

SECTION 6F

EXHAUST SYSTEM

NOTICE: All new GM vehicles are certified by the United States Environmental Protection Agency as conforming to the requirements of the regulations for the control of air pollution from new motor vehicles. This certification is contingent on certain adjustments being set to factory standards, thus, these adjustment points either have been permanently sealed and/or made inaccessible to prevent indiscriminate adjustment in the field. For this reason, the factory procedure for temporarily removing plugs, caps, etc., for the purpose of servicing the product must be strictly followed and, where practical, returned to the original intent of the design.

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

NOTICE: When fasteners are removed, always reinstall them at the same location from which they were removed. If a fastener needs to be replaced, use the correct part number fastener for that application. If the correct part number fastener is not available, a fastener of equal size and strength (or stronger) may be used. Fasteners that are not reused, and those requiring thread locking compound will be called out. The correct torque value must be used when installing fasteners that require it. If the above conditions are not followed, parts or system damage could result.

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GENERAL DESCRIPTION

NOTICE: 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 panel assembly and possible damage to the passenger compartment, insulation and trim materials.

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.

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

muffler assembly must be replaced whenever a new exhaust muffler assembly is installed.

EXHAUST CROSSOVER PIPE ASSEMBLY

On the 3.4L L32 engine, the exhaust crossover pipe assembly can be removed from the catalytic converter assembly. On the 5.7L LT1 engine, the exhaust crossover pipe and catalytic converter assembly must be replaced as a complete assembly.

CATALYTIC CONVERTER ASSEMBLY

Figure 1

CAUTION: Prolonged operation with a misfiring or flooded engine may cause the catalytic converter to overheat. This could cause damage either to the catalyst itself or the operating vehicle and possible personal injury.

NOTICE: When jacking or lifting vehicle from frame side rails, be certain lift pads do not contact

catalytic converter or damage to catalytic converter may result.

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

NOTICE: The catalytic converter requires the use of unleaded fuel only, or damage to the catalyst may result.

A single bed monolith catalytic converter is used in combination with two different types of catalyst. These are oxidation catalyst and three-way (reduction/oxidation) catalyst.

The catalysts have coatings that contain platinum and palladium. The oxidation catalyst lowers the level of hydrocarbons (HC) and carbon monoxide (CO). The three-way catalyst lowers the levels of oxides of nitrogen (NO₃) as well as HC and CO.

EXHAUST MUFFLER ASSEMBLY

The muffler assembly is a tri-flow design. The muffler assembly has a slot in the inlet pipe. The slot indexes to a key (tab) welded on the exhaust pipe assembly to help maintain alignment.

HANGERS



Important

- The installation of exhaust system supports is very important, as improperly installed supports can cause annoying vibrations that can be difficult to diagnose.

Two types of hangers are used to support the exhaust system. One type is a conventional rubber strap. The second type is a "rubber block." The rubber block type provides a rigid hanger along with a feature that continues to support the exhaust system if a rubber insulator block is broken.

CLAMPS AND WELDED CONNECTIONS

CAUTION: Coat slip joints with exhaust system sealer before assembly to prevent exhaust from entering the vehicle and causing personal injury.

Two methods are used for connecting exhaust system slip joints: clamps and welds. When servicing a welded connection it should be cut and the new connection clamped when installing replacement parts.

Three types of clamps are used for connecting exhaust system slip joints: guillotine, saddle/U-bolt and single nut compression.

DIAGNOSIS

CONDITION	POSSIBLE CAUSE	CORRECTION
Leaking Exhaust Gases	Leaks at pipe joints.	Tighten nuts or bolts/screws at leaking joints to specifications.
Exhaust Noises	1. Exhaust pipes contacting heat shields, or loose heat shields. Inspect when cold and after warmup. 2. Leaks at manifold assembly or pipe connections. 3. Burned or blown-out muffler assembly. 4. Burned or rusted out exhaust pipe assembly. 5. Leaking exhaust crossover pipe assembly at manifold flange. 6. Cracked or broken manifold assembly. 7. Leak between manifold assembly and cylinder head.	1. Tighten heat shield bolts/screws to 2.0 N•m (18 lb. in.). Align exhaust system if necessary. Refer to "Exhaust System Clearance Dimensions" in this section. 2. Tighten clamps at leaking connections to specifications. 3. Replace muffler assembly. 4. Replace exhaust pipe assembly. 5. Tighten exhaust crossover pipe nuts to 35 N•m (26 lb. ft.). 6. Replace manifold assembly. 7. Tighten manifold-to-cylinder head stud nuts or bolts/screws to specifications. Refer to SECTION 6A2A or 6A3A.

CONDITION	POSSIBLE CAUSE	CORRECTION
Exhaust Vibrations	1. Transmission shims are between catalytic converter assembly and transmission support assembly. 2. Inadequate clearance, less than 3 mm (1/8 inch), between transmission support assembly and floor panel assembly. 3. Inadequate clearance, less than 3 mm (1/8 inch), between catalytic converter hanger assembly and transmission support assembly.	1. Reposition shims so they are between transmission assembly and catalytic converter bracket. 2. Replace transmission support assembly. Refer to SECTION 11. 3. Loosen catalytic converter hanger bolts/screws and reposition catalytic converter hanger assembly.
Loss of Engine Power and/or Internal Rattles in Muffler Assembly	Dislodged turning tubes and/or baffles in muffler assembly, catalytic converter assembly or exhaust pipe assembly.	Replace muffler assembly, catalytic converter assembly or exhaust pipe assembly.

ON-VEHICLE SERVICE

COMPONENT REPLACEMENT

Exhaust system service includes replacement of the following items:

- Exhaust crossover pipe assembly (3.4L L32 engine)
- Catalytic converter assembly (with crossover pipe for 5.7L LT1 engine)
- Exhaust pipe assembly
- Exhaust muffler assembly (with tailpipe(s))
- Complete exhaust system
- Catalytic converter and exhaust muffler hanger assemblies
- Catalytic converter heat shield
- Exhaust heat shield
- Exhaust pipe heat shield assembly
- Exhaust muffler heat shield

EXHAUST CROSSOVER PIPE ASSEMBLY

3.4L L32 Engine

Figures 1 and 2

Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Exhaust crossover pipe nuts (2).
3. Exhaust crossover pipe assembly (4) from studs on exhaust manifold assembly (1).
4. Lower exhaust system.
5. Exhaust crossover pipe seal (3) from exhaust manifold assembly (1).
6. Support catalytic converter assembly (7) and exhaust system.
7. Catalytic converter clamp assembly (8).
8. Catalytic converter assembly (7) from exhaust crossover pipe assembly (4).

