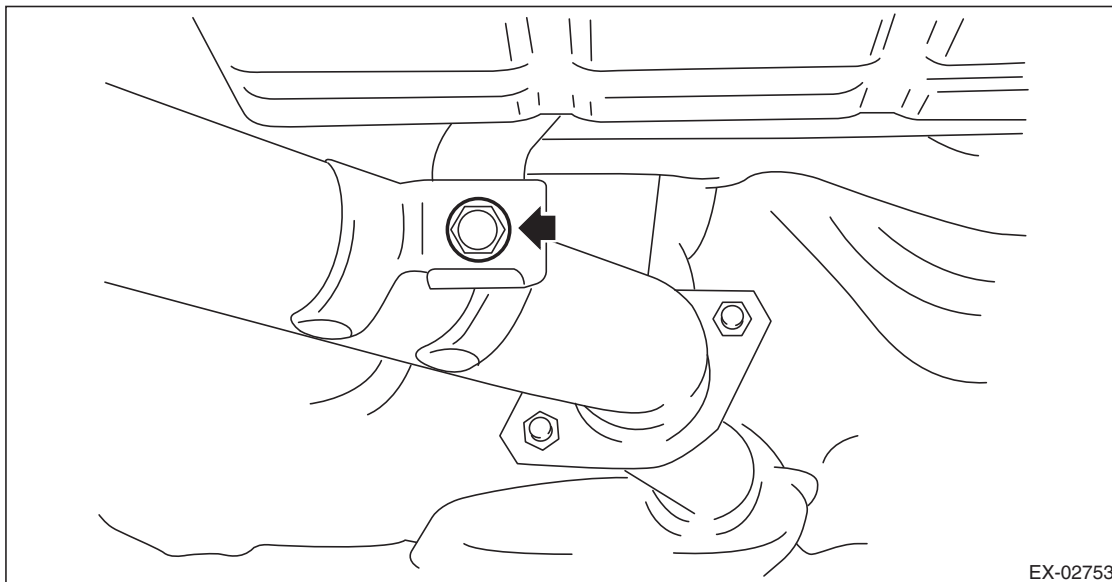
18 N·m (1.8 kgf-m, 13.3 ft-lb)



4) Tighten the bolts which secure the center exhaust pipe to the hanger bracket.

Tightening torque:

