

ENGINE2 SECTION

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicles.

This manual includes the procedures for maintenance, disassembling, reassembling, inspection and adjustment of components and diagnostics for guidance of experienced mechanics.

Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

FUEL INJECTION (FUEL SYSTEMS) FU(SOHCw/oOBD)

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES) EC(SOHCw/oOBD)

EXHAUST EX(SOHCw/oOBD)

IGNITION IG(SOHCw/oOBD)

ENGINE (DIAGNOSTICS) EN(SOHCw/oOBD)

FUEL INJECTION (FUEL SYSTEMS) FU(DOHC TURBO)

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES) EC(DOHC TURBO)

INTAKE (INDUCTION) IN(DOHC TURBO)

MECHANICAL ME(DOHC TURBO)

EXHAUST EX(DOHC TURBO)

IGNITION IG(DOHC TURBO)

ENGINE (DIAGNOSTICS) EN(DOHC TURBO)

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

EC(DOHC TURBO)

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GENERAL DESCRIPTION

Emission Control (Aux. Emission Control Devices)

1. General Description S180001

A: CAUTION S180001A03

- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
- Be careful not to burn your hands, because each part on the vehicle is hot after running.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect negative terminal from battery.

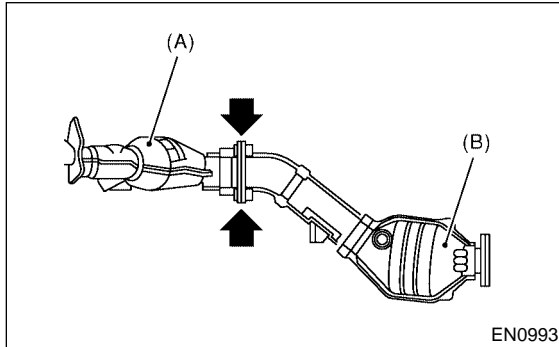
FRONT CATALYTIC CONVERTER

Emission Control (Aux. Emission Control Devices)

2. Front Catalytic Converter S180017

A: REMOVAL S180017A18

- 1) Remove center exhaust pipe. <Ref. to EX(DOHC TURBO)-9, REMOVAL, Center Exhaust Pipe.>
- 2) Separate front catalytic converter (A) from rear catalytic converter (B).



B: INSTALLATION S180017A11

NOTE:

Replace gaskets with new ones.
Install in the reverse order of removal.

C: INSPECTION S180017A10

- 1) Make sure there are no exhaust leaks from connections and welds.
- 2) Make sure there are no holes or rusting.

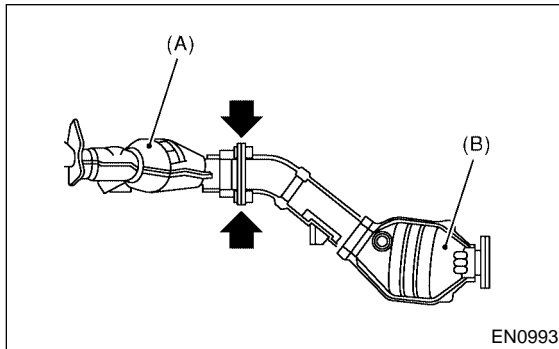
REAR CATALYTIC CONVERTER

Emission Control (Aux. Emission Control Devices)

3. Rear Catalytic Converter S180036

A: REMOVAL S180036A18

- 1) Remove center exhaust pipe. <Ref. to EX(DOHC TURBO)-9, REMOVAL, Center Exhaust Pipe.>
- 2) Separate rear catalytic converter (B) from front catalytic converter (A).



B: INSTALLATION S180036A11

NOTE:

Replace gaskets with new ones.
Install in the reverse order of removal.

C: INSPECTION S180036A10

- 1) Make sure there are no exhaust leaks from connections and welds.
- 2) Make sure there are no holes or rusting.