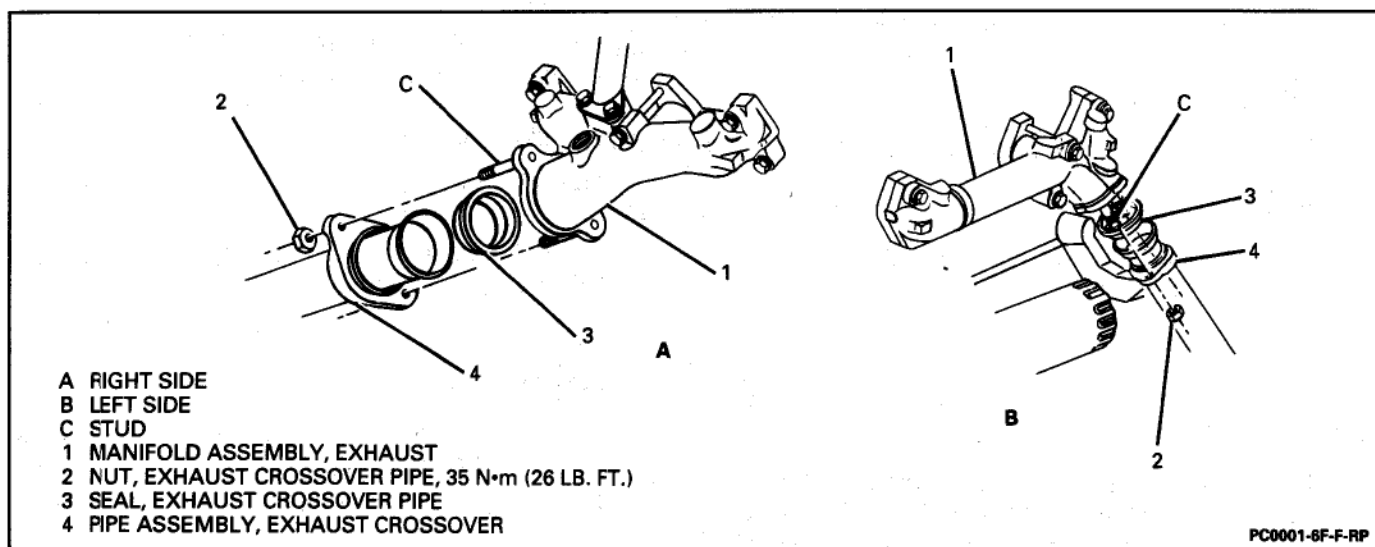


Figure 1 – Exhaust Manifold Attachments (3.4L L32 Engine)

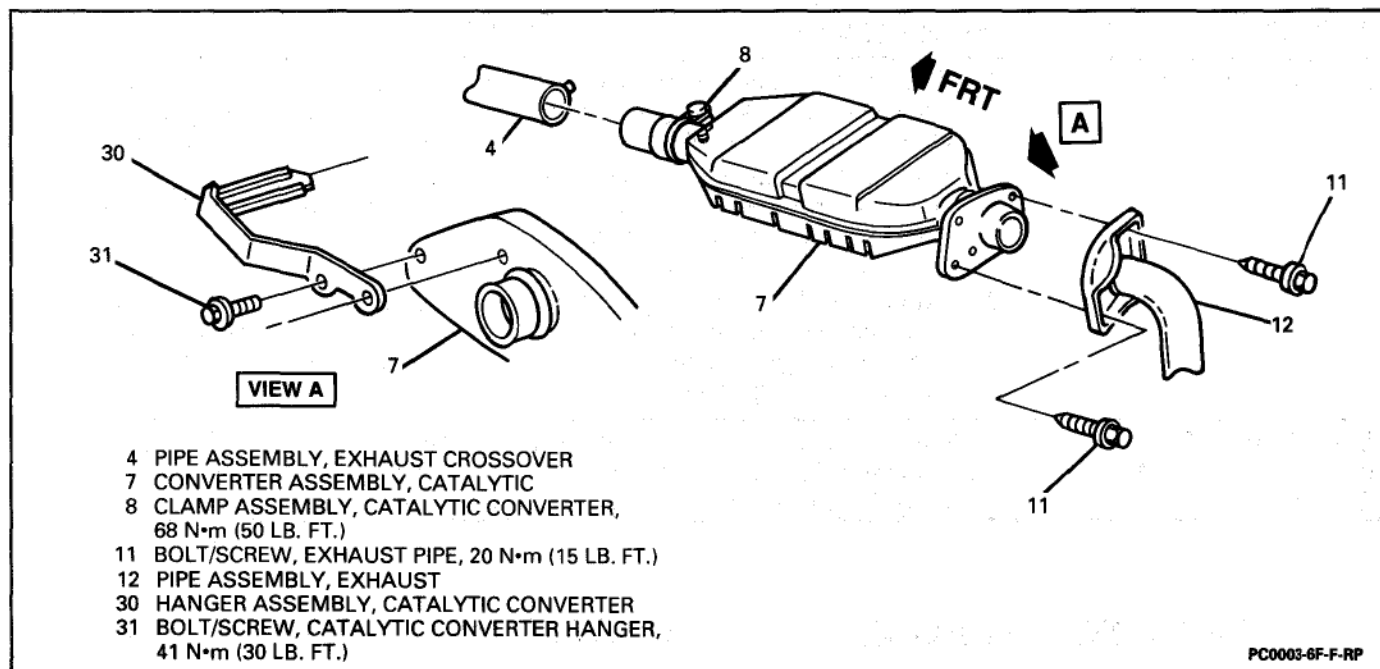


Figure 2 – Catalytic Converter Assembly (3.4L L32 Engine)

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust crossover pipe assembly (4) to catalytic converter assembly (7).
2. Catalytic converter clamp assembly (8).

Tighten

- Catalytic converter clamp assembly (8) to 68 N•m (50 lb. ft.).
3. Exhaust crossover pipe seal (3).
 4. Raise exhaust crossover pipe assembly (4).
 5. Exhaust crossover pipe assembly (4) to studs on exhaust manifold assembly (1).
 6. Exhaust crossover pipe nuts (2).

Tighten

- Exhaust crossover pipe nuts (2) evenly to 35 N•m (26 lb. ft.).
7. Lower vehicle.

5.7L LT1 Engine

The crossover pipe is welded to the catalytic converter assembly. The crossover pipe and catalytic converter assembly are replaced as a unit. Refer to “Catalytic Converter Assembly” in the following procedure.

CATALYTIC CONVERTER ASSEMBLY

3.4L L32 Engine

Figure 2

Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Catalytic converter clamp assembly (8) at exhaust crossover pipe assembly (4).
3. Exhaust pipe bolts/screws (11).
4. Exhaust pipe assembly (12) from catalytic converter assembly (7).
5. Catalytic converter hanger bolts/screws (31).
6. Catalytic converter assembly (7).

