

EXHAUST SYSTEM

ALL SERIES

CONTENTS

DESCRIPTION AND OPERATION:

Description of Exhaust System..... 6D-1

DIAGNOSIS: (Not Applicable)

MAINTENANCE AND ADJUSTMENTS: (Not Applicable)

MAJOR REPAIR:

Removal and Installation of Exhaust System 6D-1

SPECIFICATIONS:

DESCRIPTION AND OPERATION

EXHAUST SYSTEM

All exhaust pipe connections to exhaust manifold are of the ball joint type to allow angular movement for alignment purposes. On all exhaust systems, the rear end of the catalytic converter assembly is also of the ball joint type. All other connections are of the slip joint type. No gaskets are used in the entire system (except L-6 Exhaust Manifold Gaskets).

The muffler is of the oval-shaped dynamic flow type having very low back pressure. The exhaust system is supported by free-hanging rubber mountings which permit free movement of the exhaust system but do not permit transfer of noise and vibration into the passenger compartment.

MAJOR REPAIR

CAUTION: *When jacking or lifting vehicle from frame side rails, be certain lift pads do not contact catalytic converter as damage to converter will result.*

REMOVAL AND INSTALLATION OF EXHAUST SYSTEM PARTS

NOTE: *Exhaust System Sealer is to be applied to all slip joints before assembly.*

Removal and Installation of Muffler (All Series)

Check complete exhaust system and nearby body areas and trunk 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 trunk or passenger compartment. Any damaged areas should be corrected immediately. To help insure continued integrity, exhaust system pipes and resonators rearward of the muffler must be replaced whenever a new muffler is installed.

CAUTION: *If any mispositioning, incorrect assembly, or failure of components in the area of the brake system pipes, hoses, or cylinders is observed, be sure to check for any brake dam-*

age that may have resulted from such a condition and correct as required. Make sure that exhaust system components have adequate clearance from the floor pan to avoid possible overheating of the floor pan and possible damage to the passenger compartment carpets. The following instructions apply, in general to all exhaust systems. For specific information, see the illustrations at the end of the Exhaust System Section.

1. Remove U-bolts and clamps from muffler outlet nipples.
2. Split Muffler ("H" and "X" Series only) inlet nipple on opposite sides so that it is loose on inner pipe. Be careful not to damage inner pipe. On A-B-C-E Series cut muffler pipe to intermediate pipe at the weld.
3. Loosen front or intermediate exhaust pipe at forward end ball joint to allow muffler removal. (All series except "H").
4. Remove muffler.
5. Disconnect tail pipe hanger and remove tail pipe and resonator, if equipped.
6. Install new tail pipe and resonator, if equipped.
7. Install new muffler using new U-clamps finger tight.
8. Align muffler and exhaust pipe. See illustration that applies.
9. Tighten all bolts and nuts.

Removal and Installation of Resonator (If Equipped)

1. Remove tail pipe clamp bolt and spread clamp so that resonator-tail pipe assembly will slide through clamp.
2. Split resonator inlet nipple on opposite sides so that it is loose on rear exhaust pipe. Be careful not to damage tail pipe.
3. Slide old resonator to rear and then forward out of tail pipe clamp.
4. Install new hanger where necessary.

5. Install new resonator-tail pipe assembly if required.
6. Install new U-bolt and clamp. Install new tail pipe hanger bolt. Tighten all nuts so that resonator can be moved but will stay where moved.
7. Align resonator assembly. See illustration that applies.
8. Tighten all clamps.

Removal and Installation of Intermediate Exhaust Pipe

Whenever the intermediate exhaust pipe is replaced the muffler must be replaced also.

1. Disconnect exhaust pipe at forward end ball joint by removing bolts or nuts.
2. Disconnect muffler from tail pipe and remove muffler and intermediate pipe assembly.
3. Raise new exhaust pipe and muffler into position and install new bolts or nuts at forward ball joint and a new muffler clamp just snug.
6. Align exhaust pipe and muffler. See illustration that applies.
7. Tighten all bolts and nuts.

Removal and Installation of Tail Pipe

1. Raise car so that rear axle and frame are separated as far as possible.

2. Remove muffler rear clamp.

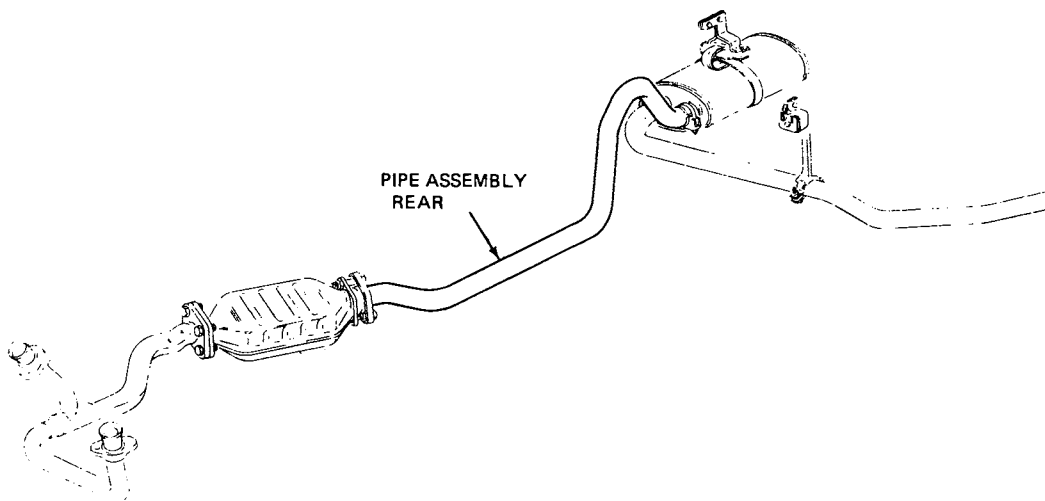
3. Remove tail pipe clamp bolt and spread clamp. Remove old tail pipe.
4. Position new tail pipe over rear axle and into position.
5. Install new U-bolt and clamp. Install new tail pipe hanger clamp bolt. Tighten all nuts just snug.
6. Align tail pipe. See illustration that applies.
7. Tighten all nuts.

**CATALYTIC CONVERTER ASSEMBLY
REMOVAL AND INSTALLATION
ALL SERIES**

NOTE: *For converter bottom cover repair or catalyst replacement see Emission Control Systems Section.*

Removal

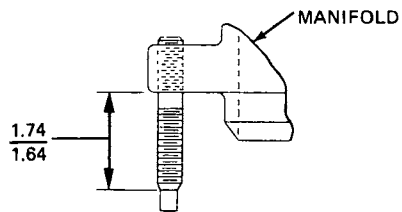
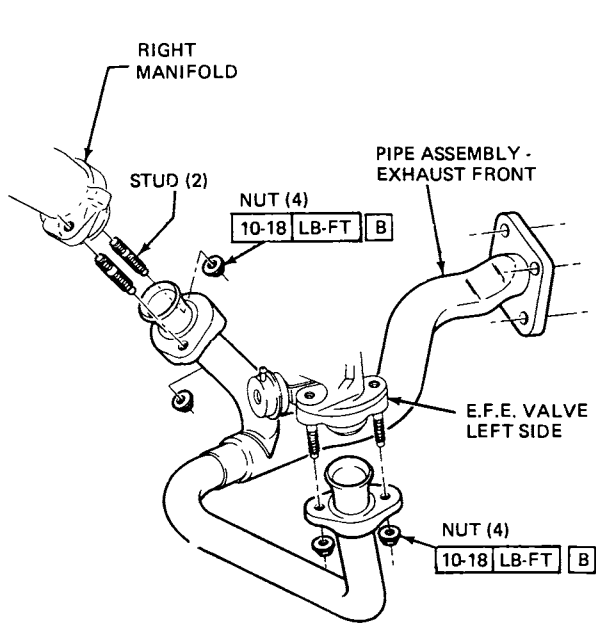
1. Raise vehicle.
2. Remove converter from clamp (A-B-C-E Series). Remove front flange bolts ("H" and "X" Series).
3. Disconnect converter rear bolts and converter rear mount (front mount on "X" Series).
4. Remove catalytic converter.
5. For installation of converter reverse steps 1 through 4.



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Figure 6D-1 H Series Exhaust System