35 N·m (3.6 kgf-m, 25.8 ft-lb)



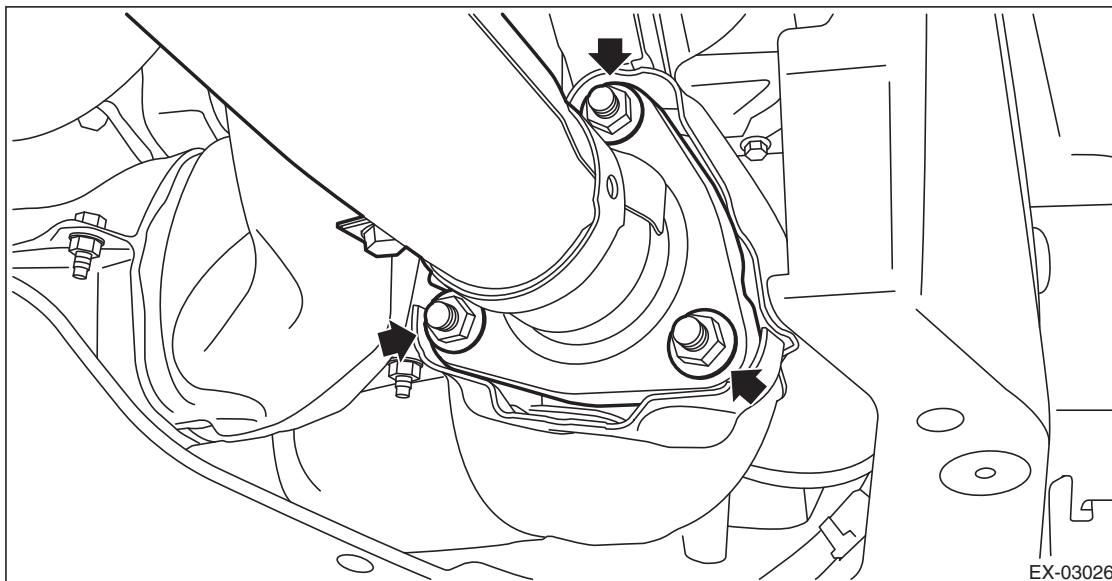
Center Exhaust Pipe

EXHAUST

5) Tighten the nuts which secure the center exhaust pipe to the front exhaust pipe.

Tightening torque:

35 N·m (3.6 kgf-m, 25.8 ft-lb)



C: INSPECTION

- 1) Check the connections and welded parts for exhaust leaks.
- 2) Make sure there are no holes or rusting.

Rear Exhaust Pipe

EXHAUST

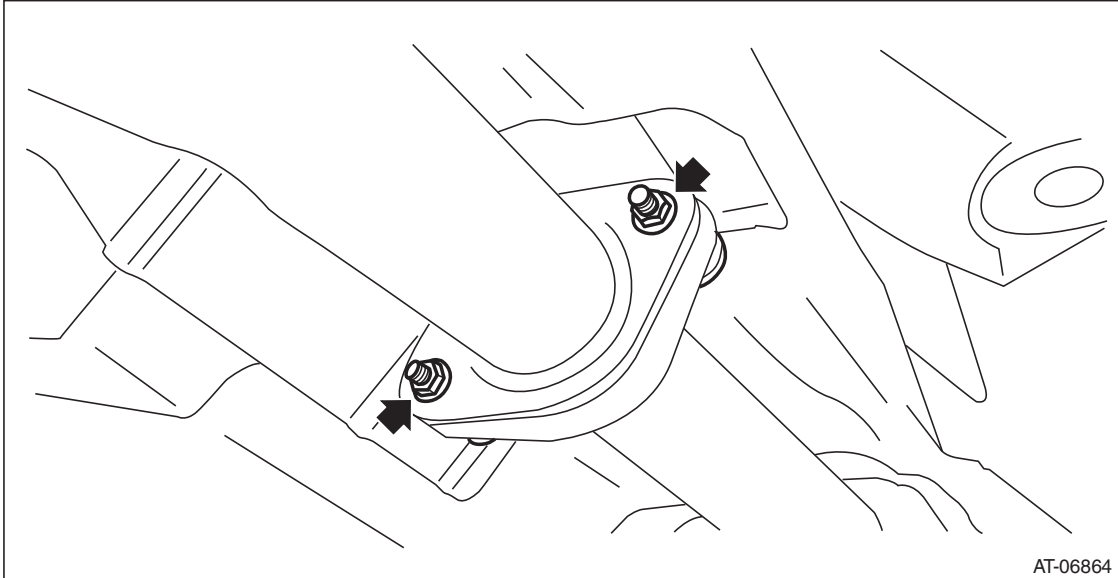
4. Rear Exhaust Pipe

A: REMOVAL

CAUTION:

Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.