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Catalytic converter assembly (7) to catalytic converter hanger assembly (30).
2. Catalytic converter hanger bolts/screws (31).

Tighten

- Catalytic converter hanger bolts/screws (31) to 41 N•m (30 lb. ft.).
3. Exhaust pipe assembly (12) to catalytic converter assembly (7).
 4. Exhaust pipe bolts/screws (11).

Tighten

- Exhaust pipe bolts/screws (11) to 20 N•m (15 lb. ft.).
5. Catalytic converter clamp assembly (8) at exhaust crossover pipe assembly (4).

Tighten

- Catalytic converter clamp assembly (8) to 68 N•m (50 lb. ft.).
6. Lower vehicle.

5.7L LT1 Engine

Figures 3 and 4

Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Exhaust crossover pipe nuts (2).

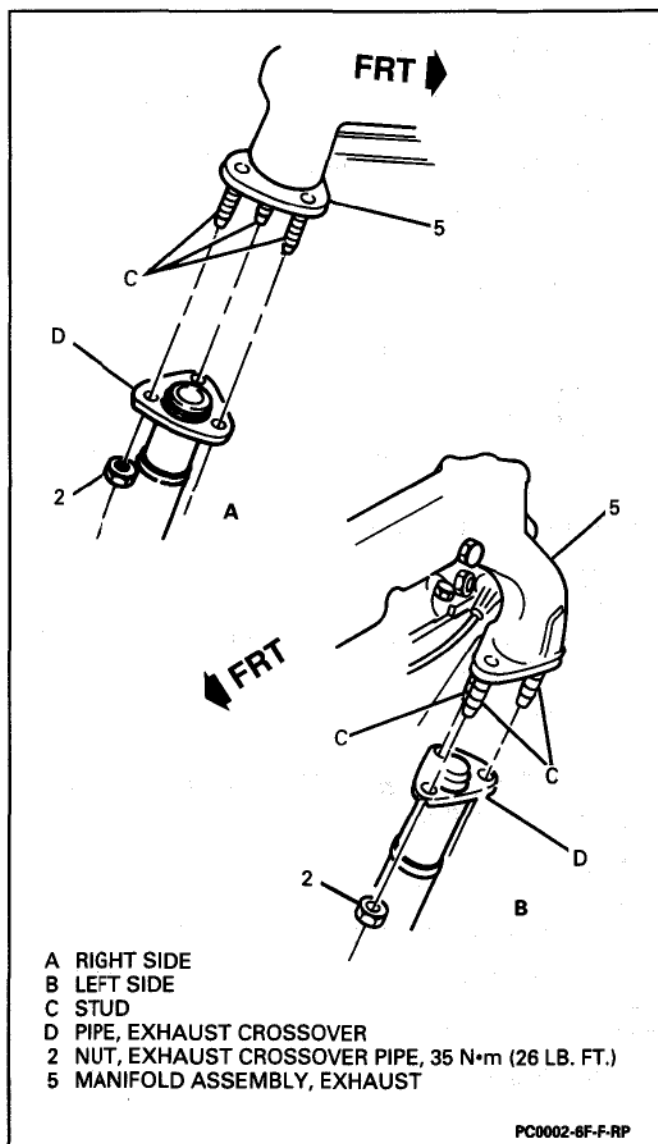


Figure 3 – Exhaust Manifold Attachments (5.7L LT1 Engine)

3. Exhaust crossover pipe from studs on exhaust manifold assembly (5).
4. Exhaust pipe bolts/screws (13).
5. Catalytic converter assembly (10) from exhaust pipe assembly (14).
6. Catalytic converter hanger bolts/screws (40).
7. Catalytic converter assembly (10).

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Catalytic converter assembly (10) to catalytic converter hanger assembly (35).
2. Catalytic converter hanger bolts/screws (40).

Tighten

- Catalytic converter hanger bolts/screws (40) to 41 N•m (30 lb. ft.).
3. Exhaust pipe assembly (14) to catalytic converter assembly (10).
 4. Exhaust pipe bolts/screws (13).

Tighten

- Exhaust pipe bolts/screws (13) to 20 N•m (15 lb. ft.).
5. Exhaust crossover pipe to studs on exhaust manifold assembly (5).
 6. Exhaust crossover pipe nuts (2).

Tighten

- Exhaust crossover pipe nuts (2) to 35 N•m (26 lb. ft.).
7. Lower vehicle.

EXHAUST PIPE ASSEMBLY

Figures 2 and 4 through 6

Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Exhaust pipe bolts/screws (11 or 13) at catalytic converter assembly (7 or 10).
3. Exhaust pipe hanger nut (19 or 22).
4. Muffler clamp assembly (17 or 23).
5. Exhaust pipe assembly (12 or 14) from exhaust muffler assembly (15 or 20).
6. Exhaust pipe assembly (12 or 14), sliding it out of exhaust pipe hanger bracket assembly (18 or 21).

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust pipe assembly (12 or 14) to exhaust pipe hanger bracket assembly (18 or 21).