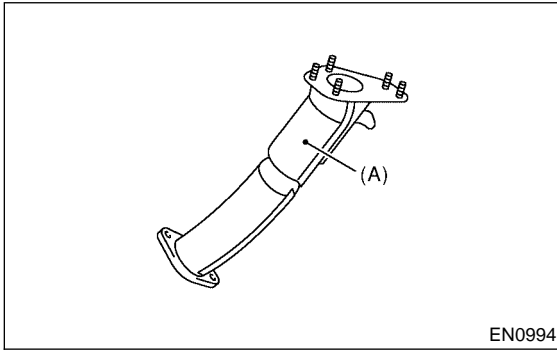
PRECATALYTIC CONVERTER

Emission Control (Aux. Emission Control Devices)

4. Precatalytic Converter S180767

A: REMOVAL S180767A18

Precatalytic converter (A) is built in joint pipe. Refer to removal of joint pipe for removal procedure. <Ref. to EX(DOHC TURBO)-13, REMOVAL, Joint Pipe.>



B: INSTALLATION S180767A11

Precatalytic converter is built in joint pipe. Refer to installation of joint pipe for installation procedure. <Ref. to EX(DOHC TURBO)-13, INSTALLATION, Joint Pipe.>

C: INSPECTION S180767A10

- 1) Make sure there are no exhaust leaks from connections and welds.
- 2) Make sure there are no holes or rusting.

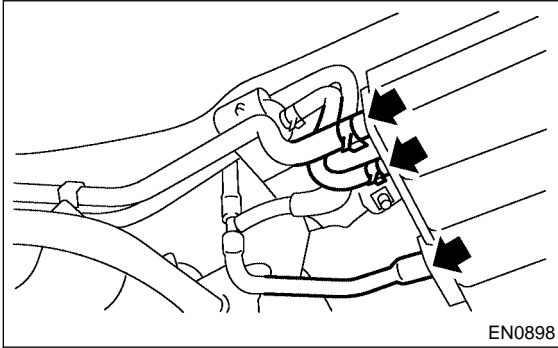
CANISTER

Emission Control (Aux. Emission Control Devices)

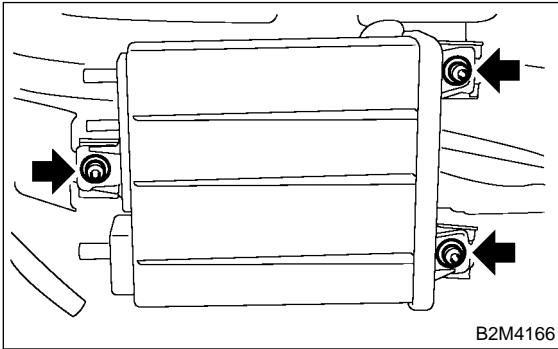
5. Canister S180037

A: REMOVAL S180037A18

- 1) Lift-up the vehicle.
- 2) Loosen two clamps which hold two canister hoses, and disconnect evaporation three hoses from canister.



- 3) Remove canister from body.

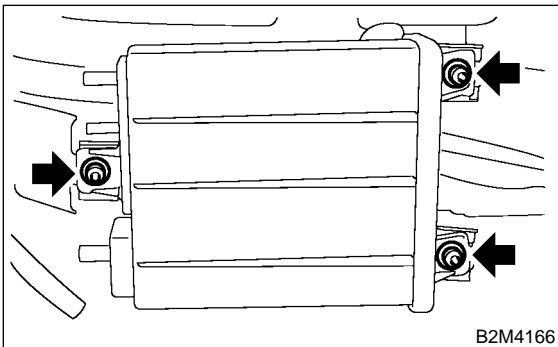


B: INSTALLATION S180037A11

- 1) Install in the reverse order of removal.

Tightening torque:

23 N·m (2.3 kgf-m, 17 ft-lb)



C: INSPECTION S180037A10

Make sure the canister and canister hoses are not cracked or loose.

