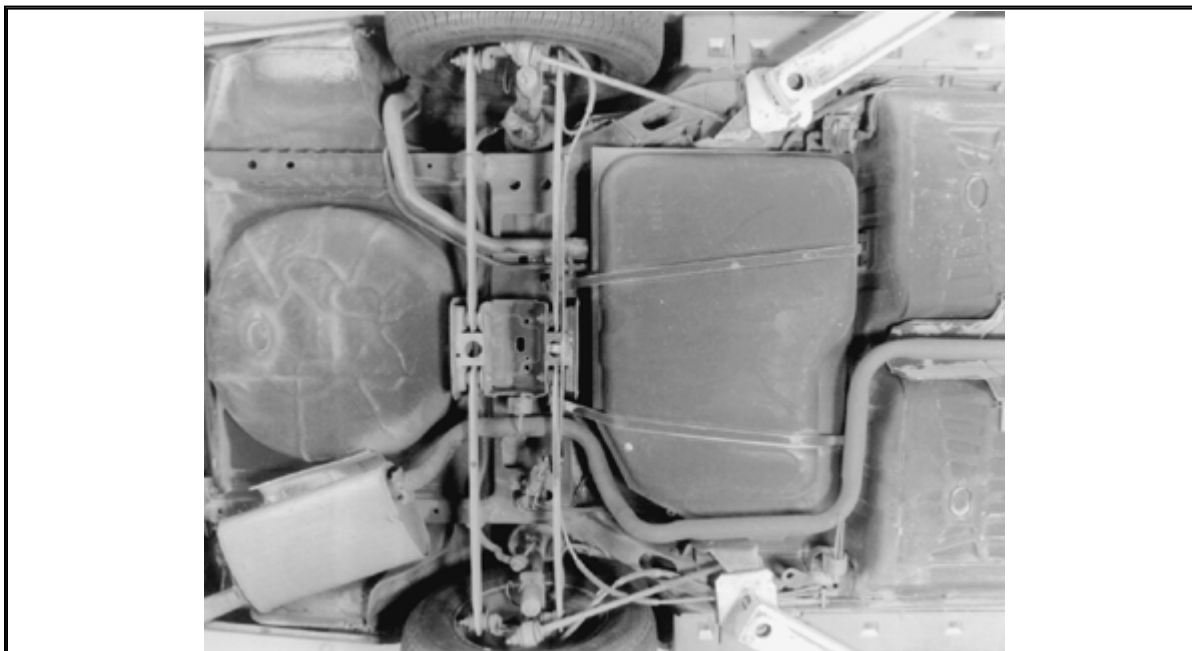


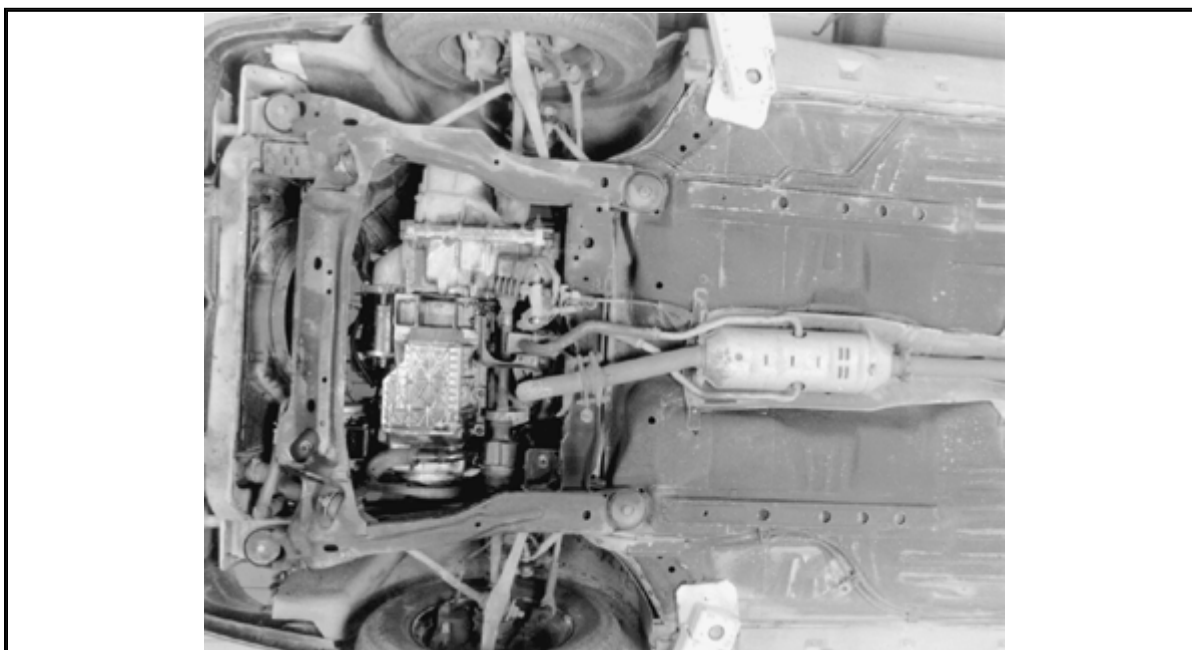
## EXHAUST SYSTEM