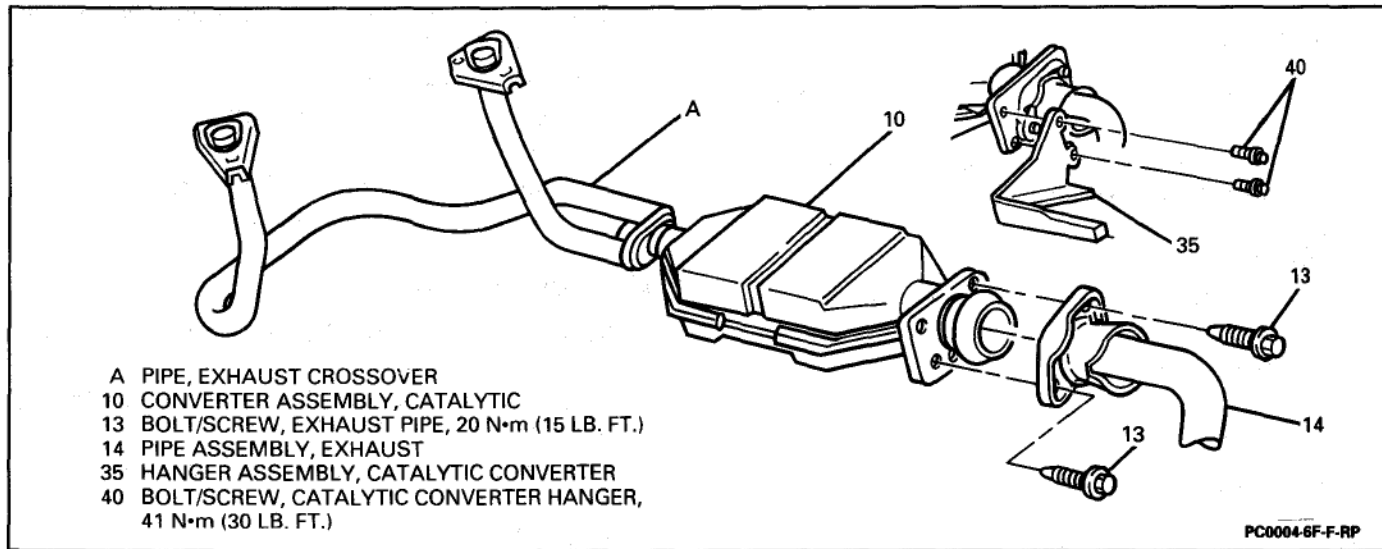


Figure 4 – Catalytic Converter Assembly (5.7L LT1 Engine)

2. Exhaust pipe assembly (12 or 14) to exhaust muffler assembly (15 or 20).
3. Muffler clamp assembly (17 or 23).



Tighten

- Muffler clamp assembly (17 or 23) to 68 N•m (50 lb. ft.).
4. Exhaust pipe hanger nut (19 or 22).



Tighten

- Exhaust pipe hanger nut (19 or 22) to 15 N•m (11 lb. ft.).
5. Exhaust pipe bolts/screws (11 or 13) to catalytic converter assembly (7 or 10).



Tighten

- Exhaust pipe bolts/screws (11 or 13) to 20 N•m (15 lb. ft.).
6. Lower vehicle.

EXHAUST MUFFLER ASSEMBLY

Figures 5 and 6



Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Exhaust muffler hanger nut (26), if equipped.
3. Muffler clamp assembly (17 or 23).
4. Exhaust pipe assembly (12 or 14) at exhaust muffler assembly (15 or 20).
5. Tailpipe from exhaust muffler hanger assembly (16 or 24).
6. Exhaust muffler assembly (15 or 20).



Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust muffler assembly (15 or 20).
2. Tailpipe to exhaust muffler hanger assembly (16 or 24).
3. Exhaust pipe assembly (12 or 14) at exhaust muffler assembly (15 or 20).
4. Muffler clamp assembly (17 or 23).



Tighten

- Muffler clamp assembly (17 or 23) to 68 N•m (50 lb. ft.).
5. Exhaust muffler hanger nut (26), if equipped.



Tighten

- Exhaust muffler hanger nut (26) to 25 N•m (18 lb. ft.).
6. Lower vehicle.

EXHAUST TAILPIPE EXTENSION ASSEMBLY (5.7L LT1 ENGINE)



Remove or Disconnect

1. Loosen exhaust tailpipe extension clamp assembly.
2. Exhaust tailpipe extension assembly from tailpipe.



Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust tailpipe extension assembly to tailpipe until stop position is reached.

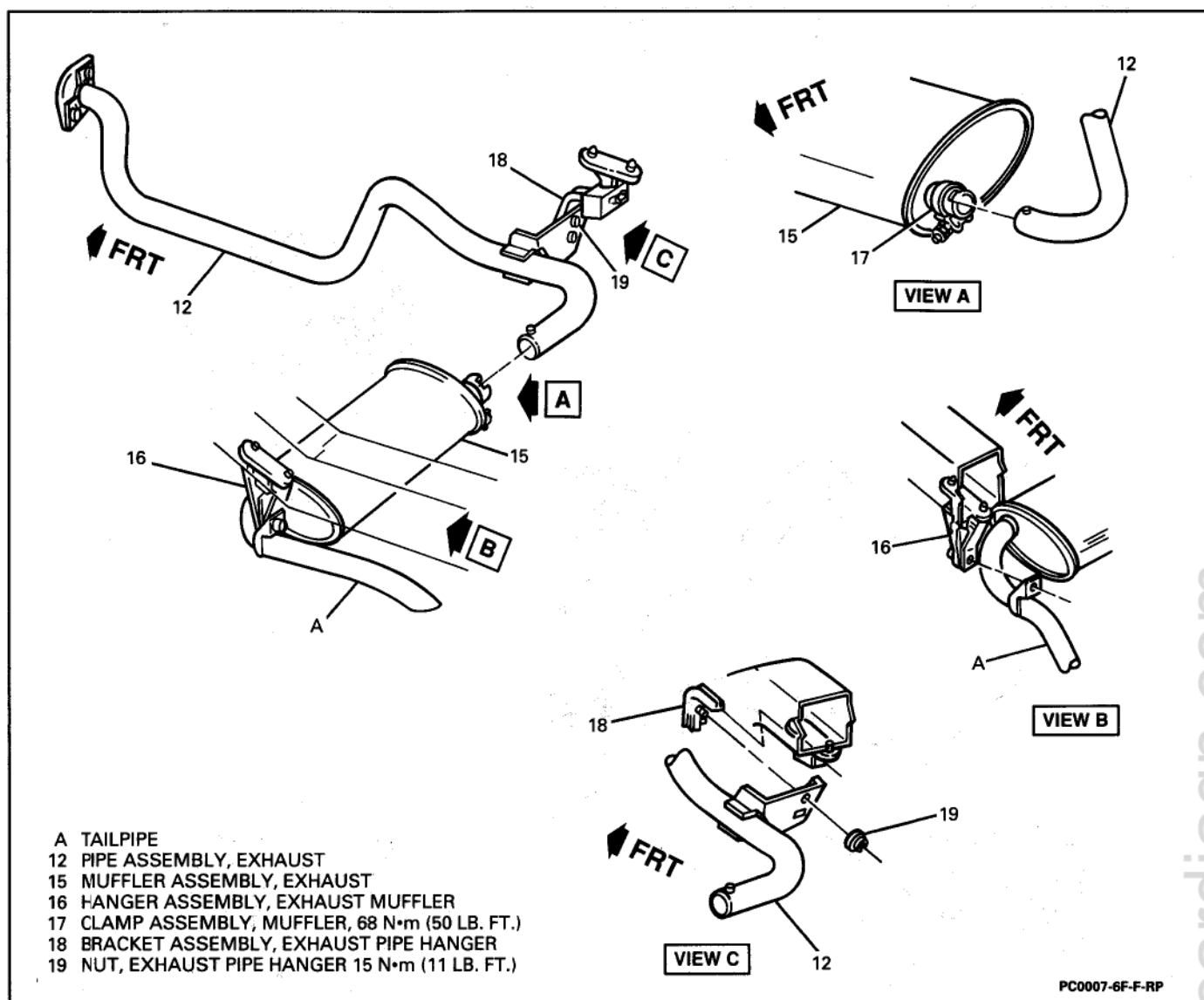


Figure 5 – Exhaust Muffler Assembly (3.4L L32 Engine)

- Align exhaust tailpipe extension assembly to rear fascia assembly and tighten exhaust tailpipe extension clamp assembly.