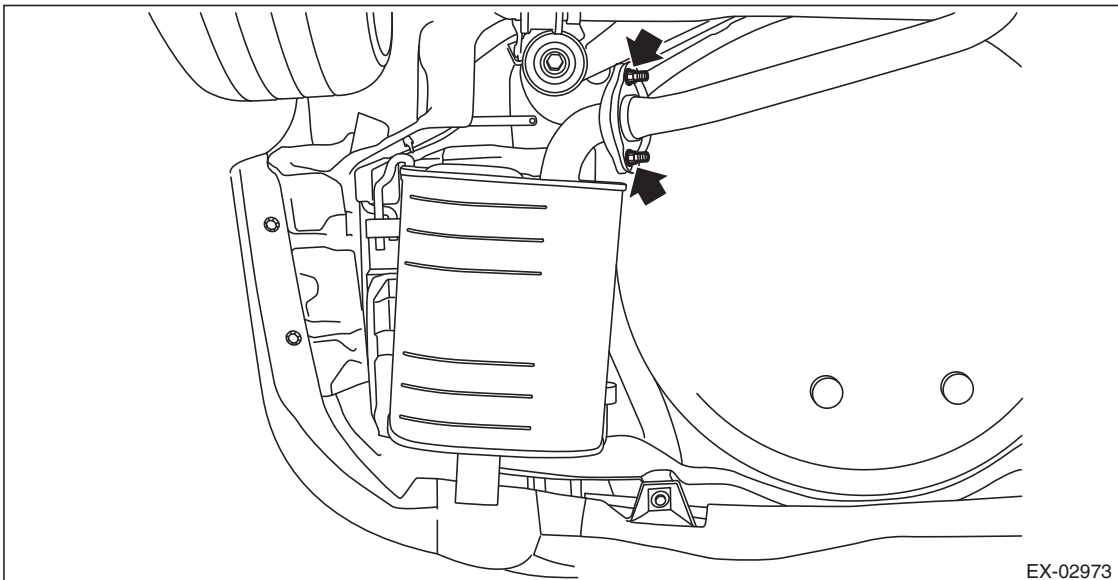
- 1) Lift up the vehicle.
- 2) Remove the bolts, springs, and nuts securing the rear exhaust pipe to the center exhaust pipe.



- 3) Remove the bolts and self-locking nuts securing the mufflers to the rear exhaust pipes.

CAUTION:

Be careful not to drop the rear exhaust pipe.



- 4) Apply a coat of spray type lubricant to the mating area of cushion rubber.

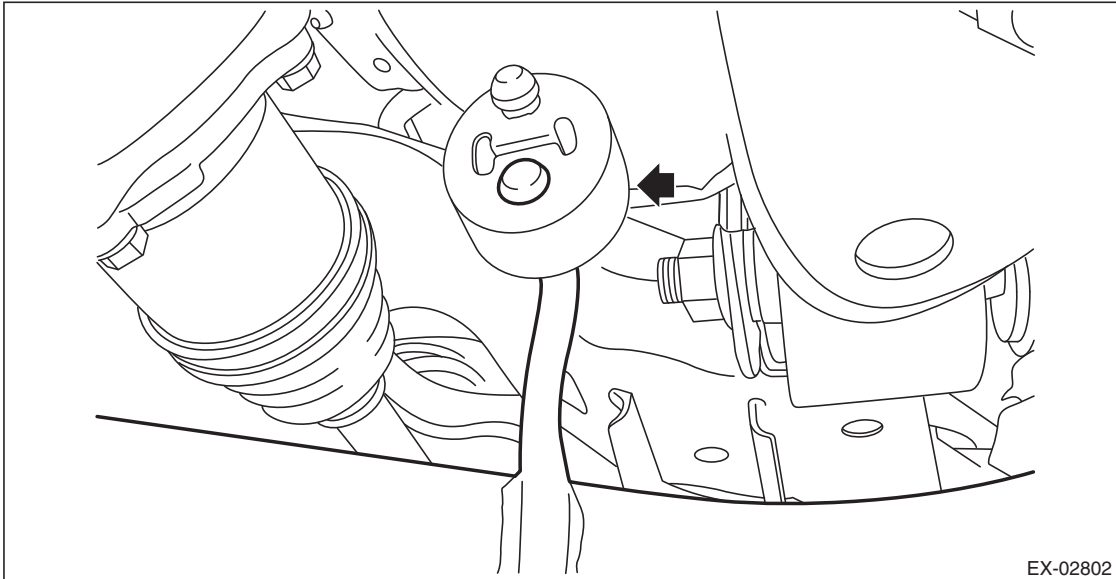
Rear Exhaust Pipe

EXHAUST

5) Remove the rear exhaust pipe from the cushion rubber.