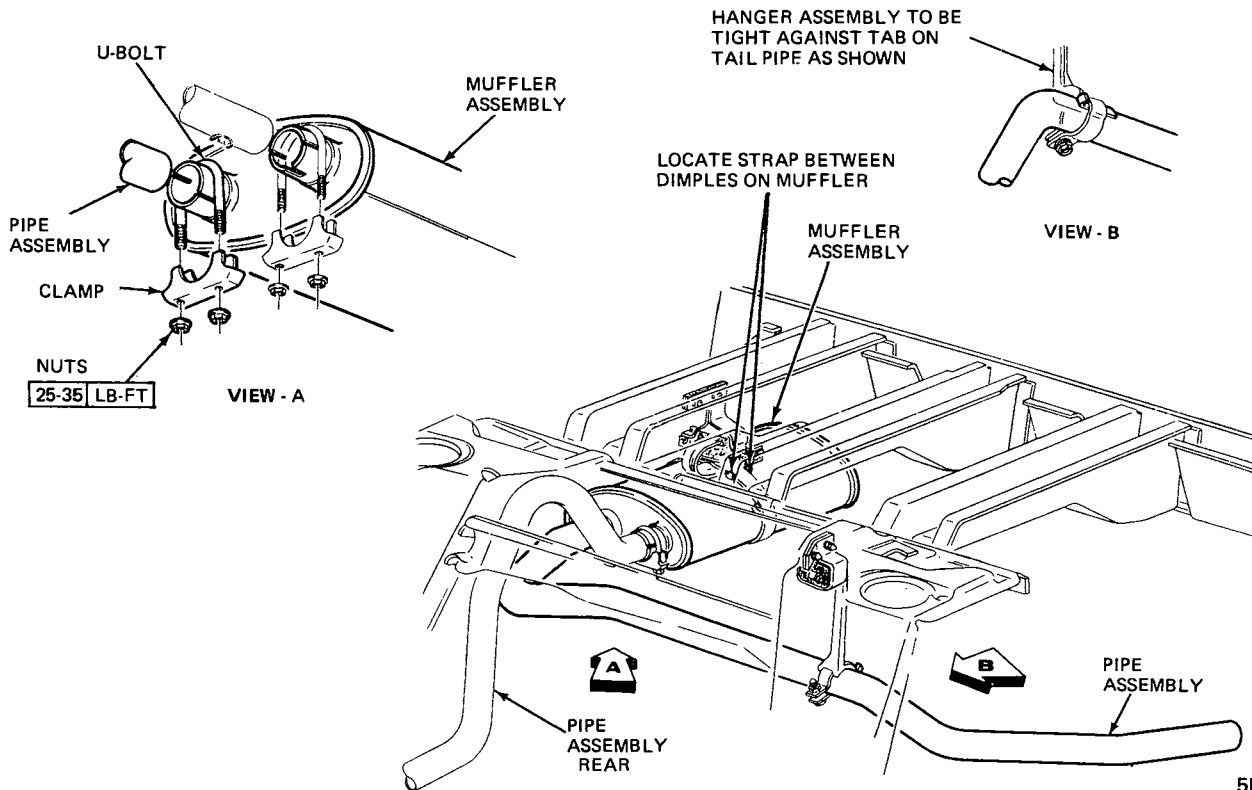


TYPICAL STUD INSTALLATION

B ONE NUT IS TO BE TIGHTENED FINGER TIGHT WITH PARTS SEATED BEFORE THE OTHER NUT IS TIGHTENED TO SPECIFIED TORQUE.

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Figure 6D-2 H Series Exhaust Pipe to Exhaust Manifold



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Figure 6D-3 H Series Muffler and Tail Pipe Assembly

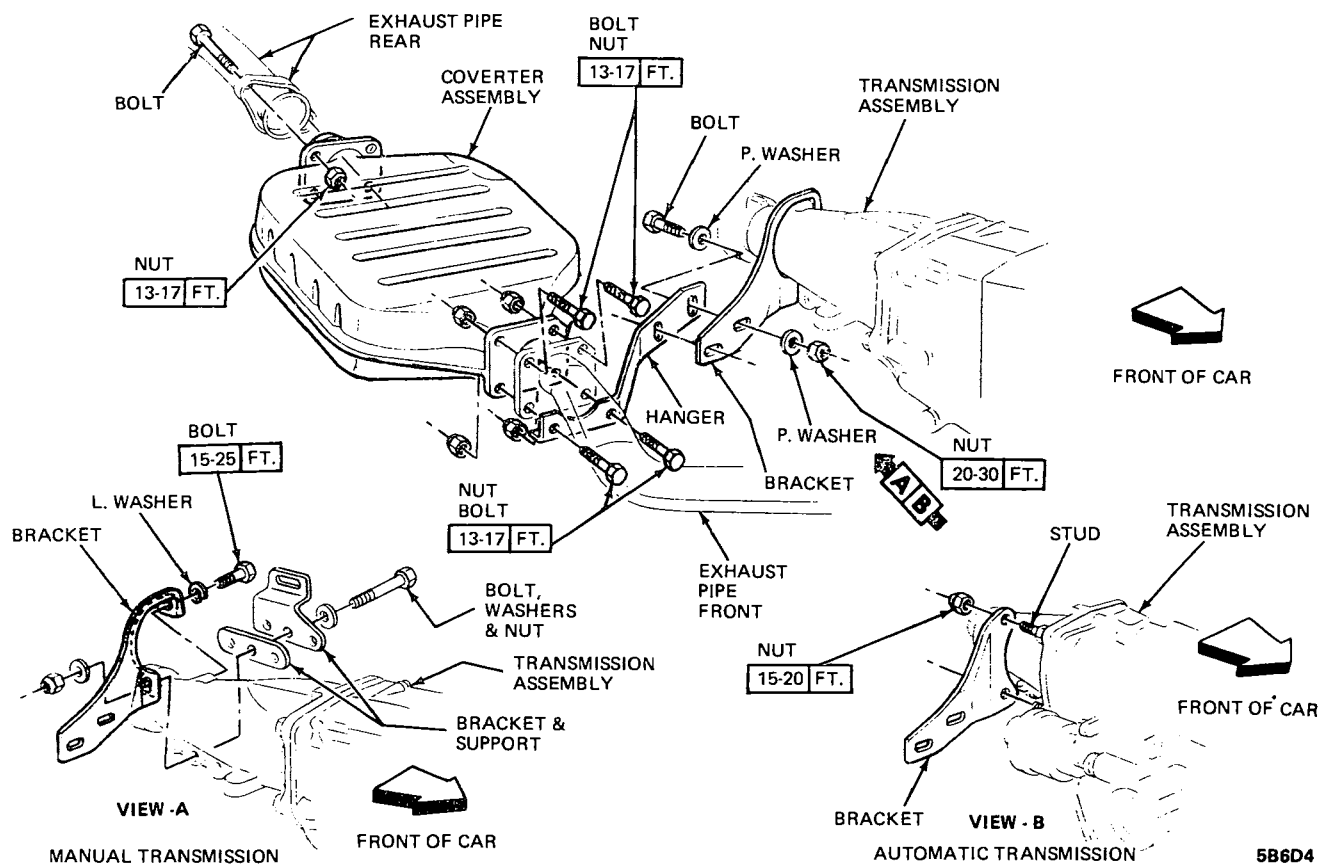
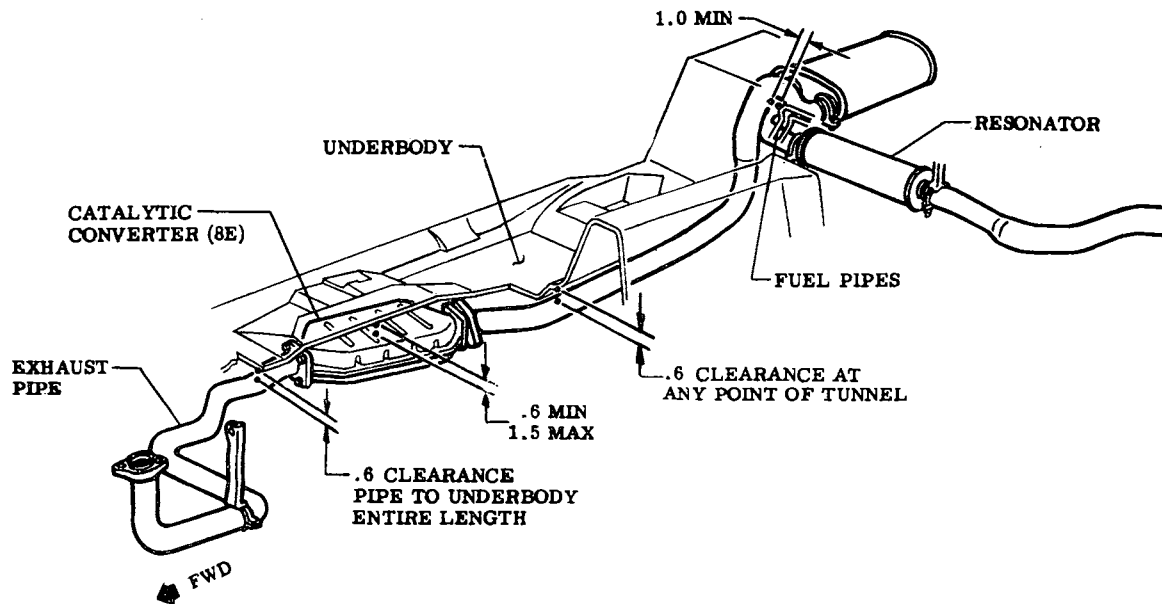


Figure 6D-4 H Series Catalytic Converter Mounting



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Figure 6D-4A - H Series Exhaust System Clearance Requirements

