
ENGINE 4J SERIES

SECTION 6F ENGINE EXHAUST

Caution:

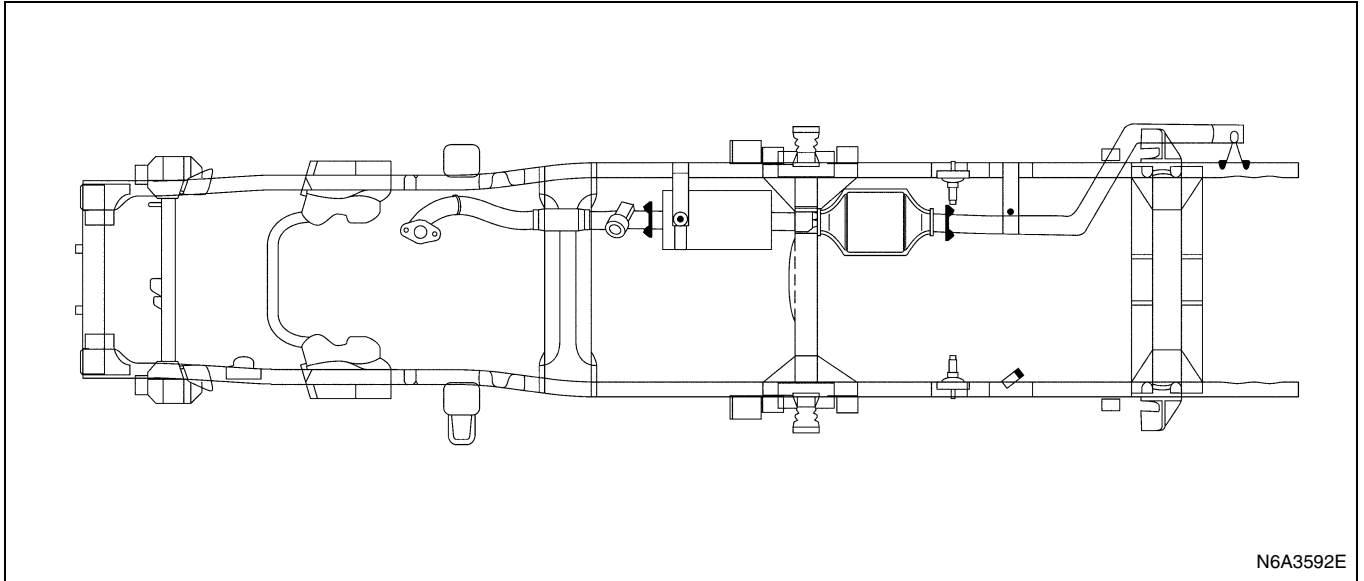
Exhaust system components must have enough clearance from the underbody to prevent overheating of the floor pan and possible damage to the passenger compartment, insulation and trim materials.