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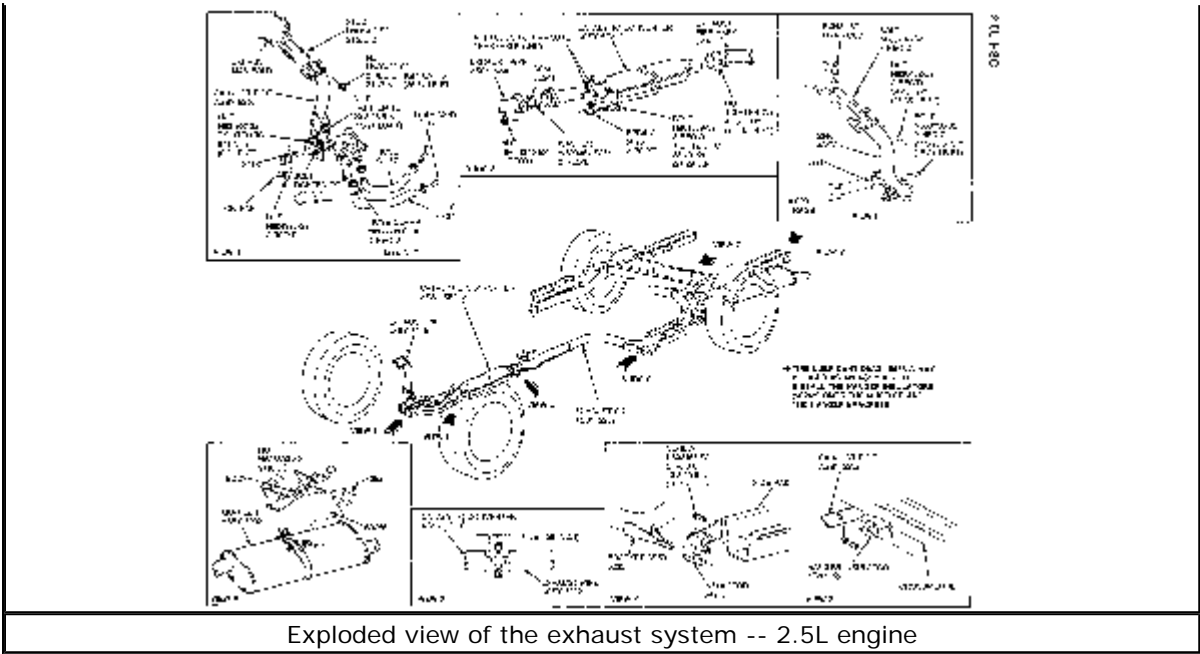
### Introduction