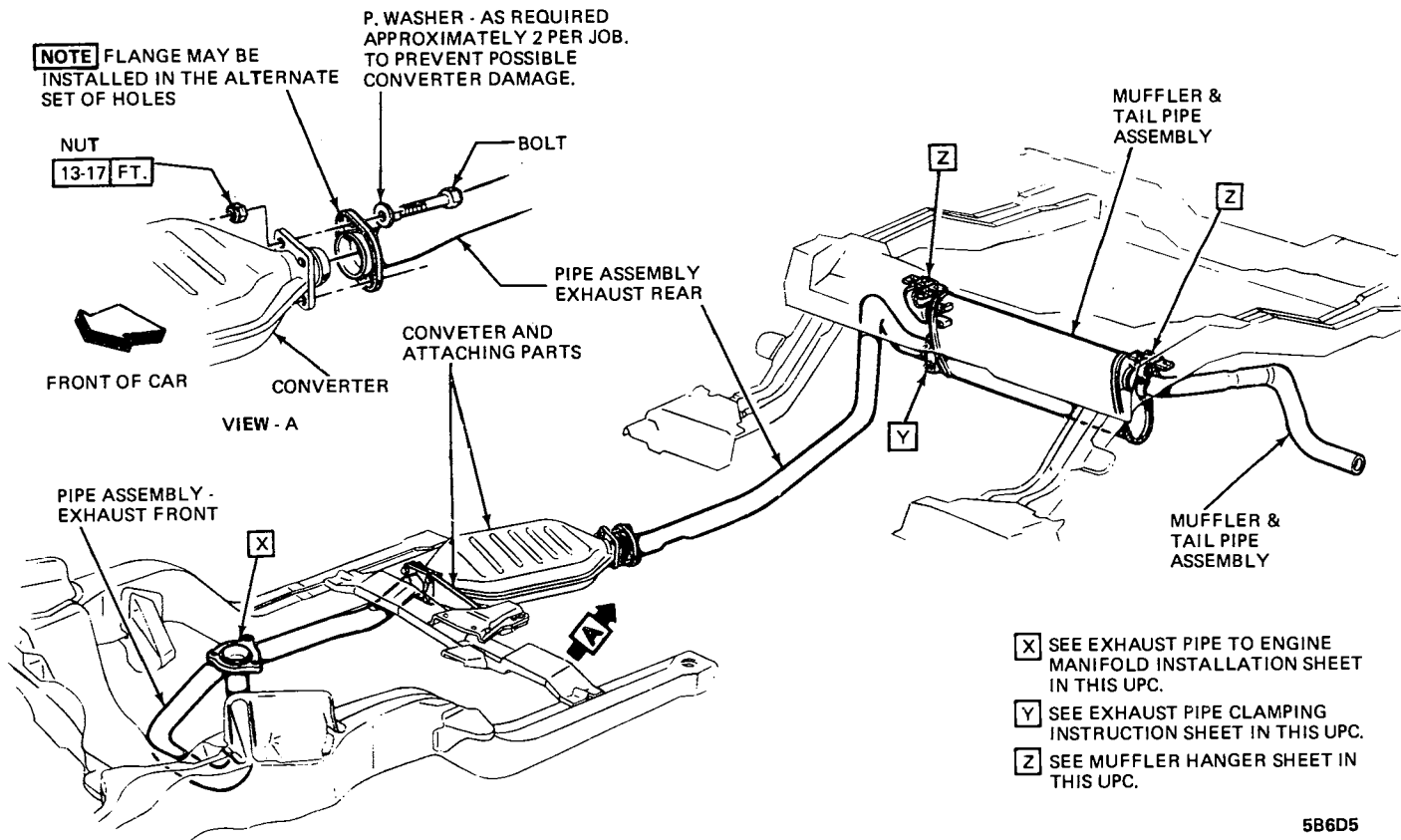


Figure 6D-5 X Series Exhaust System 250 Engine

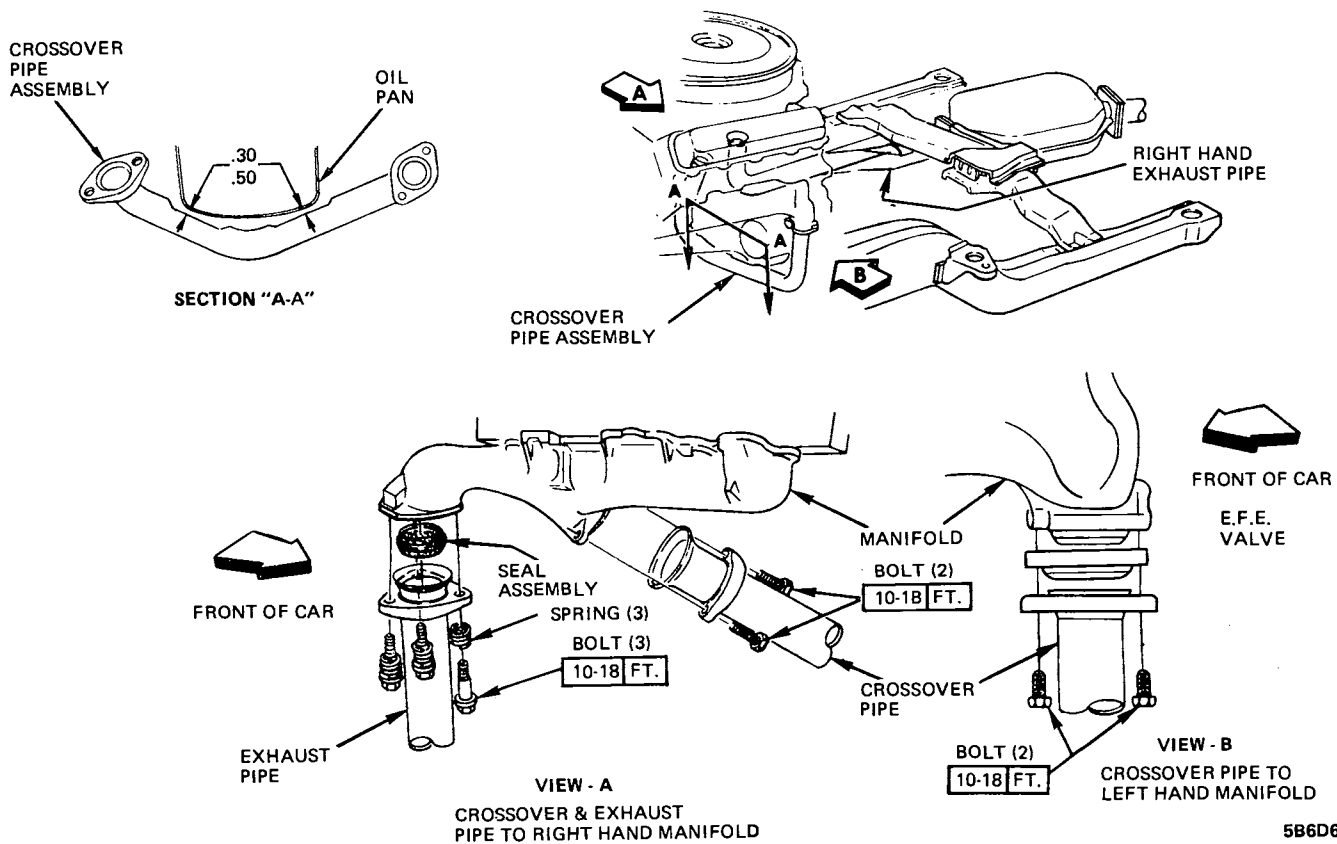
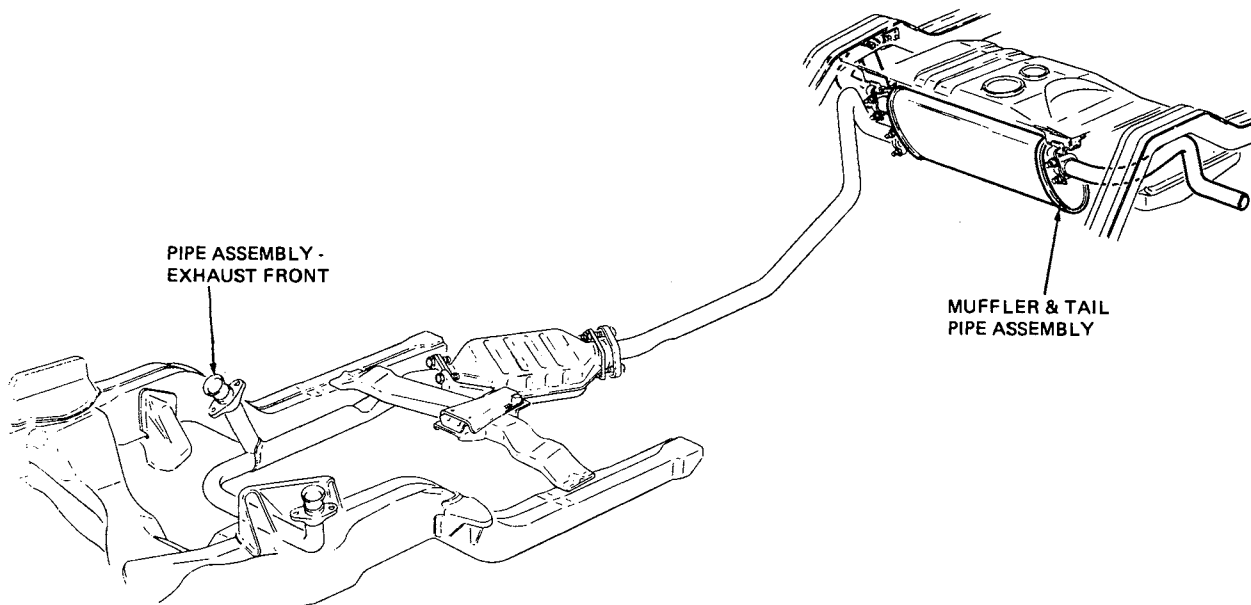
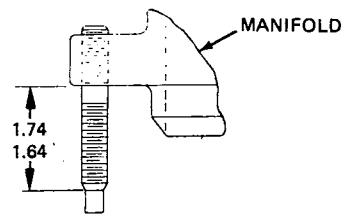
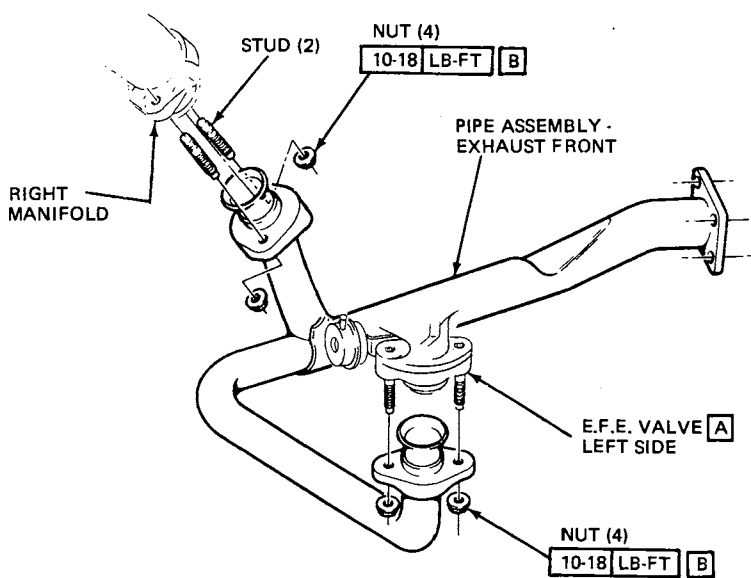


Figure 6D-6 X Series Exhaust Pipe to Exhaust Manifold 260 Engine



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Figure 6D-7 X Series Exhaust System 231 and 350 Engines



TYPICAL STUD INSTALLATION

- A. FOR PART NO. & INSTLAATION SEE 6L-2.
- B. ONE NUT IS TO BE TIGHTENED FINGER TIGHT WITH PARTS SEATED BEFORE THE OTHER NUT IS TIGHTENED TO SPECIFIED TORQUE.

