

**Exhaust System Flex Tube**

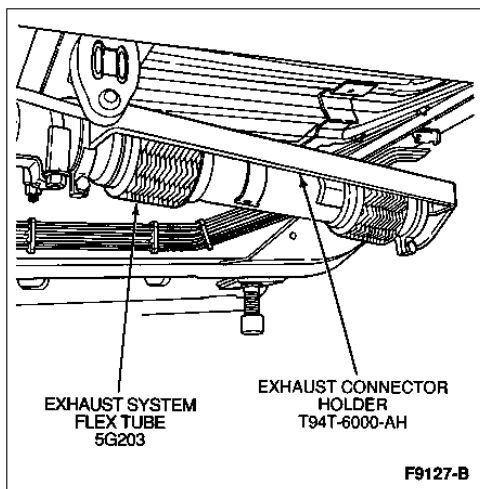
## SPECIAL SERVICE TOOL(S) REQUIRED

Description	Tool Number
Exhaust Connector Holder	T94T-6000-AH

**Removal**

**NOTE:** When servicing the exhaust system, it is necessary to take the following precautions to make sure that the exhaust system flex tube (5G203) is not damaged in any way. The bellows of the exhaust system flex tube are extremely sensitive to large deflections. To make sure that the useful life of the bellows is achieved, it needs to be supported using an Exhaust Connector Holder Tool T94T-6000-AH and not allowed to hang under its own weight when not attached to the muffler or inlet pipe catalyst assembly.

1. Raise vehicle. Refer to Section 00-02 .
2. Install Exhaust Connector Holder T94T-6000-AH.



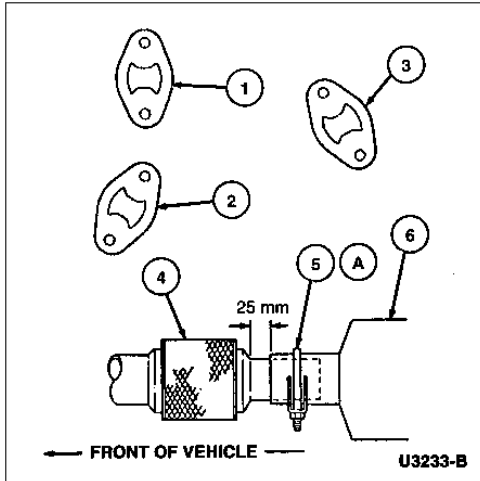
3. Remove two retaining nuts and bolts that connect the exhaust system flex tube to the dual converter Y pipe (5F250). Remove and discard exhaust converter outlet gasket (5E241).
4. Loosen exhaust clamp and slide exhaust system flex tube from muffler (5230).

**Installation**

**NOTE:** When replacing the exhaust system flex tube, care must be taken to make sure that the exhaust system flex tube is inserted into the muffler to the proper depth. With the correct insertion of the exhaust system flex tube, the exhaust system will be neutralized.

1. Install exhaust system flex tube into muffler.

2. Install new exhaust converter outlet gasket.
3. Install retaining nuts and bolts to exhaust system flex tube and dual converter Y pipe.
4. Make sure exhaust hanger insulators (5F262) hang straight up and down as illustrated. If they do not, adjust the depth that the exhaust system flex tube is inserted into the muffler and tailpipe assembly until they do.



Item	Part Number	Description
1	5F262	Exhaust Hanger Insulator $\hat{\wedge}$ with Exhaust System Installed Correctly
2	5F262	Exhaust Hanger Insulator $\hat{\wedge}$ with Exhaust System Flex Tube Inserted Too Deeply Into Muffler and Tailpipe Assembly
3	5F262	Exhaust Hanger Insulator $\hat{\wedge}$ with Exhaust System Flex Tube Inserted Insufficiently Into Muffler and Tailpipe Assembly
4	5G203	Exhaust System Flex Tube
5	$\hat{\wedge}$	Clamp
6	5K214	Muffler and Tailpipe Assembly
A	$\hat{\wedge}$	Tighten to 34-46 Nm (26-33 Lb-Ft)

5. Remove Exhaust Connector Holder T94T-6000-AH.
6. Position exhaust clamp. Tighten to 34-46 Nm (26-33 lb-ft).
7. Lower vehicle and check system for leaks.



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**Dual Three Way Catalytic Converter (TWC) and Pipe****Removal**

1. **⚠ CAUTION:** When servicing exhaust system or removing exhaust components, disconnect all heated oxygen sensor (HO2S) (9F472) at the wiring connectors to prevent damage to the heated oxygen sensor and wiring harness. Refer to Section 03-14 for location of the heated oxygen sensor.

Raise vehicle. Refer to Section 00-02 .

2. Remove front and rear dual converter Y-pipe flange fasteners from exhaust manifolds (9430).
3. Remove bolt and nut retainers at transaxle.
4. Remove two remaining nuts and bolts from dual converter Y-pipe outlet connection. Discard exhaust converter outlet gasket (5E241).
5. Remove dual converter Y pipe (5F250).