Location of the muffler--Early model 2.5L shown

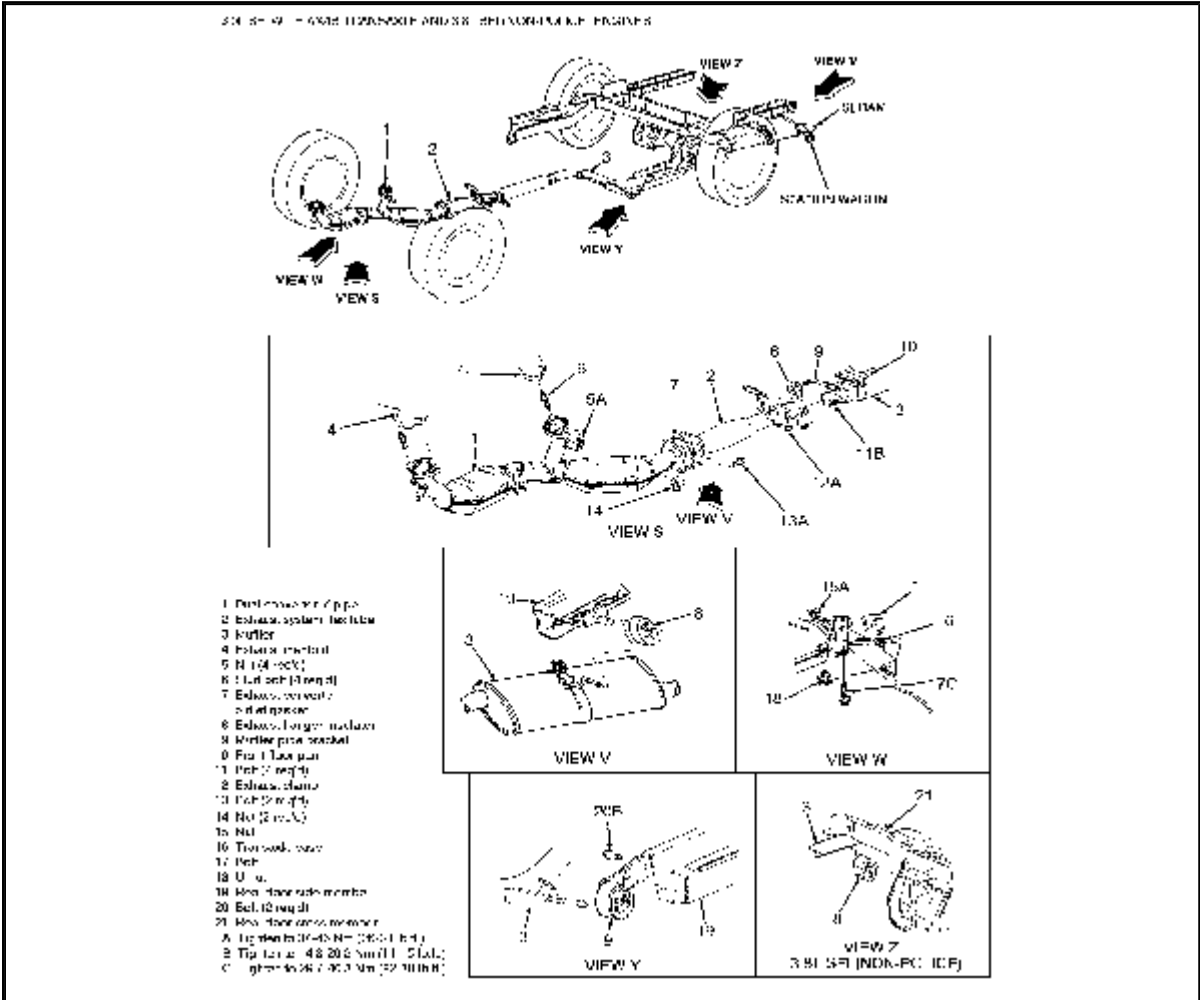


Location of the catalytic converter-- early model 2.5L shown



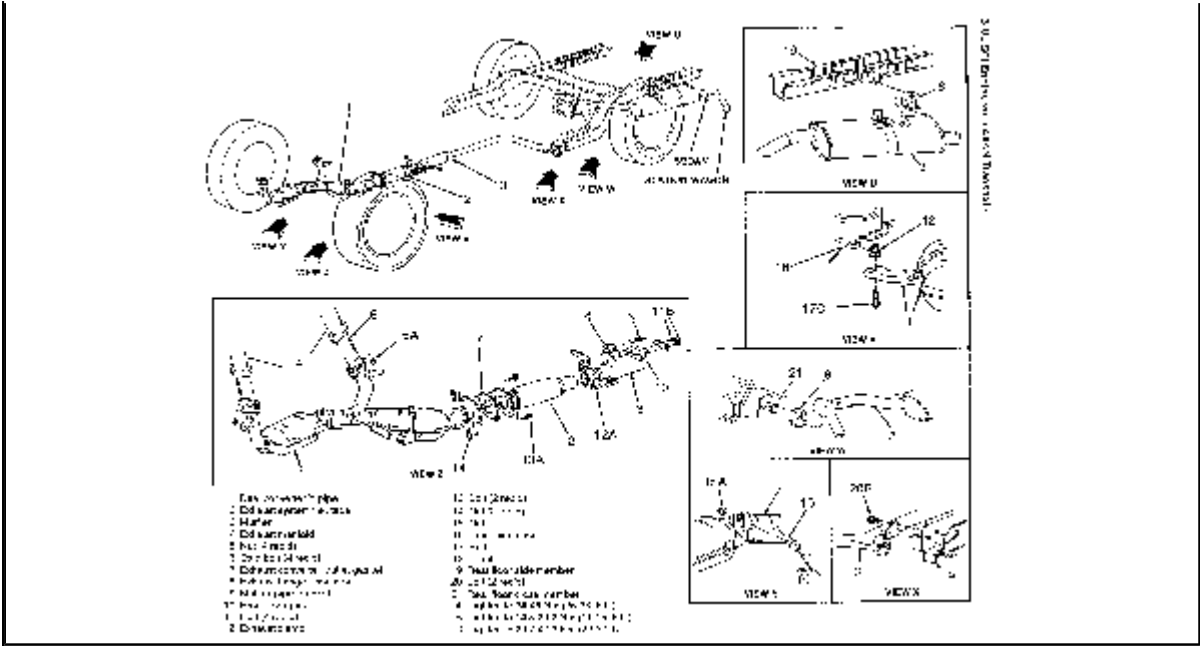
Exploded view of the exhaust system -- 2.5L engine