**Tighten**

- Exhaust tailpipe extension clamp assembly to 70 N•m (52 lb. ft.).

CATALYTIC CONVERTER HANGER ASSEMBLY**Figures 7 and 8****Remove or Disconnect**

- Raise and suitably support vehicle. Refer to SECTION 0A.
- Support catalytic converter assembly (7 or 10).
- Catalytic converter hanger bolts/screws (31 or 40).

**Install or Connect**

NOTICE: See "Notice" on page 6F-1 of this section.

- Catalytic converter hanger assembly (30 or 35) to catalytic converter hanger bracket assembly (32, 33 or 38).

- Rear axle torque arm outer bracket bolt/screw (34), if equipped.
- Rear axle torque arm bracket nuts (29 or 39) from rear axle torque arm inner bracket bolts/screws (28 or 36).
- Catalytic converter hanger bracket assembly (32, 33 or 38) with catalytic converter hanger assembly (30 or 35) away from rear axle torque arm inner bracket assembly (27 or 37).
- Catalytic converter hanger assembly (30 or 35) from catalytic converter hanger bracket assembly (32, 33 or 38).

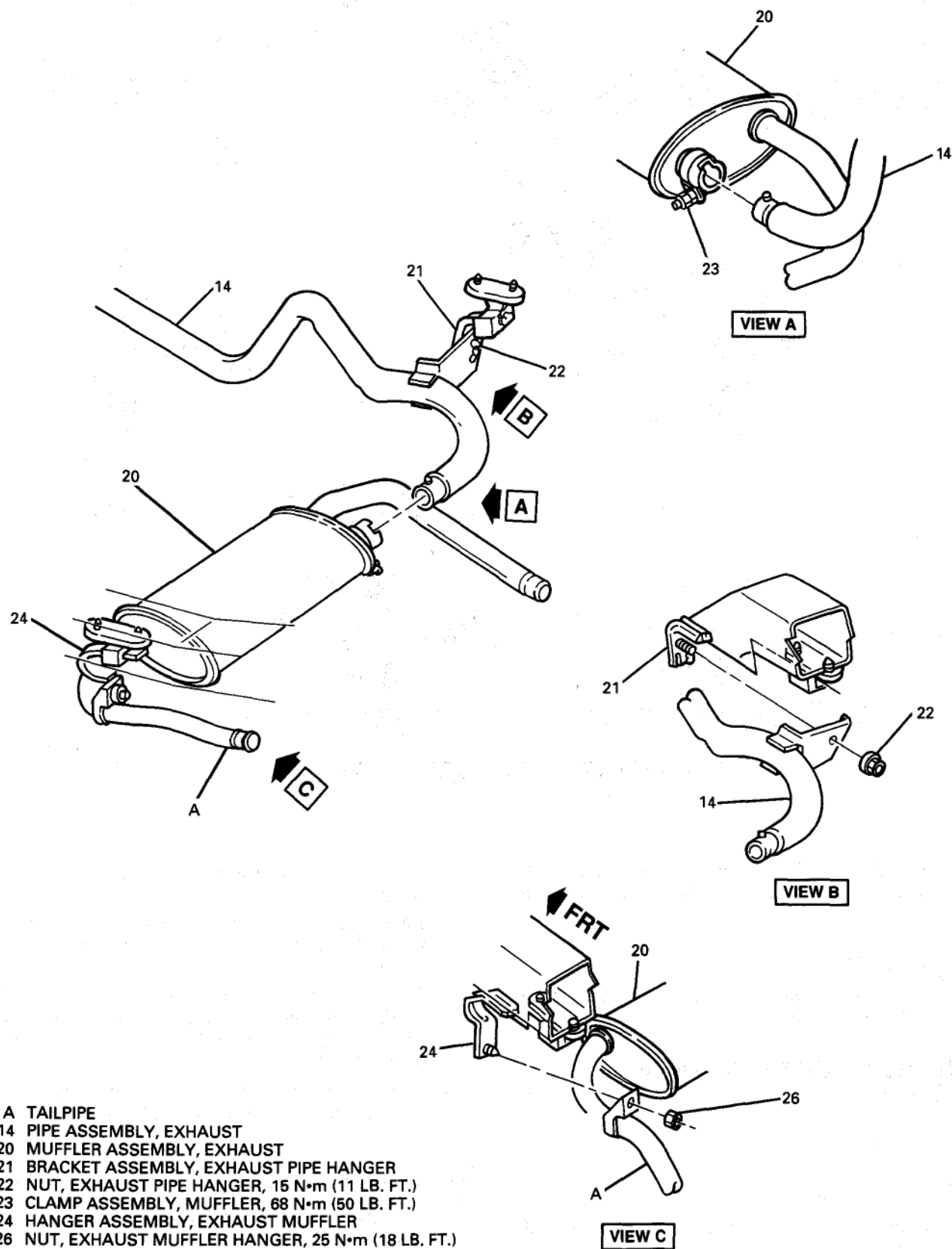


Figure 6 – Exhaust Muffler Assembly (5.7L LT1 Engine)

- A WITH MANUAL FIVE-SPEED TRANSMISSION ASSEMBLY
- B WITH AUTOMATIC TRANSMISSION ASSEMBLY
- 7 CONVERTER ASSEMBLY, CATALYTIC
- 27 BRACKET ASSEMBLY, REAR AXLE TORQUE ARM INNER
- 28 BOLT/SCREW, REAR AXLE TORQUE ARM INNER BRACKET
- 29 NUT, REAR AXLE TORQUE ARM BRACKET, 41 N•m (30 LB. FT.)
- 30 HANGER ASSEMBLY, CATALYTIC CONVERTER
- 31 BOLT/SCREW, CATALYTIC CONVERTER HANGER, 41 N•m (30 LB. FT.)
- 32 BRACKET ASSEMBLY, CATALYTIC CONVERTER HANGER
- 33 BRACKET ASSEMBLY, CATALYTIC CONVERTER HANGER
- 34 BOLT/SCREW, REAR AXLE TORQUE ARM OUTER BRACKET, 27 N•m (20 LB. FT.)