CAUTION:

Be careful not to let the muffler contact the rear bumper.



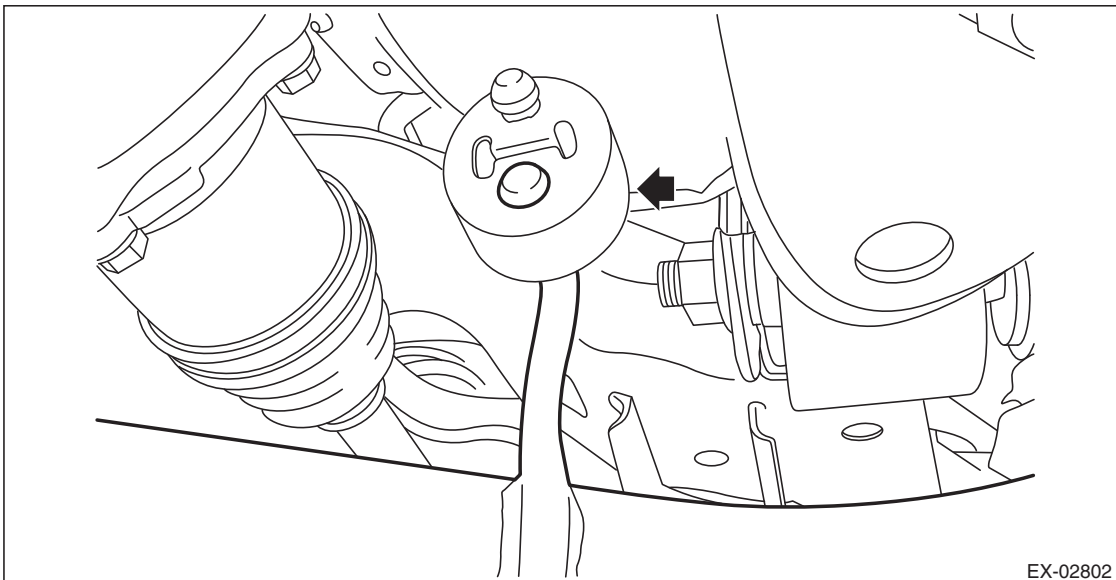
B: INSTALLATION

1) Apply a coat of spray type lubricant to the mating area of cushion rubber.

2) Install the rear exhaust pipe to cushion rubber.

NOTE:

After assembling, degrease the lubricant which was applied to the cushion rubber while removing/installing.



Rear Exhaust Pipe

EXHAUST

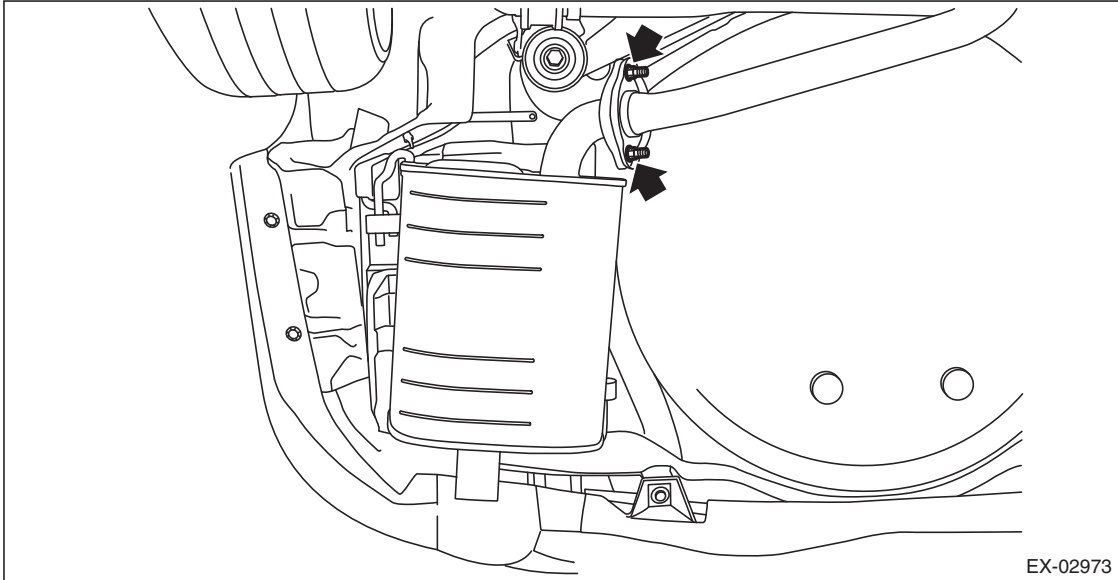
3) Install the bolts and self-locking nuts which secure the muffler to the rear exhaust pipe.