[Click to enlarge](#)



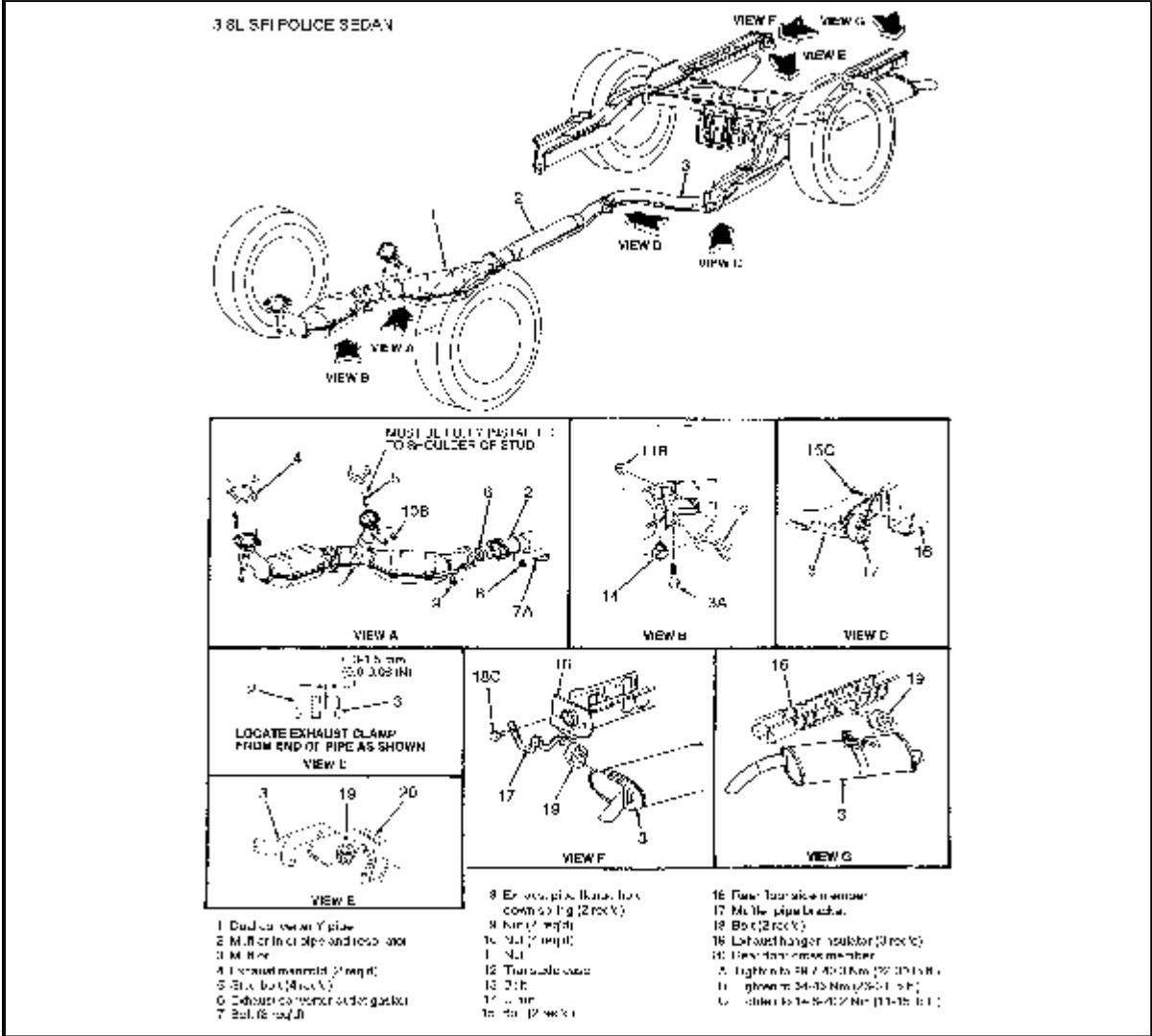
Exploded view of the exhaust system -- 3.0L engine(except SHO) equipped with the AX4S transaxle

[Click to enlarge](#)