**Installation**

1. Loosely install dual converter Y pipe to exhaust manifold connections.
  2. Install dual converter Y-pipe bolt and nut retainer to transaxle.
  3. Install new exhaust converter outlet gasket.
  4. Install dual converter Y pipe to exhaust system flex tube (5G203).
  5. Align exhaust system. Starting at front of system, tighten all nuts and bolts to specification. Tighten Y-pipe to exhaust manifold nuts, Y-pipe to flex tube nuts, pipe to transaxle case nut and exhaust clamps to 34-46 Nm (26-33 lb-ft). Refer to exhaust system illustration in this section.
  6. Check system for leaks and lower vehicle.
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**Muffler Pipe Brackets**

## SPECIAL SERVICE TOOL(S) REQUIRED

Description	Tool Number
Exhaust Connector Holder	T94T-6000-AH

**Removal and Installation**

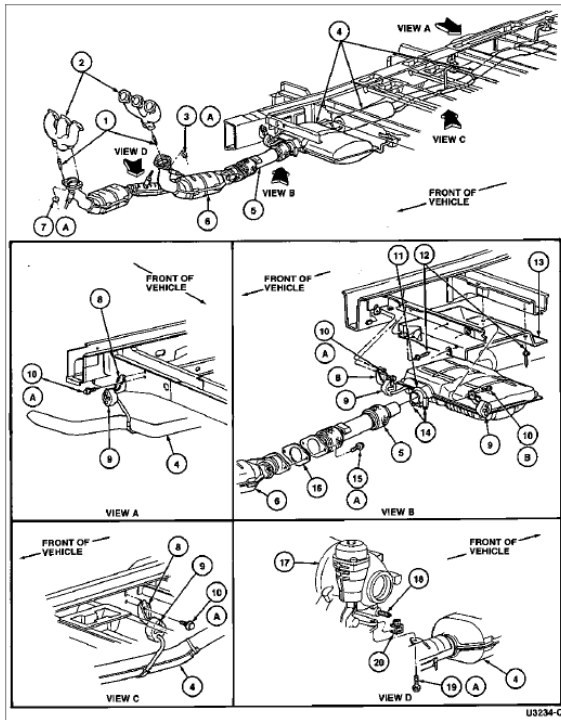
**NOTE: There are four hanger assemblies supporting the muffler and tailpipe assembly--two which support the front of the muffler and two which support the tailpipe and resonator. The muffler and tailpipe are one assembly. To remove one bracket or insulator:**

1. Raise vehicle on hoist. Refer to [Section 00-02](#) .
2. Support exhaust system with suitable jack stand.
3. Attach Exhaust Connector Holder T94T-6000-AH to exhaust system flex tube (5G203).
4. Remove bracket-to-frame screw.
5. Remove bracket tab (if present) from hole in frame and slide exhaust hanger insulator (5F262) off of rod welded onto muffler and tailpipe assembly.
6. Remove exhaust hanger insulator from muffler pipe bracket (5277).
7. **NOTE: For ease of assembly, lubricate exhaust hanger insulators with Silicone Lubricant D7AZ-19553-AA or equivalent meeting Ford specification ESR-M13P4-A prior to installation mufflers (5230).**

To install, reverse Removal Procedure. Tighten bracket-to-frame screws to 15-20 Nm (11-15 lb-ft).

**Muffler Pipe Brackets, 3.0L and 3.8L Engines**

1996 Windstar



Item	Part Number	Description
1	N808287-S60	Stud
2	9430	Exhaust Manifold
3	N808287-S60	Nut M10 x 1.5
4	5K214	Muffler and Tailpipe Assembly
5	5G203	Exhaust System Flex Tube
6	5F250	Dual Converter Y Pipe
7	N620482-S60	Nut M10 x 1.5
8	5291	Muffler Pipe Bracket
9	5F262	Exhaust Hanger Insulator
10	N802455-S60	Screw M8-1.25 x 28
11	Â	U-Bolt (Part of 5K214)
12	N806012-S43B	Rivet
13	5N212	Heat Shield
14	Â	Nut (Part of 5K214)
15	N806408-S60	Bolt M10-1.5 x 29.5
16	5E241	Exhaust Converter Outlet Gasket
17	7003	Transmission
18	N806944	Stud
19	N80677-S60	Bolt M10-1.5 x 40
20	N807325-S60	Nut and Retainer, U
A	Â	34-46 Nm (25-33 Lb-Ft)
B	Â	15-20 Nm (11-15 Lb-Ft)





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**Exhaust System**

Inspect the dual converter Y pipe (5F250), exhaust system flex tube (5G203), muffler inlet pipe and resonator (5A289) and muffler (5230) for cracked joints, broken welds and corrosion damage that would result in a leaking exhaust system. Inspect exhaust system flex tubeexhaust system flex tube for collapsed bellows. Inspect the clamps, muffler pipe brackets (5277), and exhaust hanger insulators (5F262) for cracks.

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### **Exhaust Shield Inspection**

Inspect the exhaust shields for cracks, broken welds, corrosion and damage. Replace the exhaust shield if damaged.

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**Exhaust System Alignment**

A misaligned exhaust system is usually indicated by vibration, grounding, rattling or binding of system components. Often the associated noise is hard to distinguish from other chassis noises. Look for broken or loose clamps and brackets. Replace or tighten as necessary. It is important that exhaust clearances and alignment be maintained.

Perform the following procedures to align the system:

1. Loosen the attaching hardware, clamp and the pipe support brackets.
2. Align the exhaust system, beginning at the front of the vehicle, to establish maximum clearance.
3. **NOTE: Tighten the flange nuts and the exhaust manifold nuts in the following sequence: tighten one side until it contacts the shoulder stud then tighten to correct torque value; tighten remaining side until proper torque is reached.**

**NOTE: Muffler (5230), exhaust system flex tube (5G203), muffler inlet pipe and resonator (5A289), dual converter Y pipe (5F250), muffler pipe brackets (5277), clamps and exhaust hanger insulators (5F262) should be replaced if they are worn or become badly corroded. Do not attempt to service these parts.**

Tighten all attachments.

4. Start the engine and check the exhaust system for leaks.
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