NOTE:

Use a new gasket and self-locking nut.

Tightening torque:

48 N·m (4.9 kgf-m, 35.4 ft-lb)



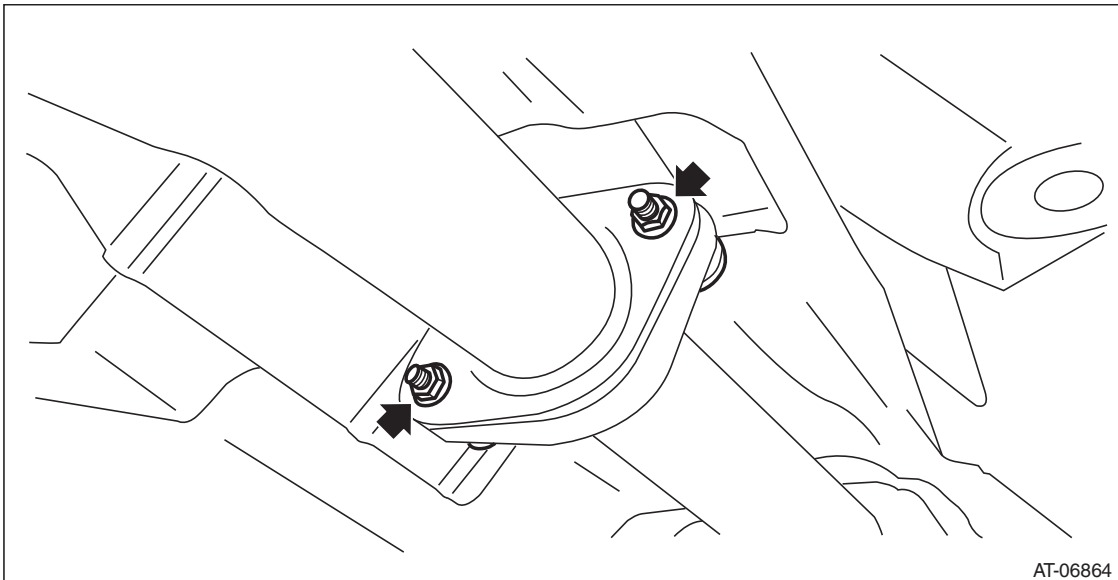
4) Install the bolts, springs, and nuts which secure the center exhaust pipe to the rear exhaust pipe.

NOTE:

Use a new gasket.

Tightening torque:

18 N·m (1.8 kgf-m, 13.3 ft-lb)



5) Lower the vehicle.

C: INSPECTION

- 1) Check the connections and welded parts for exhaust leaks.
- 2) Make sure there are no holes or rusting.
- 3) Check the cushion rubber for wear or crack.