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Figure 6D-8 X Series Exhaust Pipe to Exhaust Manifold 231 and 350 Engines

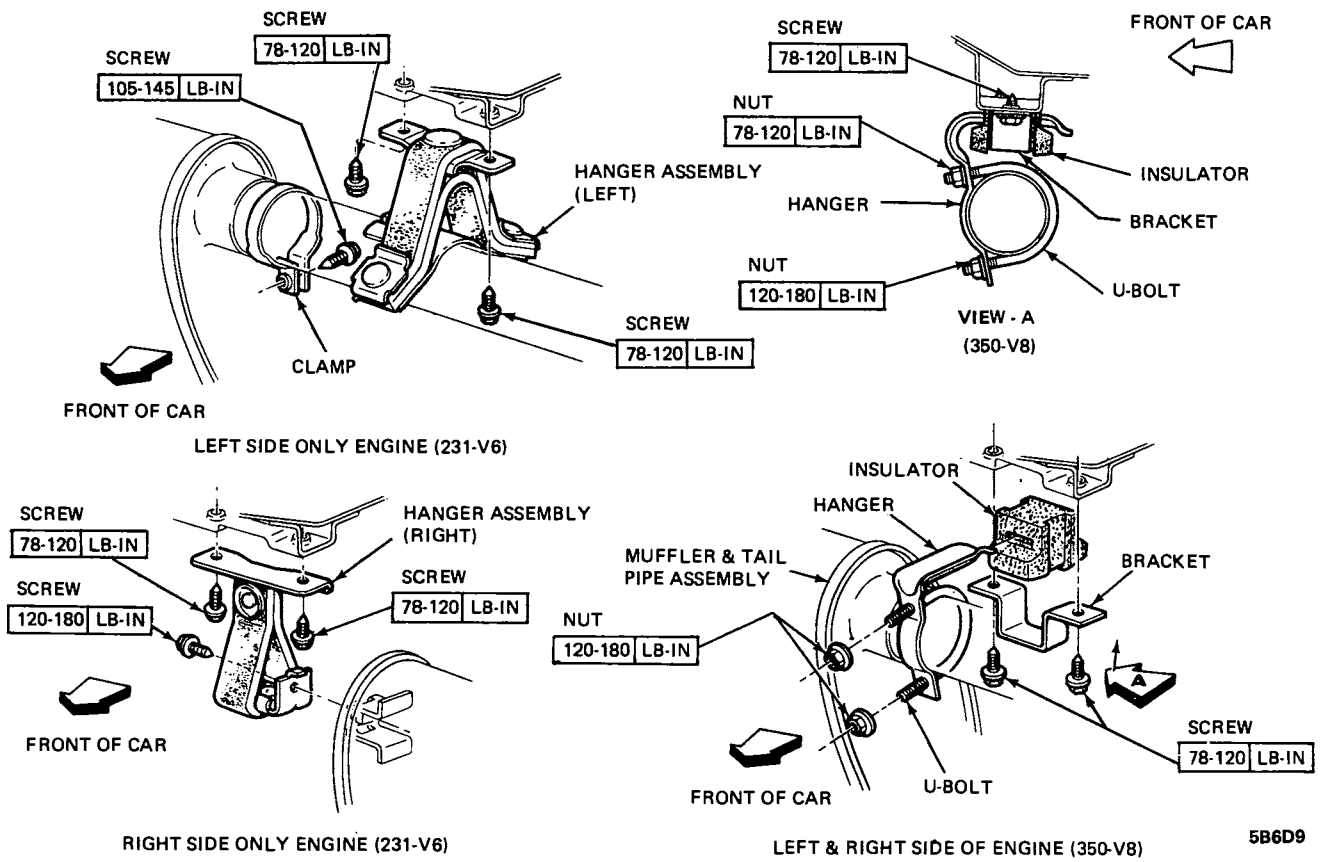
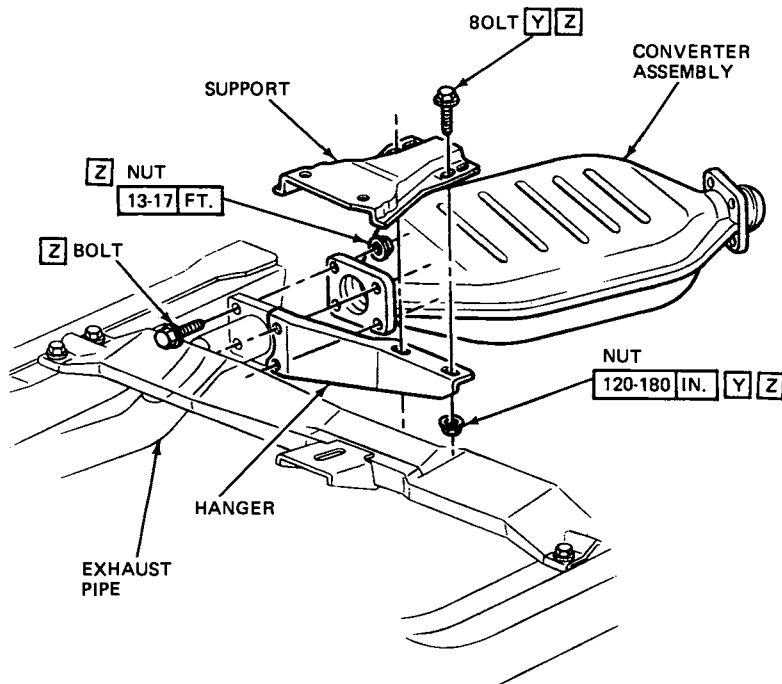
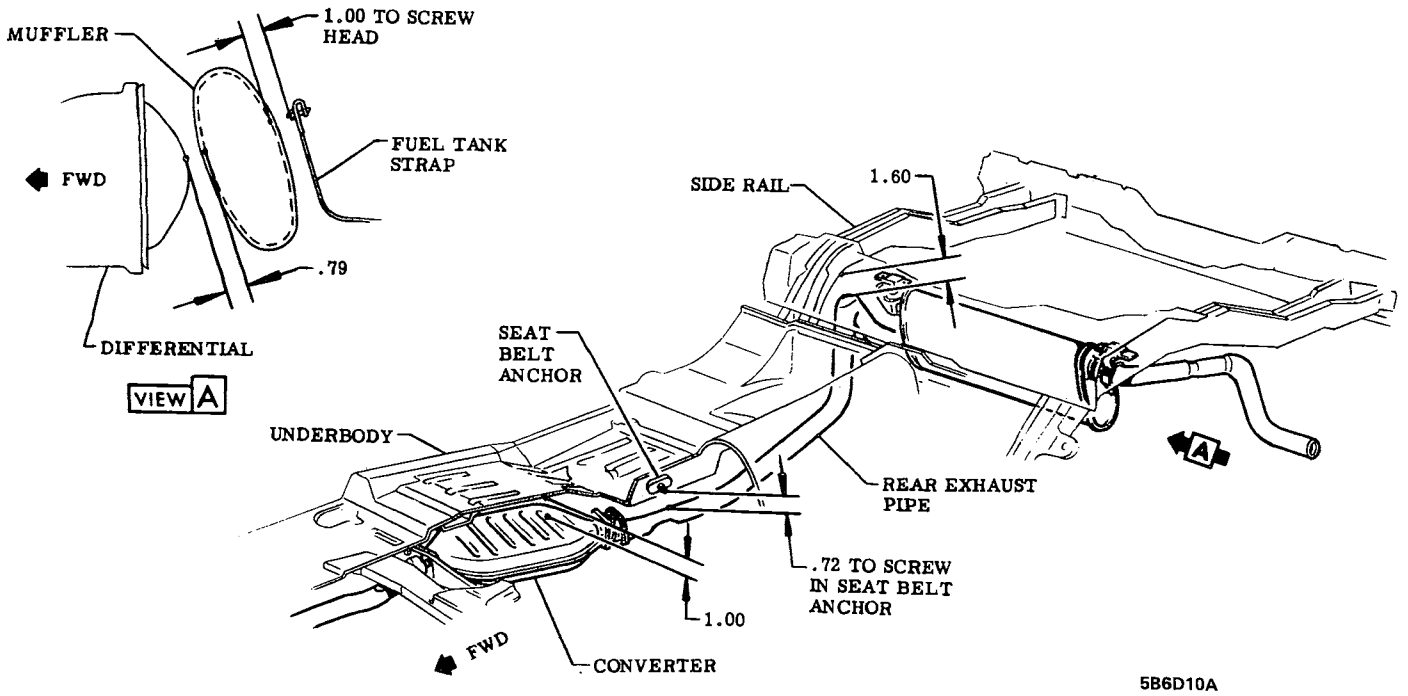