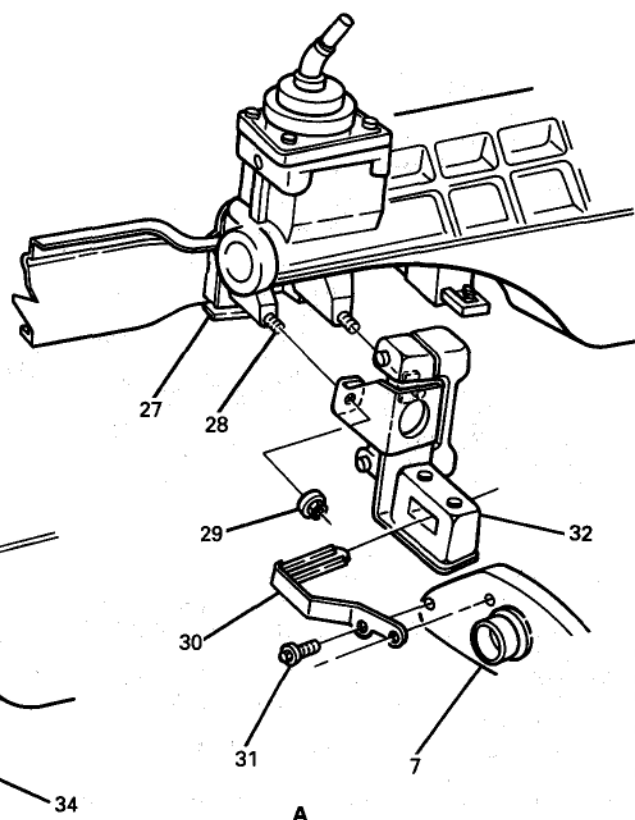
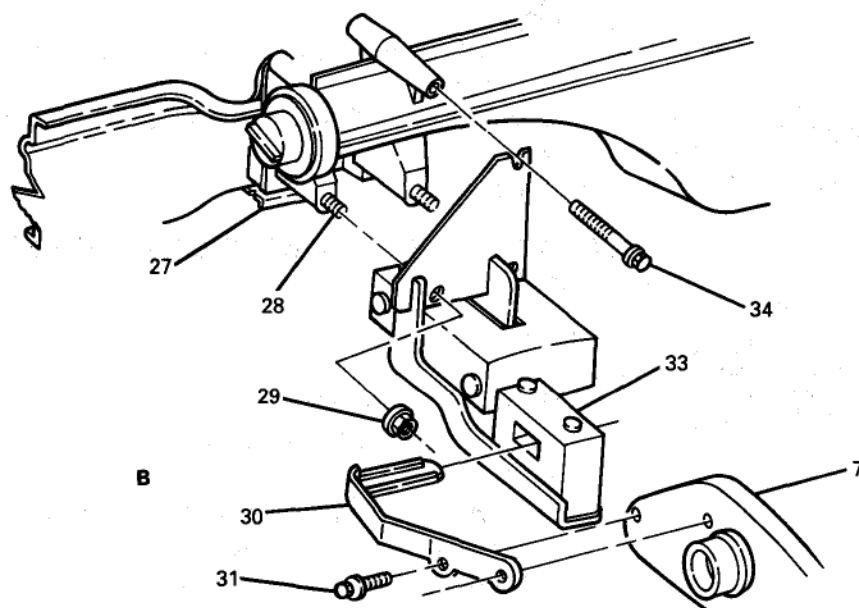


Figure 7 – Catalytic Converter Hanger Assembly to Transmission Assembly (3.4L L32 Engine)

2. Catalytic converter hanger bracket assembly (32, 33 or 38) with catalytic converter hanger assembly (30 or 35) to rear axle torque arm inner bracket assembly (27 or 37).
3. Rear axle torque arm bracket nuts (29 or 39) to rear axle torque arm inner bracket bolts/screws (28 or 36).

Tighten

- Rear axle torque arm bracket nuts (29 or 39) to 41 N•m (30 lb. ft.).
4. Rear axle torque arm outer bracket bolt/screw (34), if equipped.
- #### Tighten
- Rear axle torque arm outer bracket bolt/screw (34) to 27 N•m (20 lb. ft.).
5. Catalytic converter hanger bolts/screws (31 or 40).

Tighten

- Catalytic converter hanger bolts/screws (31 or 40) to 41 N•m (30 lb. ft.).
6. Remove support from catalytic converter assembly (7 or 10).
 7. Lower vehicle.

EXHAUST MUFFLER HANGER ASSEMBLIES

Figures 5, 6 and 9

3.4L L32 Engine

Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Support exhaust muffler assembly (15).
3. Exhaust muffler hanger bracket bolts/screws (42)
4. Exhaust muffler hanger assembly (16) by sliding it off of tailpipe.

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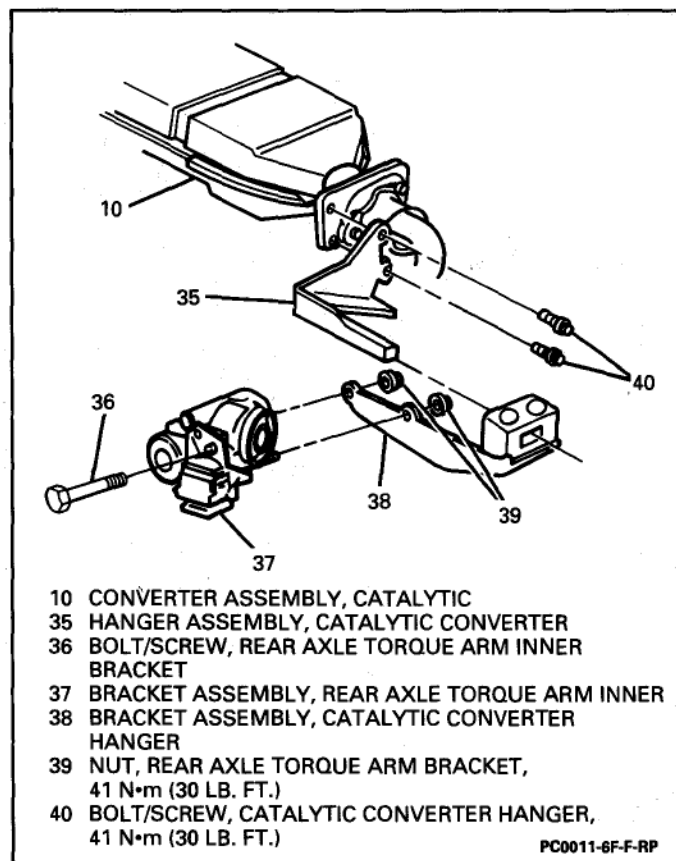


Figure 8 – Catalytic Converter Assembly to Transmission Assembly (5.7L LT1 Engine – Manual Transmission Assembly Shown, Automatic Transmission Assembly Similar)

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust muffler hanger assembly (16 or 24) to tailpipe and underbody.
2. Exhaust muffler hanger bracket bolts/screws (42).