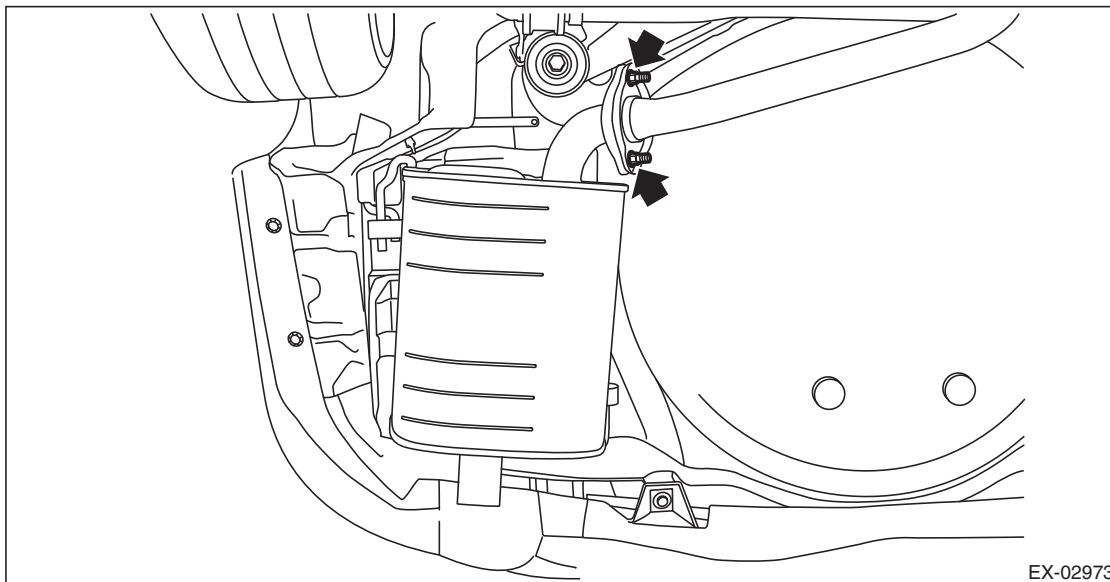
5. Muffler

A: REMOVAL

CAUTION:

Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.

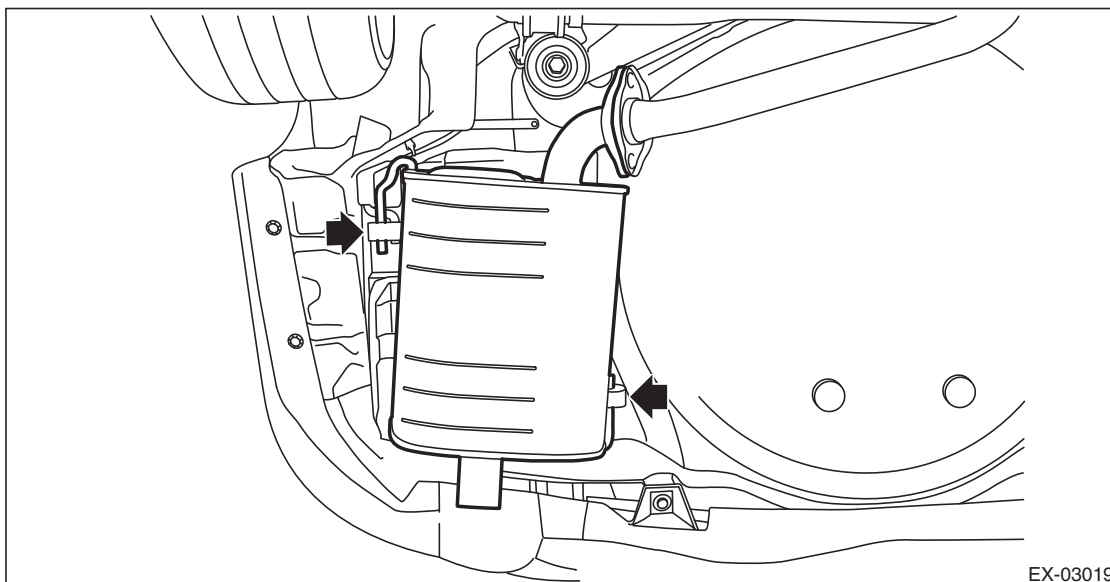
- 1) Lift up the vehicle.
- 2) Remove the bolts and self-locking nuts which secure the rear exhaust pipe to the muffler.