Figure 6D-9 X Series Muffler Hanger Assembly All



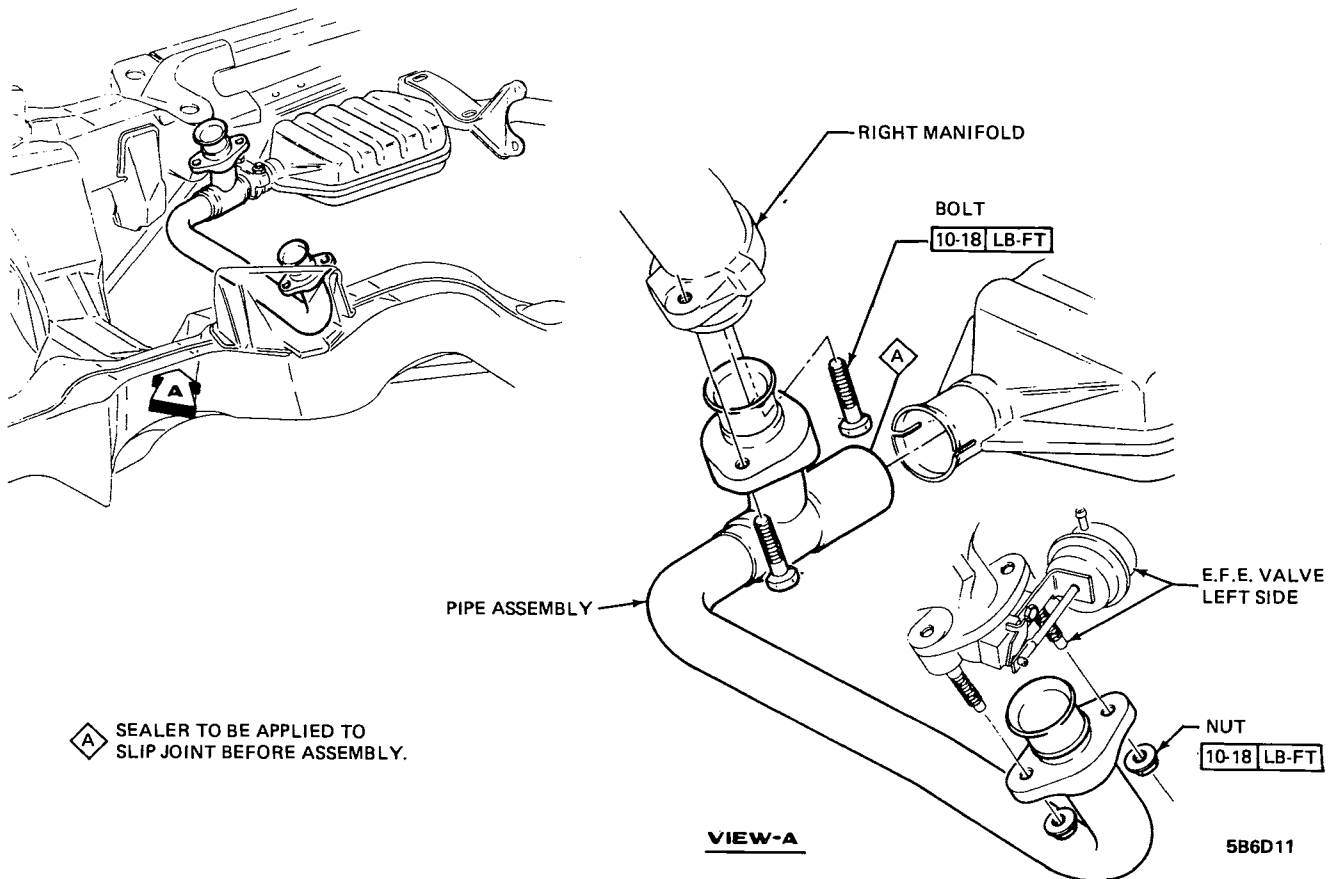
Y BOLTS MAY BE INSTALLED IN EITHER DIRECTION.
Z TORQUE MAY BE APPLIED OPTIONALLY TO BOLT OR NUT.

Figure 6D-10 X Series Catalytic Converter Mounting All



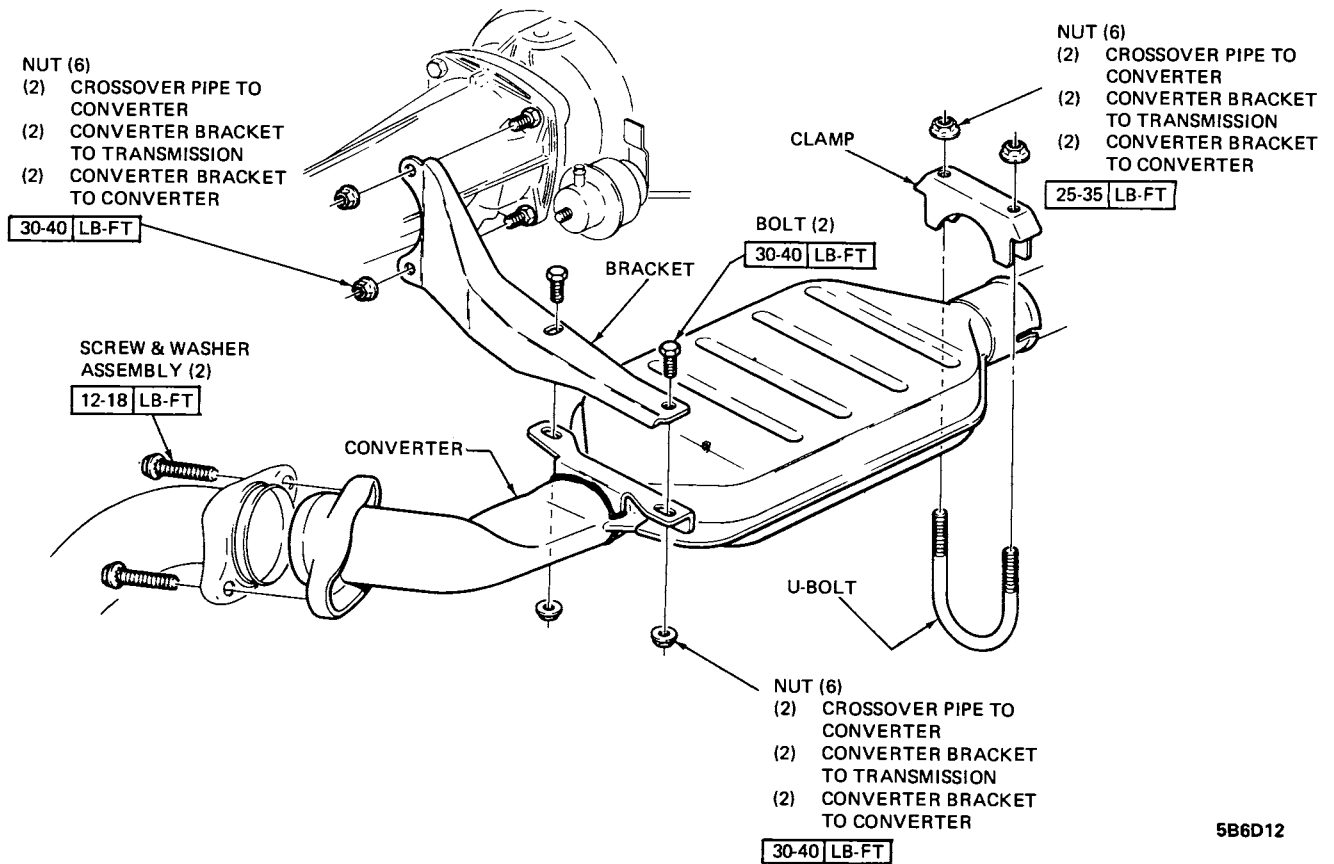
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Figure 6D-10A - X Series Exhaust System Clearance Requirements



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Figure 6D-11 A-B-C-E Series Manifold Attachments All

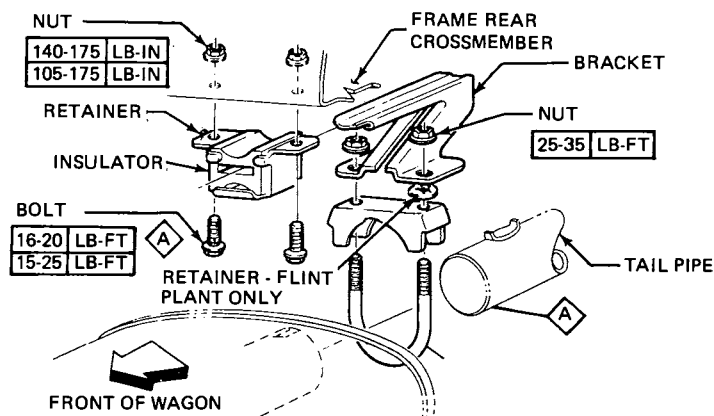


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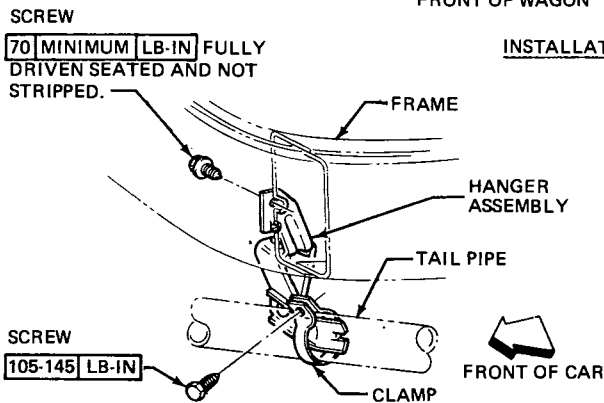
Figure 6D-12 A-B Series Catalytic Converter Attachments 350 Engine

THE COMPLETE SYSTEM MUST HANG FREE AND WITHOUT BIND ON ITS RUBBER HANGERS.

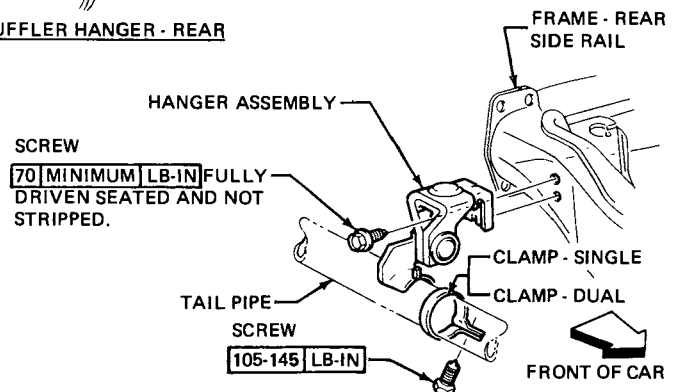
A SEALER TO BE APPLIED TO ALL SLIP JOINTS BEFORE ASSEMBLY.