Tighten

- Exhaust muffler hanger bracket bolts/screws (42) to 15 N•m (11 lb. ft.).
3. Remove support from exhaust muffler assembly (15)
 4. Lower vehicle.

5.7L LT1 Engine

Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Support exhaust muffler assembly (20).
3. Exhaust muffler hanger nut (26).
4. Exhaust muffler hanger assembly (24).
5. Exhaust muffler hanger bracket bolts/screws (41).

6. Exhaust muffler hanger assembly (57).

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust muffler hanger assembly (57).
2. Exhaust muffler hanger bracket bolts/screws (41).

Tighten

- Exhaust muffler hanger bracket bolts/screws (41) to 15 N•m (11 lb. ft.).
3. Exhaust muffler hanger assembly (24).
 4. Exhaust muffler hanger nut (26).

Tighten

- Exhaust muffler hanger nut (26) to 25 N•m (18 lb. ft.).
5. Remove support from exhaust muffler assembly (20).
 6. Lower vehicle.

EXHAUST MUFFLER INTERIOR BRACKET ASSEMBLY

Figures 5, 6 and 9

Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Support exhaust muffler assembly (15 or 20) and exhaust pipe assembly (12 or 14).
3. Exhaust pipe hanger nut (19 or 22).
4. Exhaust pipe hanger bracket assembly (18 or 21).
5. Exhaust muffler interior hanger bolts/screws (44).
6. Exhaust muffler interior bracket assembly (43).

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust muffler interior bracket assembly (43).
2. Exhaust muffler interior hanger bolts/screws (44).

Tighten

- Exhaust muffler interior hanger bolts/screws (44) to 15 N•m (11 lb. in.).
3. Exhaust pipe hanger bracket assembly (18 or 21).
 4. Exhaust pipe hanger nut (19 or 22).

Tighten

- Exhaust pipe hanger nut (19 or 22) to 15 N•m (11 lb. in.).
5. Remove support from exhaust muffler assembly (15 or 20) and exhaust pipe assembly (12 or 14).
 6. Lower vehicle.

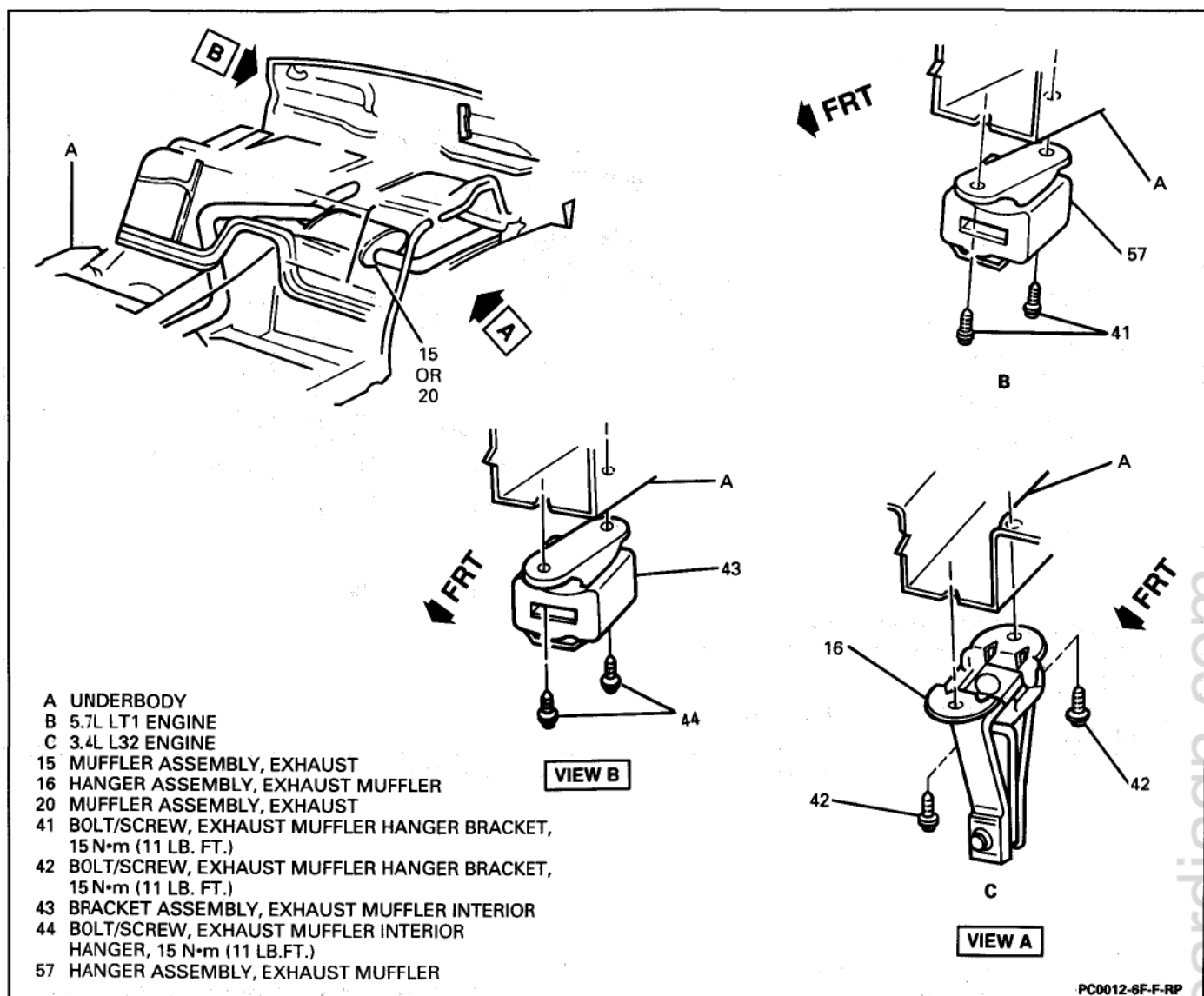


Figure 9 – Installing Exhaust Muffler Hanger Assemblies to Underbody

CATALYTIC CONVERTER HEAT SHIELD

Figure 10

Remove or Disconnect

1. Catalytic converter assembly. Refer to “Catalytic Converter Assembly” under “On-Vehicle Service” in this section.
2. Catalytic converter heat shield bolts/screws (46).
3. Catalytic converter heat shield (45).

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Catalytic converter heat shield (45).
2. Catalytic converter heat shield bolts/screws (46).