- 3) Apply a coat of spray type lubricant to the mating area of cushion rubber.
- 4) Remove the muffler from the cushion rubber.

CAUTION:

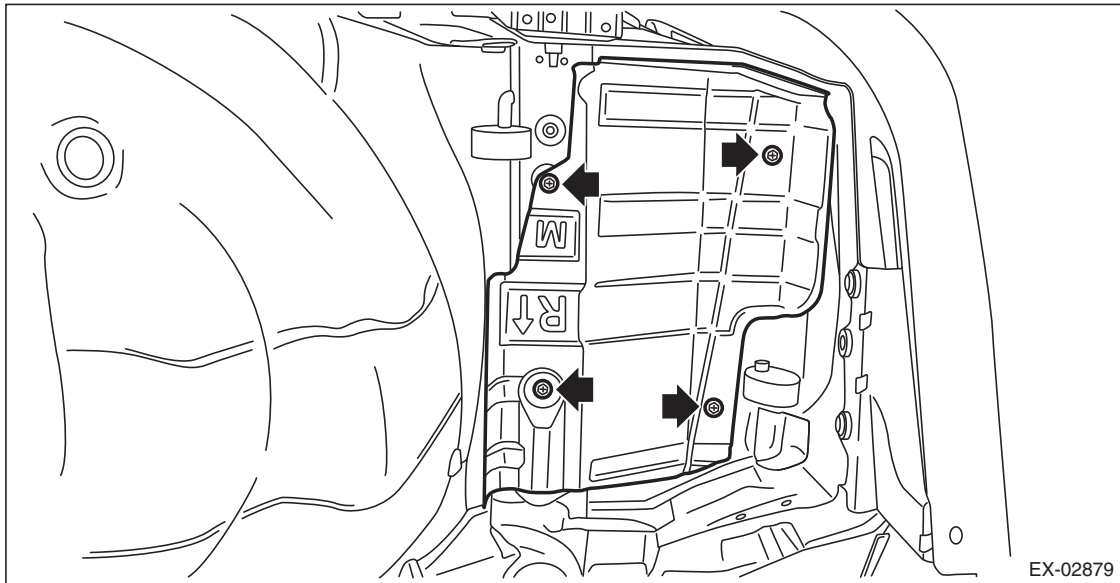
Be careful not to drop the muffler during removal.



Muffler

EXHAUST

5) Remove the heat shield cover from the vehicle.