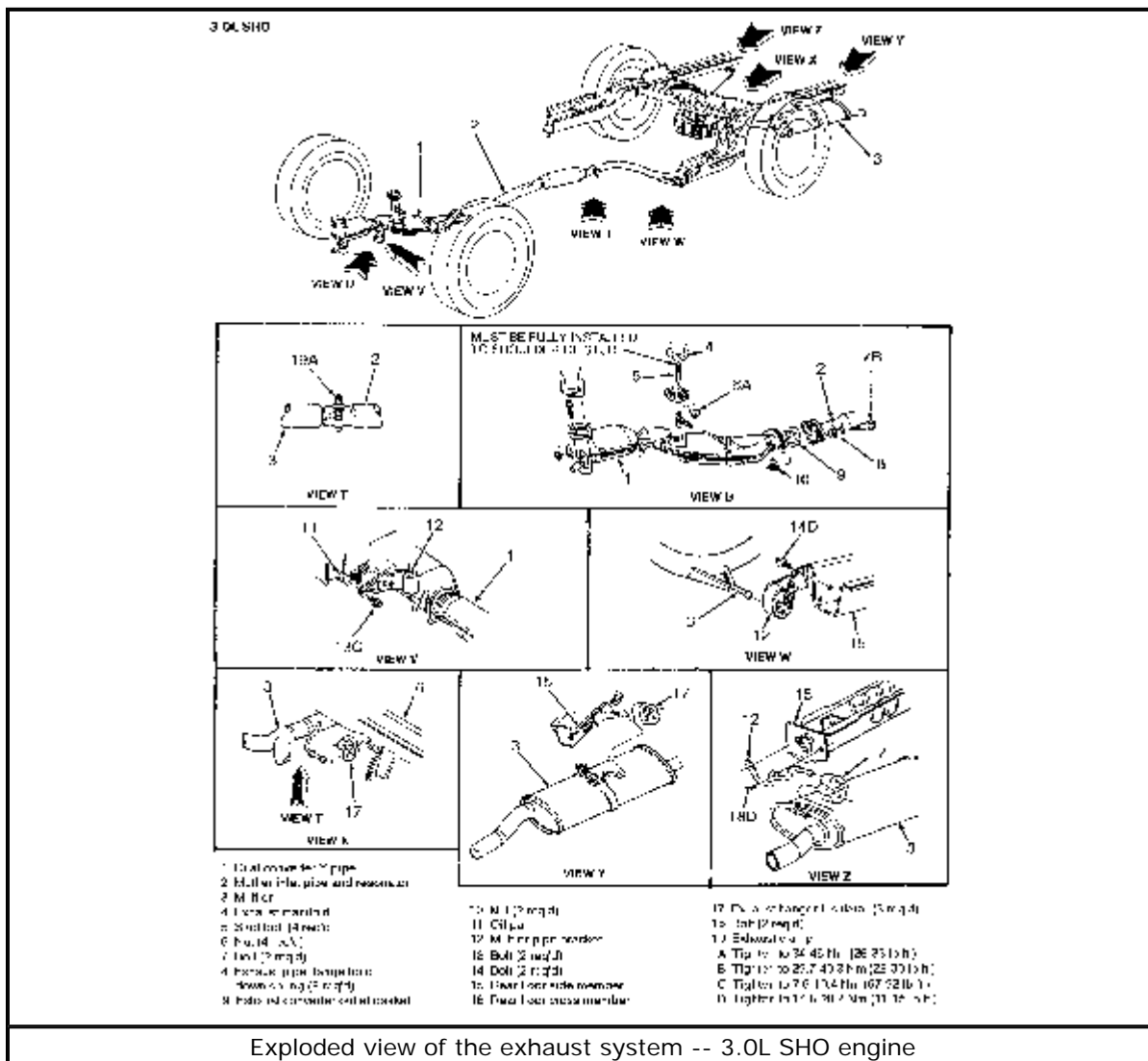
Exploded view of the exhaust system -- 3.0L engine(expect SHO) equipped with the AX4N transaxle

[Click to enlarge](#)