Contents

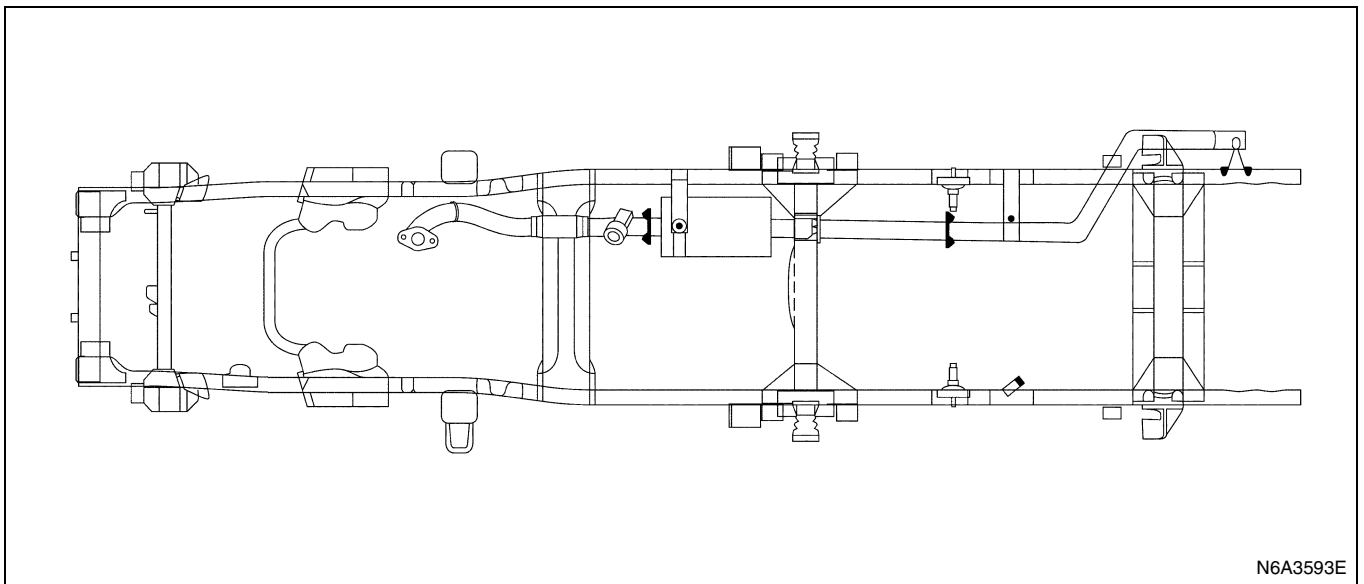
GENERAL DESCRIPTION	6F-2
THREE WAY CATALYTIC CONVERTER	6F-3
On-Vehicle Service	6F-3
FRONT EXHAUST PIPE.....	6F-4
Component	6F-4
Removal	6F-4
Installation	6F-4
EXHAUST BRAKE UNIT.....	6F-6
Inspection	6F-6

GENERAL DESCRIPTION

Model '91/542B (Euro 2)



General Export

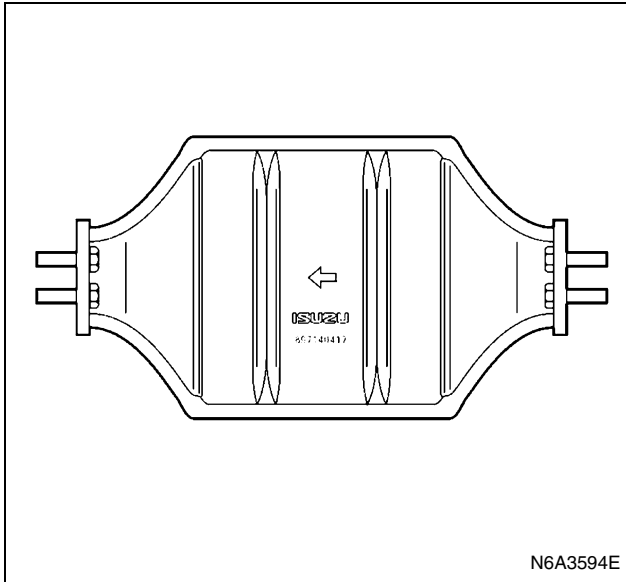


When inspecting or replacing exhaust system components, make sure there is adequate clearance from all points on the underbody to prevent overheating of the floor pan and possible damage to the passenger compartment insulation and trim materials.

Check complete exhaust system and nearby body areas and rear compartment lid for broken, damaged, missing or mispositioned parts, open seams, holes, loose connections or other deterioration which could permit exhaust fumes to seep into the rear compartment or passenger compartment. Dust or water in the rear compartment may be an indication of a problem in one of these areas. Any faulty areas should be corrected immediately.

THREE WAY CATALYTIC CONVERTER

The three way catalytic converter is an emission control device added to the exhaust system to reduce pollutants from the exhaust gas stream.



Caution:

The catalytic converter requires the use of unleaded fuel only.

Periodic maintenance of the exhaust system is not required. If the vehicle is raised for other service, it is advisable to check the condition of the complete exhaust system.

A dual bed monolith catalytic converter is used in combination with three way catalytic converter.

Catalytic Types:

Three way (Reduction/Oxidation) catalyst

The catalyst coating on the three way (reduction) converter contains platinum and rhodium which lowers the levels of oxide of nitrogen (NOx) as well as hydrocarbons (CH) and carbon monoxide (Co).