INSTALLATION OF MUFFLER HANGER - REAR



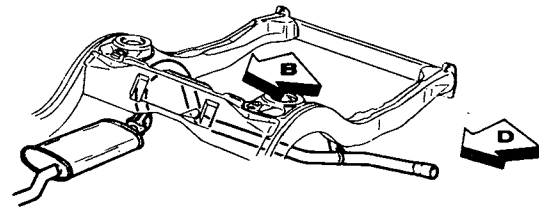
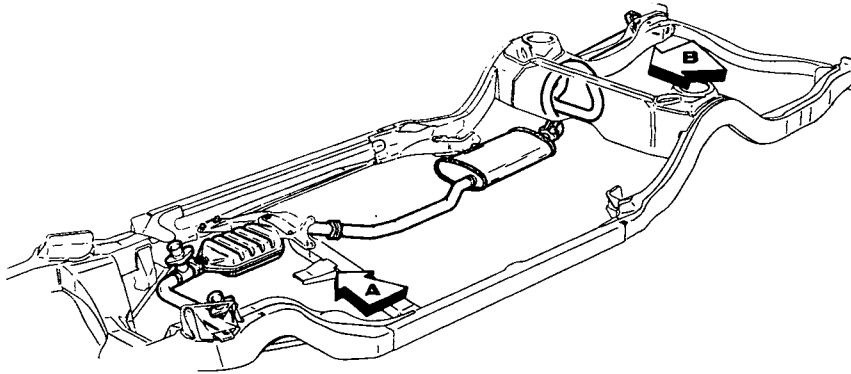
INSTALLATION OF TAIL PIPE HANGER (WAGON)



INSTALLATION OF TAIL PIPE HANGER (SEDANS & COUPES)

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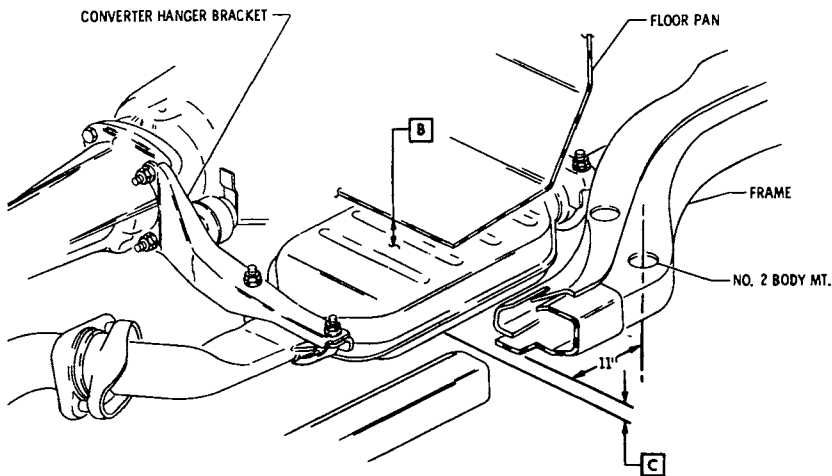
Figure 6D-13 A Series Exhaust System Attaching Parts



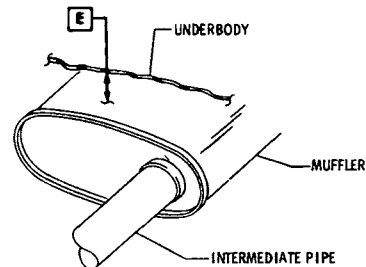
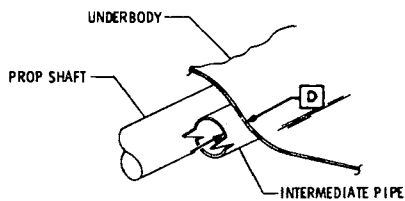
WAGON

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Figure 6D-14 A Series Exhaust System All



- B** .6 MIN. TOP OF CONVERTER TO FLOOR PAN AT ANY POINT
- C** 1.2 MAX. BOTTOM OF CONVERTER TO BOTTOM OF FRAME SIDE RAIL AT ITS LOWEST POINT (LOCATE USING DIM SHOWN)
- D** .6 MIN. INTERMEDIATE PIPE TO UNDERBODY AT ANY POINT
- E** .6 MIN. TOP OF MUFFLER TO UNDERBODY



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Figure 6D-15 A Series Exhaust System Clearance Requirements