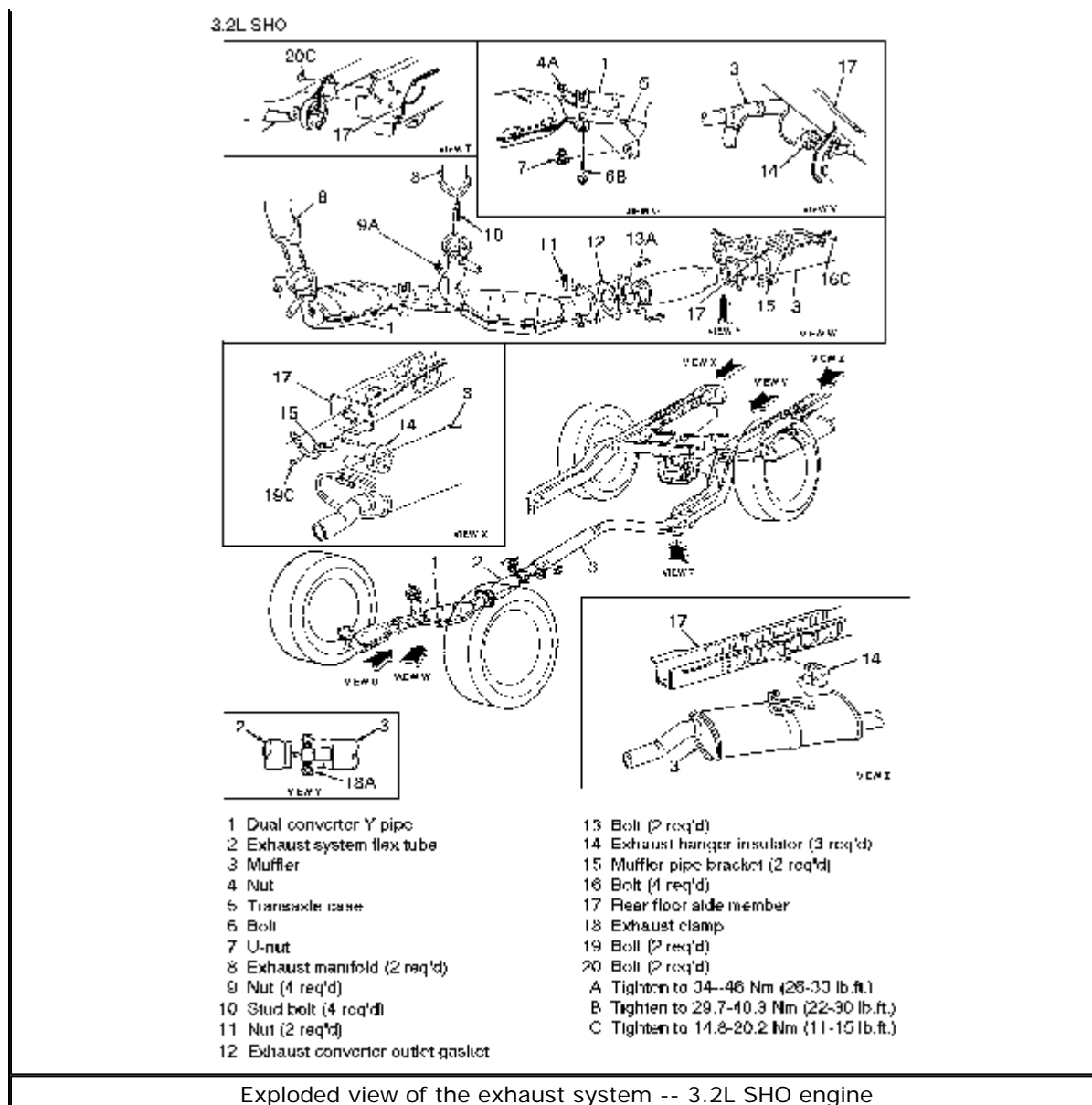
Exploded view of the exhaust system -- 3.8L engine Police sedan

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## General Information

Two types of pipe connections are used on most exhaust systems; they are: the ball joint (to allow angular movement for alignment purposes) and the slip joint. Gaskets are used only with the ball joint type connections.

The system is supported by free hanging rubber mountings which permit some movement of the exhaust system but do not allow the transfer of noise and vibration into the passenger compartment. Any noise vibrations or rattles in the exhaust system are usually caused by damage or misalignment of the parts.

### CAUTION

Before performing any operations on the exhaust system, be sure to allow it sufficient time to cool.

As with many areas of service on your car, the exhaust system presents its own

dangers. Always follow safety precautions carefully during exhaust system service.

## Safety Precautions

**Safety glasses should be worn at all times when working on or near the exhaust system. Older exhaust systems will almost always be covered with loose rust particles which will shower you when disturbed. These particles are more than a nuisance and could injure your eye.**

Whenever working on the exhaust system, always follow these safety precautions:

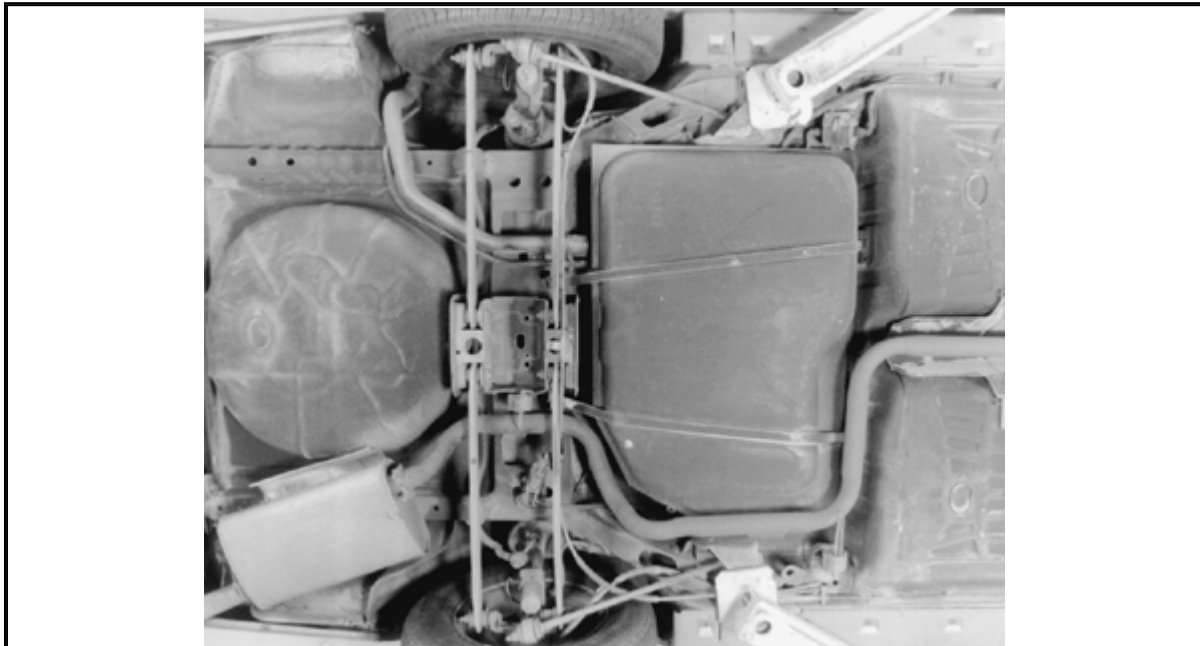
- **Support the car extra securely. Not only will you often be working directly under it, but you'll frequently be using a lot of force, say, heavy hammer blows, to dislodge rusted parts. This can cause a car that's improperly supported to shift and possibly fall.**
- **Wear goggles. Exhaust system parts are always rusty. Metal chips can be dislodged, even when you're only turning rusted bolts. Attempting to pry pipes apart with a chisel makes the chips fly even more frequently.**
- **If you're using a cutting torch, keep it a great distance from either the fuel tank or lines. Stop what you're doing and feel the temperature of the fuel bearing pipes on the tank frequently. Even slight heat can expand and/or vaporize fuel, resulting in accumulated vapor, or even a liquid leak, near your torch.**
- **Watch where your hammer blows fall and make sure you hit squarely. You could easily tap a brake or fuel line when you hit an exhaust system part with a glancing blow. Inspect all lines and hoses in the area where you've been working.**

### CAUTION

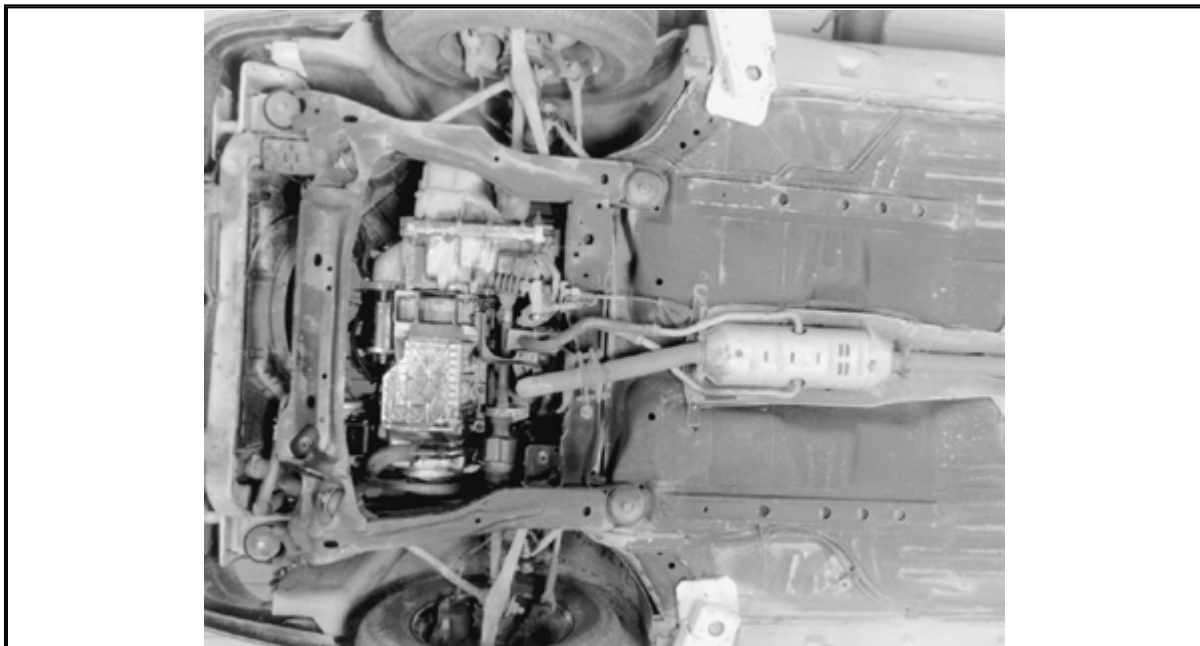
Be very careful when working on or near the catalytic converter. External temperatures can reach 1,500°F (816°C) and more, causing severe burns. Removal or installation should be performed only on a cold exhaust system.