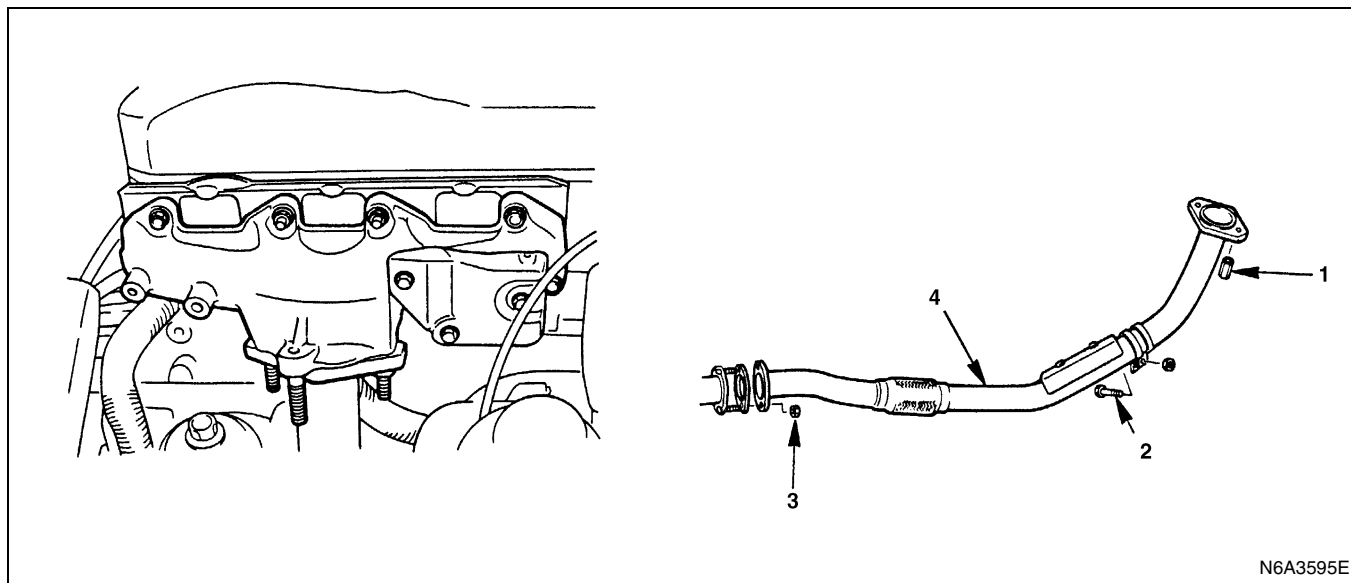
On-Vehicle Service

Rattles and noise vibrations in the exhaust system are usually caused by misalignment of parts. When aligning the system, leave all bolts or nuts loose until all parts are properly aligned; then tighten, working from front to rear.

1. Check connections for looseness or damage, especially for exhaust gas leakage.
2. Check clamps and rubbers for weakness, cracks or damage.
3. If any part of the converter heat shield is damaged or dented to the extent that it contacts the catalyst, repair or replace.
4. Check for dents or damage and for any holes or cracks caused by corrosion.

FRONT EXHAUST PIPE

Component



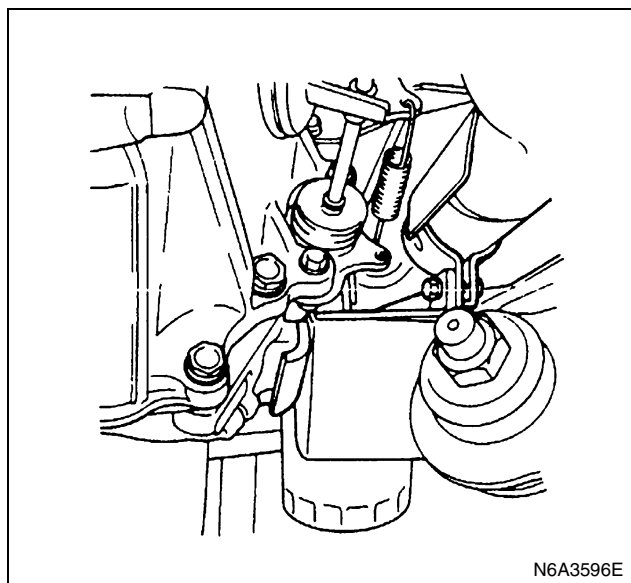
Legend

- | | |
|---|-----------------------------------|
| 1. Exhaust manifold fixing washer and nut. | 3. Front exhaust pipe fixing nut. |
| 2. Front exhaust pipe mounting bracket fixing bolt and nut. | 4. Front exhaust pipe. |

Removal

Preparation

- Battery ground cable
1. Exhaust manifold fixing nuts.
 - Remove two fixing nuts from exhaust manifold and front pipe.
 2. Front exhaust pipe mounting bracket fixing bolt and nut.