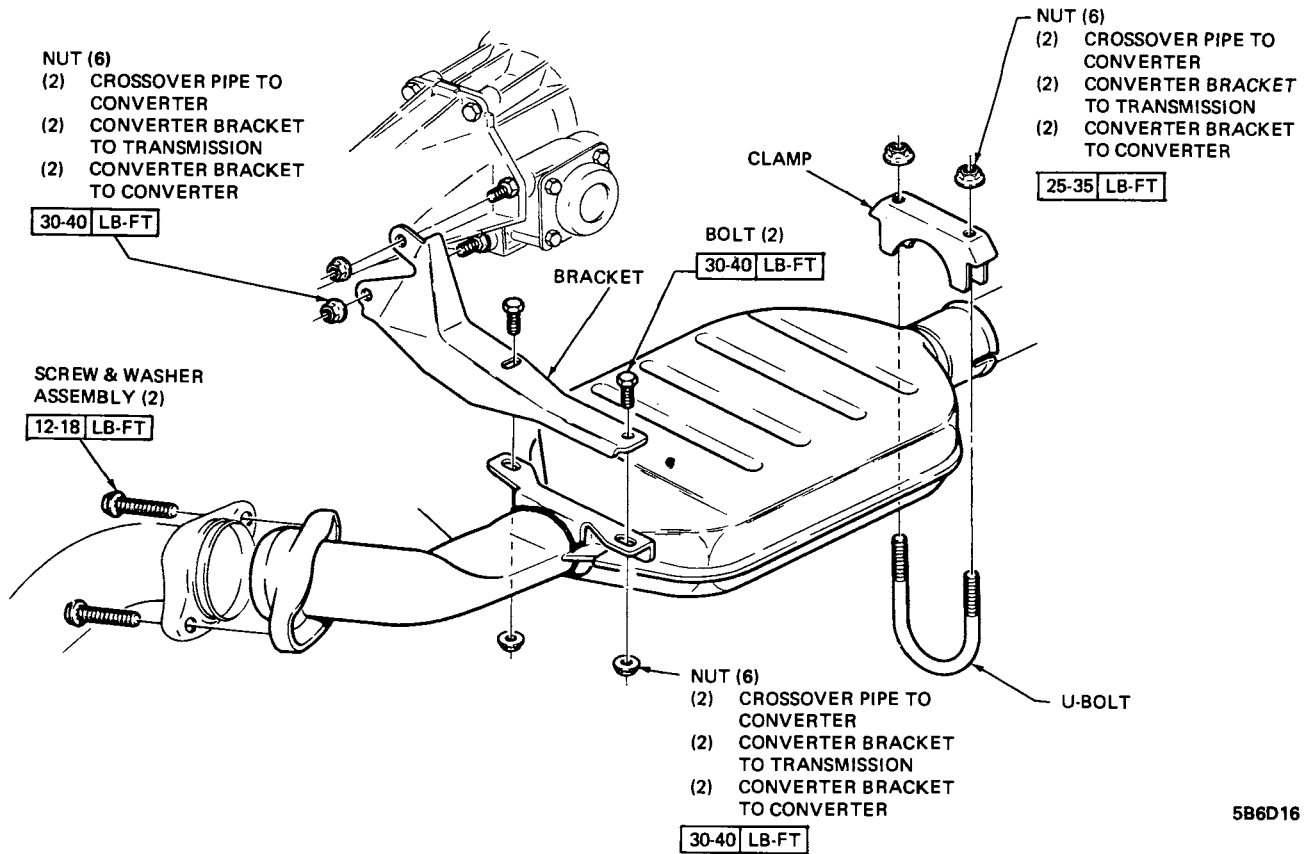


Figure 6D-16 B-C-E Series Catalytic Converter Attachments 455 Engine

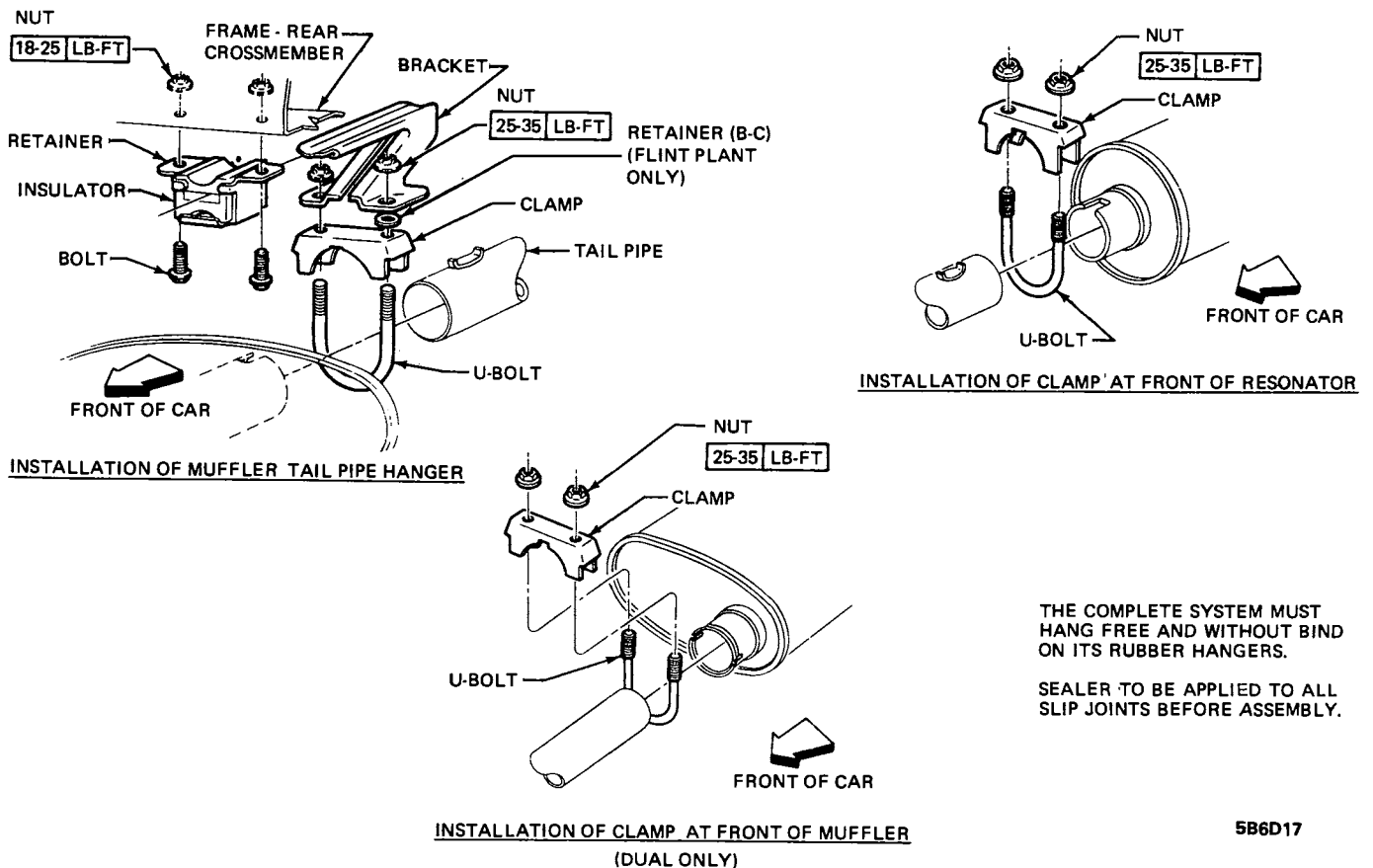


Figure 6D-17 B-C-E Series Exhaust System Attaching Parts Sedans & Coupes Front

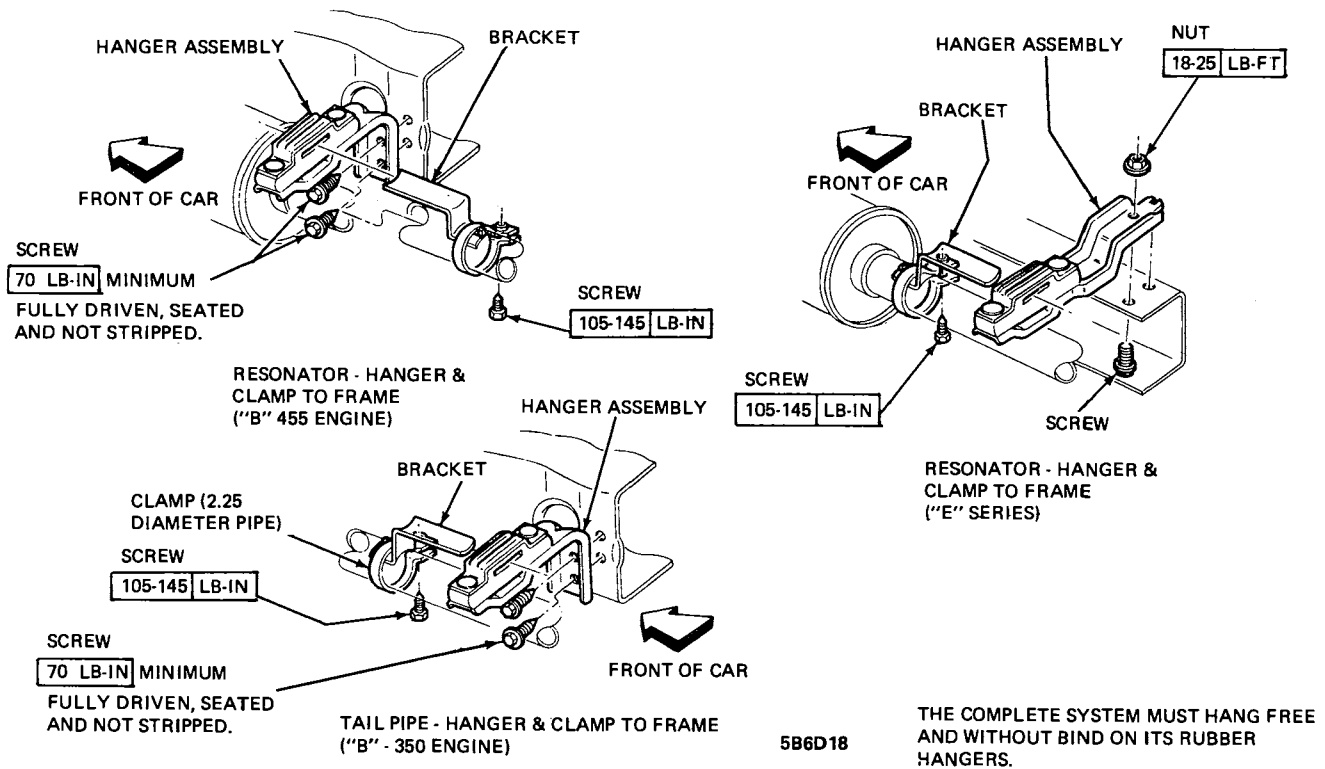


Figure 6D-18 B-C-E Series Exhaust System Attaching Parts Sedans & Coupes Rear

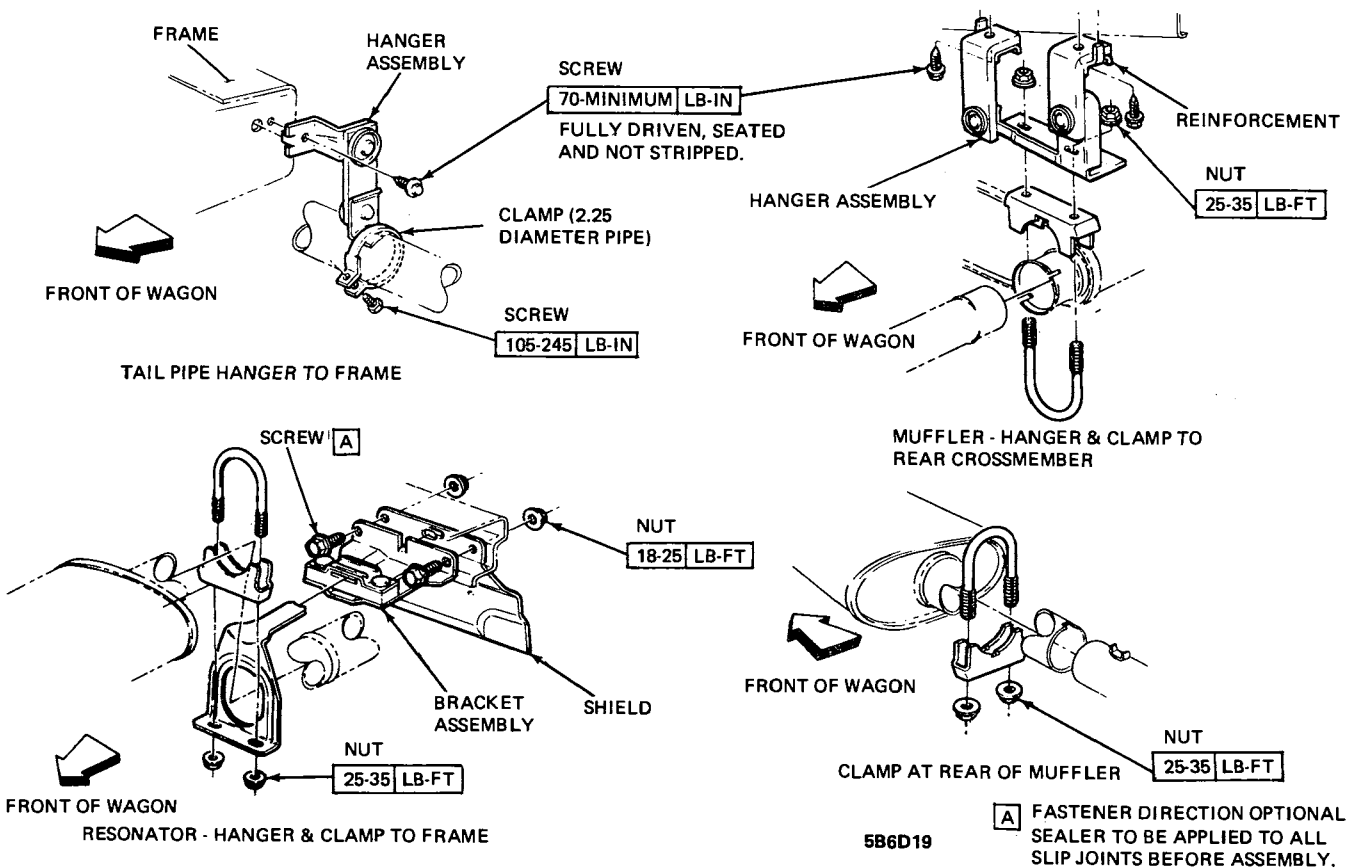
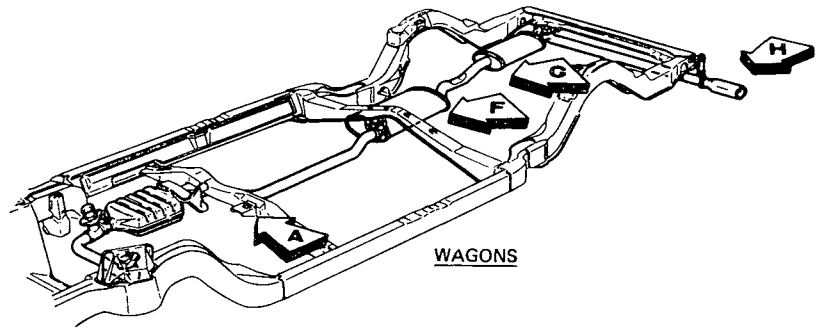
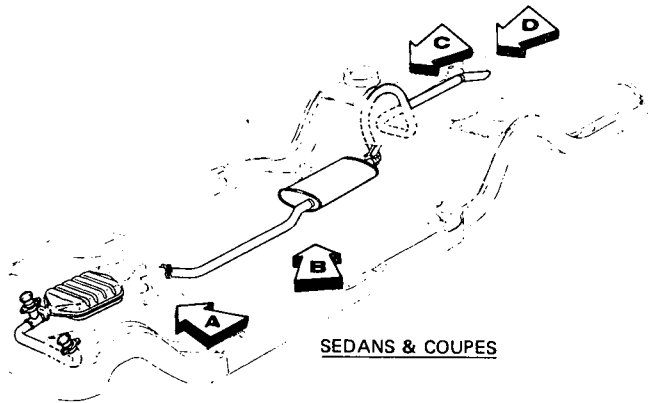
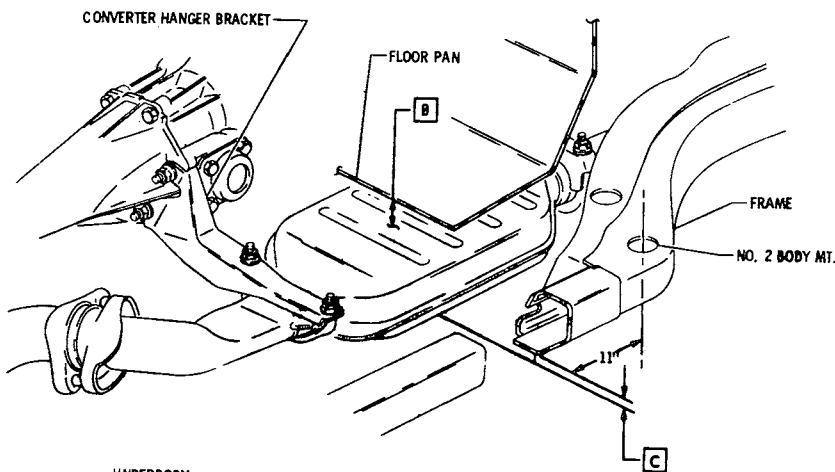