B: INSTALLATION

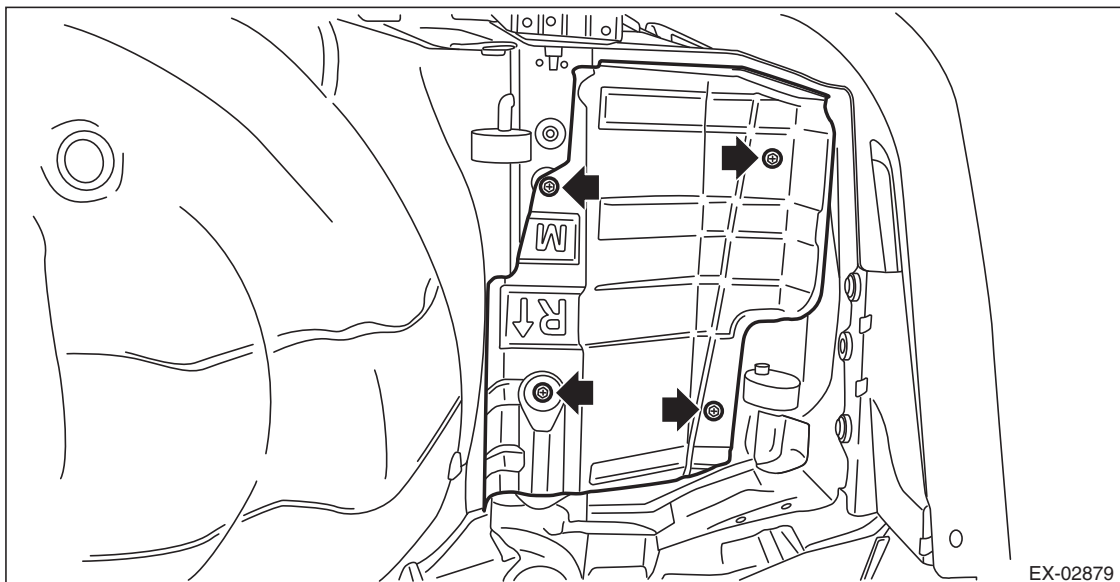
Install in the reverse order of removal.

NOTE:

- Use a new gasket and self-locking nut.
- After assembling, degrease the lubricant which was applied to the cushion rubber while removing/installing.

Tightening torque:

10 N·m (1.0 kgf-m, 7.4 ft-lb)

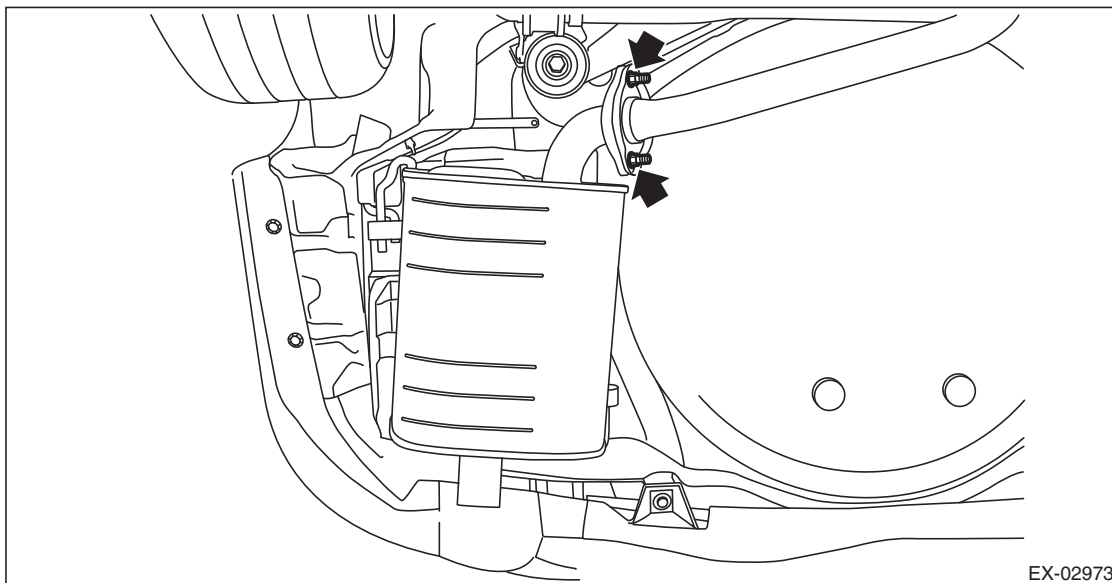


Muffler

EXHAUST

Tightening torque:

48 N·m (4.9 kgf-m, 35.4 ft-lb)



C: INSPECTION

- 1) Check the connections and welded parts for exhaust leaks.
- 2) Make sure there are no holes or rusting.
- 3) Check the cushion rubber for wear or crack.



Muffler

EXHAUST