PURGE CONTROL SOLENOID VALVE

Emission Control (Aux. Emission Control Devices)

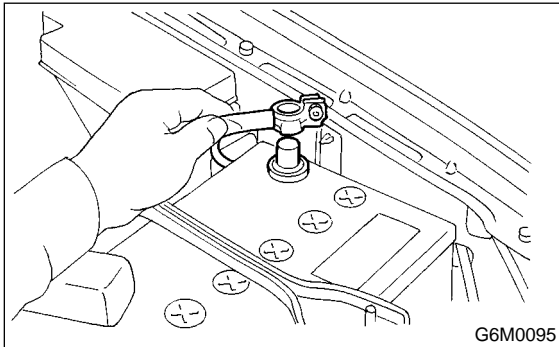
6. Purge Control Solenoid Valve

S180035

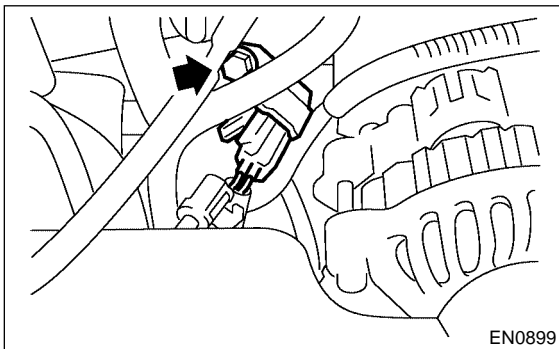
A: REMOVAL

S180035A18

- 1) Disconnect battery ground cable.



- 2) Disconnect connector and hoses from purge control solenoid valve.
- 3) Remove bolt which installs purge control solenoid valve onto intake manifold.



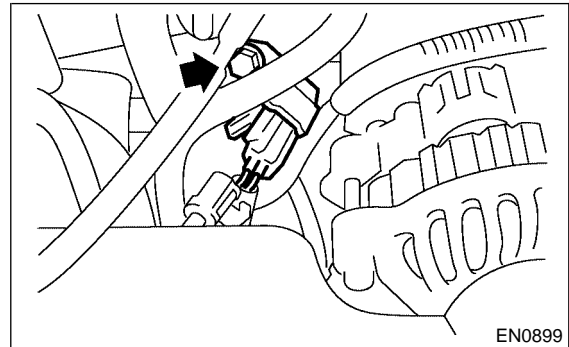
B: INSTALLATION

S180035A11

Install in the reverse order of removal.

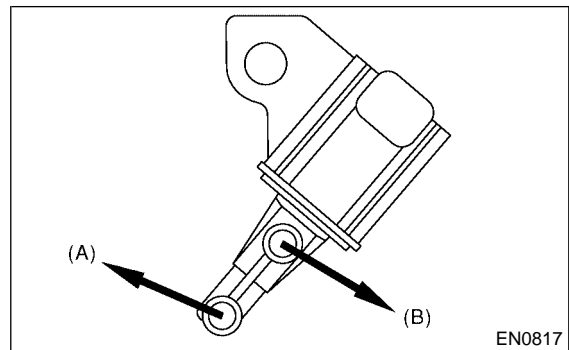
Tightening torque:

16 N·m (1.6 kgf-m, 11.6 ft-lb)



CAUTION:

Carefully connect the evaporation hoses.



(A) To intake manifold

(B) To purge valve

C: INSPECTION

S180035A10

Make sure hoses are not cracked or loose.

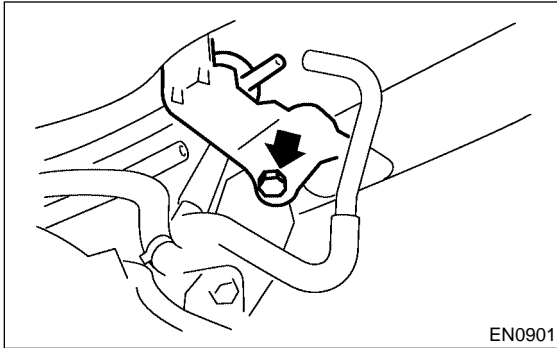
TWO-WAY VALVE

Emission Control (Aux. Emission Control Devices)

7. Two-way Valve S180707

A: REMOVAL S180707A18

- 1) Lift-up the vehicle.
- 2) Remove canister from body. <Ref. to EC(DOHC TURBO)-6, REMOVAL, Canister.>
- 3) Remove two-way valve with bracket as a single unit from body.



- 4) Remove two-way valve from bracket.

B: INSTALLATION S180707A11

Install in the reverse order of removal.

C: INSPECTION S180707A10

Make sure that hoses are not cracked or loose.