- **Inspect inlet pipes, outlet pipes and mufflers for cracked joints, broken welds and corrosion damage that would result in a leaking exhaust system. It is normal for a certain amount of moisture and staining to be present around the muffler seams. The presence of soot, light surface rust or moisture does not indicate a faulty muffler. Inspect the clamps, brackets and insulators for cracks and stripped or badly corroded bolt threads. When flat joints are loosened and/or disconnected to replace a shield pipe or muffler, replace the bolts and flange nuts if there is reasonable doubt that its service life is limited.**
- **Check the complete exhaust system for open seams, holes, loose connections, or other deterioration which could permit exhaust fumes to seep into the passenger compartment.**
- **The exhaust system, including brush shields, must be free of leaks, binding, grounding and excessive vibrations. These conditions are usually caused by loose or broken flange bolts, shields, brackets or pipes. If any of these conditions exist, check the exhaust system components and alignment. Align or replace as necessary. Brush shields are positioned on the underside of the catalytic converter and should be free from bends which would bring any part of the shield in contact with the catalytic converter or muffler. The shield should also be clear of any combustible material such as dried grass or leaves.**

- Before removing any component of the exhaust system, ALWAYS squirt a liquid rust dissolving agent onto the fasteners for ease of removal. A lot of knuckle skin will be saved by following this rule.
- Coat all of the exhaust connections and bolt threads with anti-seize compound to prevent corrosion from making the next disassembly difficult.



Location of the muffler-Early model 2.5L shown



Location of the catalytic converter-early model 2.5L shown

## Special Tools

A number of special exhaust system tools can be rented from auto supply houses or local stores that rent special equipment. A common one is a tailpipe expander, designed to enable you to join pipes of identical diameter.

It may also be quite helpful to use solvents designed to loosen rusted bolts or flanges. Soaking rusted parts the night before you do the job can speed the work

of freeing rusted parts considerably. Remember that these solvents are often flammable. Apply only to parts that have been allowed to cool!

## Resonator Assembly

### REMOVAL & INSTALLATION

1. Raise and safely support the vehicle.
2. Remove the front resonator flange fasteners at the flex joint, then discard the flex joint gasket. Loosen the rear U-bolt connection.
3. Separate the resonator inlet and outlet connections, then remove the resonator.

To install:

4. Loosely install the resonator to the muffler, then install a new flex joint gasket.
5. Install the resonator and muffler assembly to the converter outlet joint.
6. Align the exhaust system, making sure that the muffler and resonator are fully engaged.
7. Starting at the front of the exhaust system, tighten all nuts and bolts.

## Muffler

### REMOVAL & INSTALLATION

1. Raise and safely support the vehicle.
2. Remove the U-bolt assembly and rubber insulators from the hanger brackets, then remove the muffler assembly. Slide the muffler rearward to disconnect it from the resonator or flexible pipe, as applicable.
3. Replace any damaged parts.

To install:

4. Position the muffler assembly and slide it onto the resonator outlet pipe. Check the make sure the slot in the muffler and the tab on the resonator are fully engaged.
5. Install the rubber insulators on the hanger assemblies, then install the U-bolt and tighten it to 26-33 ft. lbs. (34-46 Nm).
6. Lower the vehicle. Start the engine and check for leaks.

## Catalytic Converter

Depending on your vehicle, the catalytic converter may be located underneath the car under the oil pan or located in the engine compartment.

### REMOVAL & INSTALLATION

1. Raise and safely support the vehicle. As required, remove the transmission to converter support brace.
2. Remove the front catalytic converter flange fasteners at the flex joint and discard the flex joint gasket, remove the rear U-bolt connection.



3. **Separate the catalytic converter inlet and outlet connections. Remove the converter.**
4. **Installation is the reverse of the removal procedure. Be sure to use new retaining clamps.**
5. **Lower the vehicle. Start the engine and check for leaks.**

## **Tailpipe**

### **REMOVAL & INSTALLATION**

1. **Raise and safely support the vehicle. Remove the tailpipe retaining clamp from the tailpipe to the frame, if equipped.**
2. **Remove the retaining clamp holding the tailpipe to the muffler or resonator.**
3. **Using the proper tool separate the tailpipe from the muffler or resonator.**
4. **Carefully remove the tailpipe from the vehicle.**
5. **Installation is the reverse of the removal procedure. Be sure to use new retaining clamps.**
6. **Lower the vehicle. Start the engine and check for leaks.**

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