3. Front exhaust pipe fixing bolts and nuts.

- Remove two bolts fixed from front pipe and center pipe.
4. Front exhaust pipe.
 - Take out the exhaust pipe to another side.

Installation

1. Front exhaust pipe.
2. Front exhaust pipe fixing bolts and nuts.
 - Tighten the fixing nuts to the specified torque

Tighten:

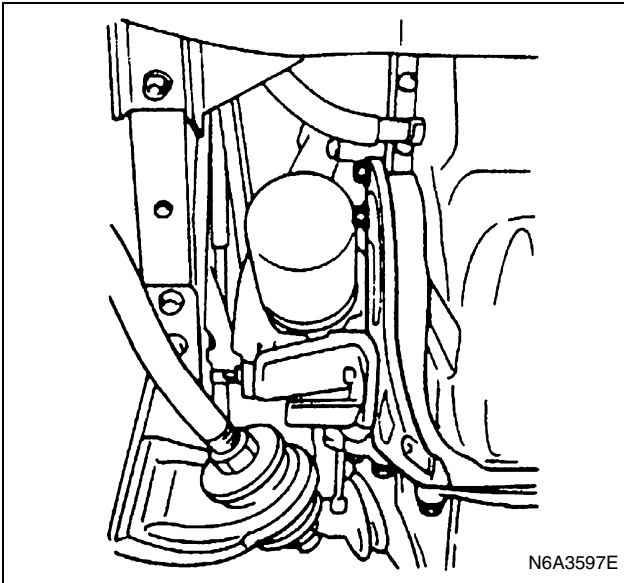
- 50 N·m (5.1 kg·m / 37 lb-ft)
3. Front exhaust pipe mounting bracket fixing bolt and nut.
 - Tighten the fixing bolt to the specified torque

Tighten:

- 40 N·m (4.1 kg·m / 30 lb-ft)
4. Exhaust manifold fixing nuts
 - Tighten the fixing nuts to the specified torque

Tighten:

- 69 N·m (7 kg·m / 51 lb-ft)



- Connect battery ground cable.
- After assembling each part, start the engine to check for any leakage of gas at each connection.

EXHAUST BRAKE UNIT

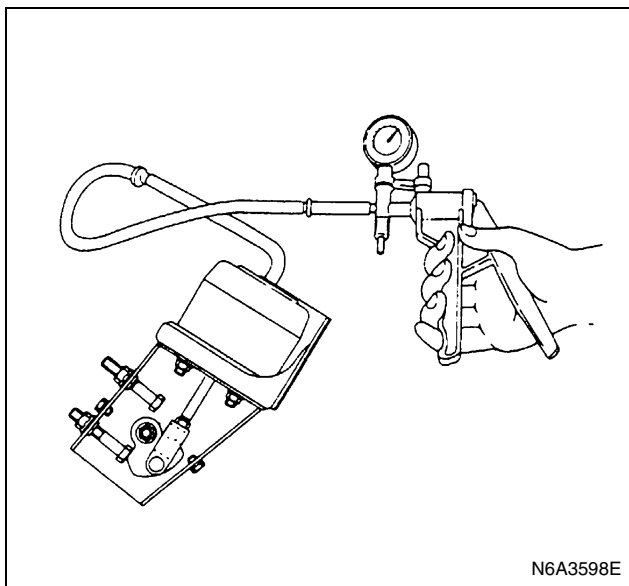
Inspection

Operational Inspection

- With the engine idling, operate the exhaust brake to check for the sound of the valve hitting against the stopper.

Unit Inspection

- Check to see if the exhaust valve opens and closes smoothly when the power chamber is applied with a negative pressure (400 mmHg — 700 mmHg) by the vacuum pump.



- Check to see if the clearance between the valve and the body is in the range of 0.1 mm — 0.2 mm (the minimum of 0.1 mm) on an average of the points “A” and “B” when the power chamber is applied with a negative pressure (650 mmHg — 700 mmHg) by the vacuum pump.
When the clearance is outside this range, adjust the clearance with the adjust bolt.