Figure 6D-19 B Series Exhaust System Attaching Parts Wagon

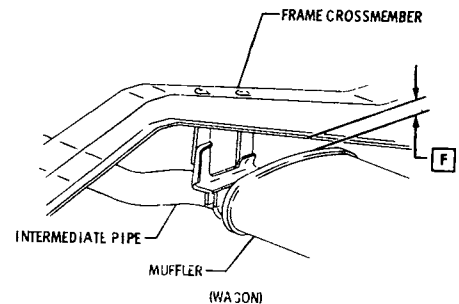
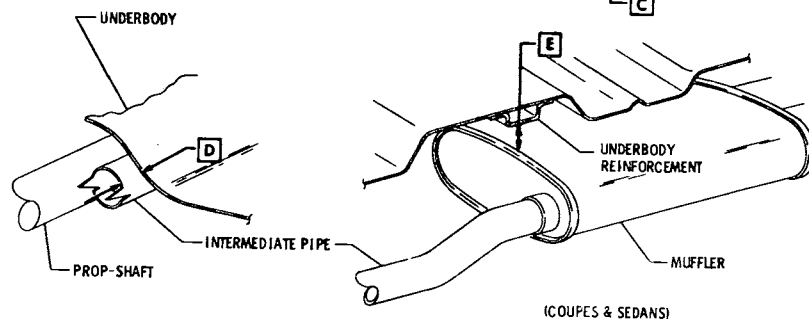


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Figure 6D-20 B-C-E Series Exhaust System



- B** .6 MIN. TOP OF CONVERTER TO FLOOR PAN AT ANY POINT
- C** 1.5 MAX. BOTTOM OF CONVERTER TO BOTTOM OF FRAME SIDE RAIL AT ITS LOWEST POINT (LOCATE USING DIM SHOWN)
- D** .6 MIN. INTERMEDIATE PIPE TO UNDERBODY AT ANY POINT
- E** .6 MIN. TOP OF MUFFLER TO UNDERBODY REINFORCEMENT
- F** .6 MIN TOP OF MUFFLER TO BOTTOM OF FRAME CROSSMEMBER



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Figure 6D-21 B-C-E Series Exhaust System Clearance Requirements All

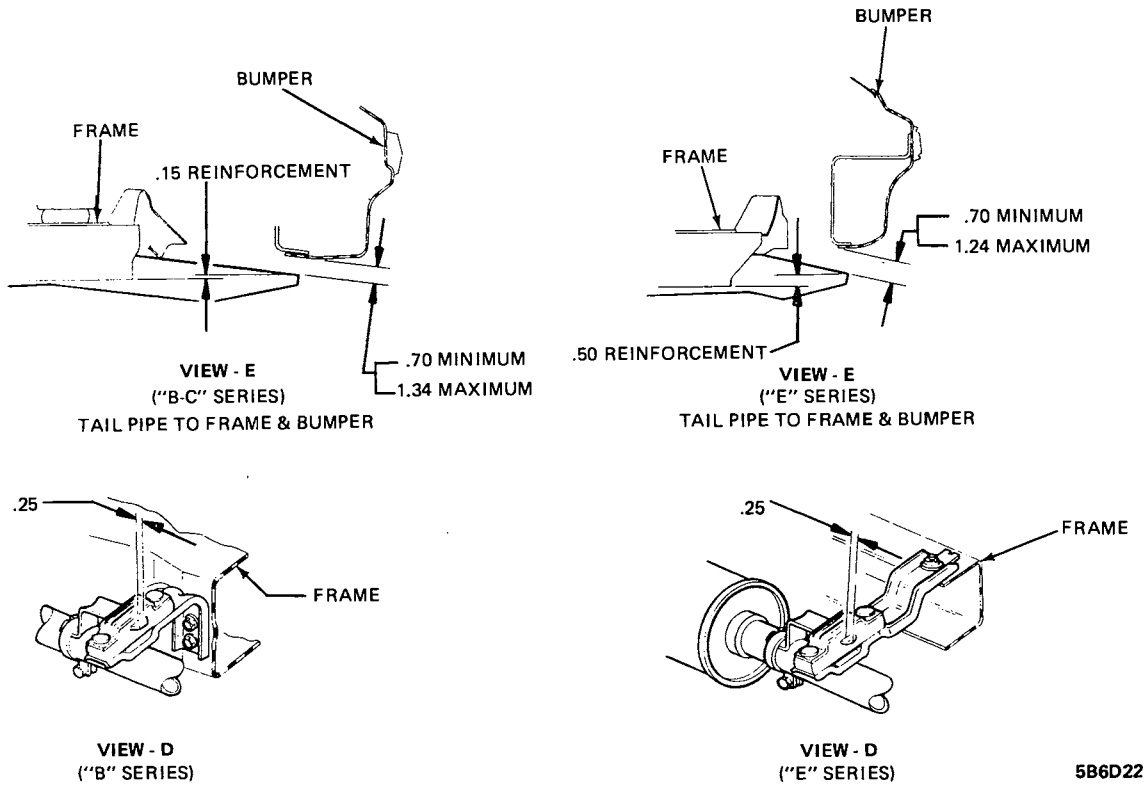


Figure 6D-22 B-C-E Series Exhaust System Clearance Requirements Sedans and Coupes

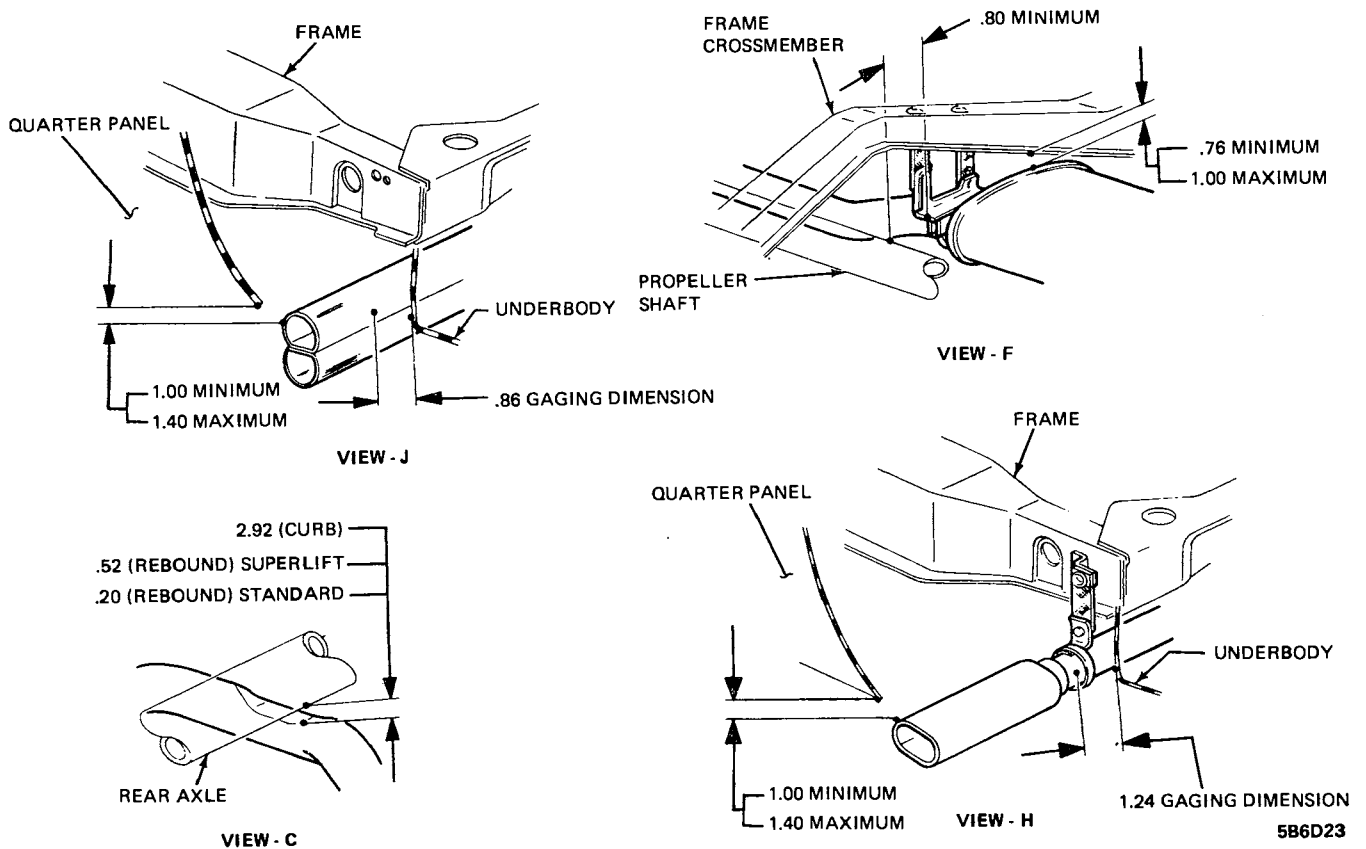


Figure 6D-23 B Series Exhaust System Clearance Requirements Wagon