Tighten

- Catalytic converter heat shield bolts/screws (46) to 2.0 N·m (18 lb. in.).
3. Catalytic converter assembly. Refer to “Catalytic Converter Assembly” under “On-Vehicle Service” in this section.

EXHAUST HEAT SHIELD

Figure 10

Remove or Disconnect

1. Exhaust crossover pipe assembly (3.4L L32 engine). Refer to “Exhaust Crossover Pipe Assembly” under “On-Vehicle Service” in this section.

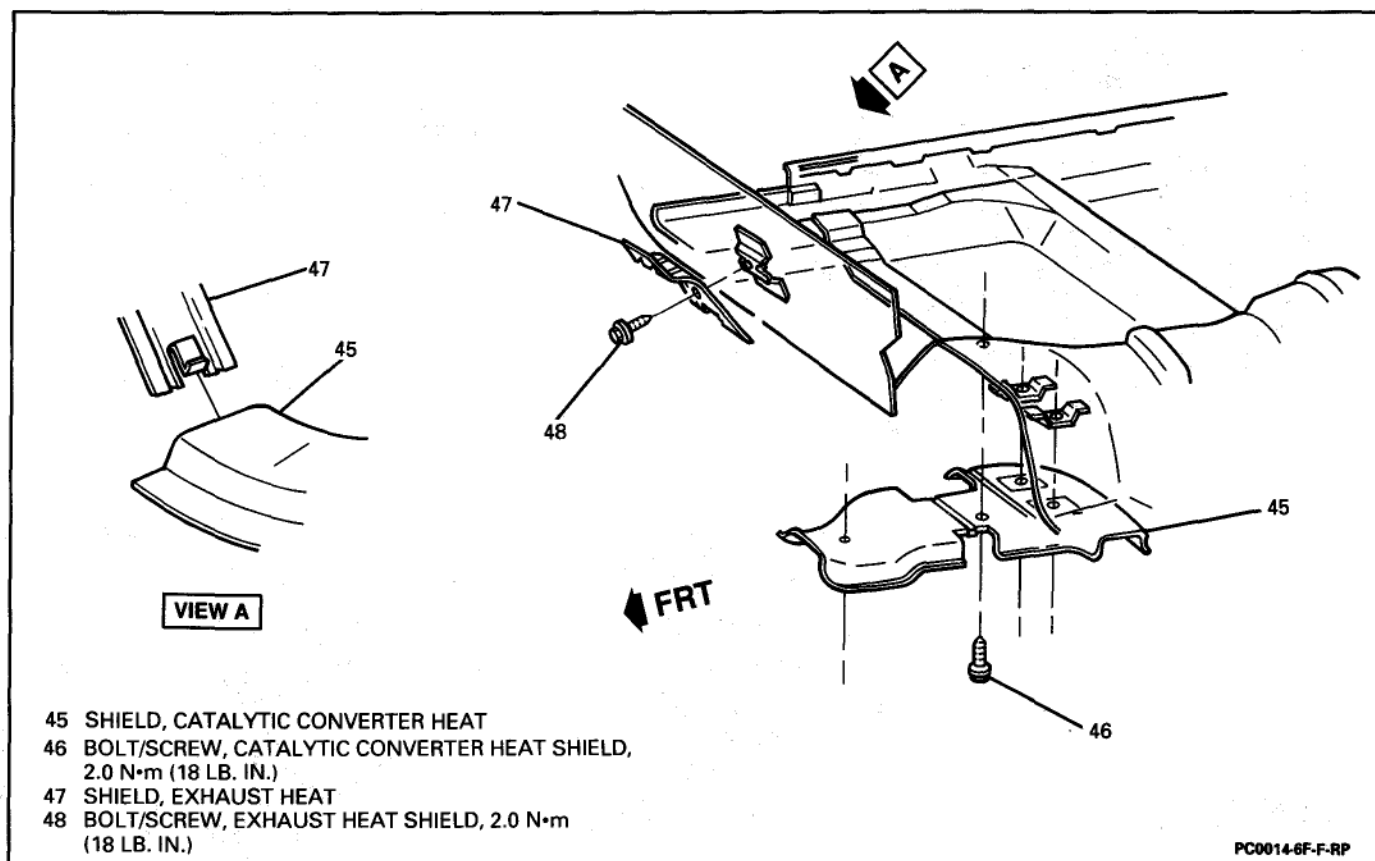


Figure 10 – Catalytic Converter and Exhaust Heat Shields

2. Catalytic converter assembly (5.7L LT1 engine). Refer to “Catalytic Converter Assembly” under “On-Vehicle Service” in this section.
3. Exhaust heat shield bolt/screw (48).
4. Exhaust heat shield (47).

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust heat shield (47).
2. Exhaust heat shield bolt/screw (48).

Tighten

- Exhaust heat shield bolt/screw (48) to 2.0 N·m (18 lb. in.).
3. Catalytic converter assembly (5.7L LT1 engine). Refer to “Catalytic Converter Assembly” under “On-Vehicle Service” in this section.
 4. Exhaust crossover pipe assembly (3.4L L32 engine). Refer to “Exhaust Crossover Pipe Assembly” under “On-Vehicle Service” in this section.

EXHAUST PIPE HEAT SHIELD ASSEMBLY AND EXHAUST MUFFLER HEAT SHIELD

Figure 11

Remove or Disconnect

1. Exhaust muffler assembly. Refer to “Exhaust Muffler Assembly” under “On-Vehicle Service” in this section.
2. Exhaust pipe assembly. Refer to “Exhaust Pipe Assembly” in this section.
3. Exhaust pipe heat shield bolts/screws (50).
4. Exhaust pipe heat shield assembly (49).
5. Exhaust muffler heat shield bolts/screws (51).
6. Exhaust muffler heat shield (52).

Install or Connect

NOTICE: See “Notice” on page 6F-1 of this section.

1. Exhaust muffler heat shield (52).
2. Exhaust muffler heat shield bolts/screws (51).

 Tighten

- Exhaust muffler heat shield bolts/screws (51) to 2.0 N•m (18 lb. in.).

3. Exhaust pipe heat shield assembly (49).
4. Exhaust pipe heat shield bolts/screws (50).

 Tighten

- Exhaust pipe heat shield bolts/screws (50) to 2.0 N•m (18 lb. in.).

5. Exhaust pipe assembly. Refer to "Exhaust Pipe

Assembly" in this section.

6. Exhaust muffler assembly. Refer to "Exhaust Muffler Assembly" under "On-Vehicle Service" in this section.

EXHAUST SYSTEM CLEARANCE DIMENSIONS

Figures 12 and 13

All checking dimensions are to be made on a cold exhaust system.

If dimensions cannot be met, it indicates a quality deficiency in a component part that must be corrected.

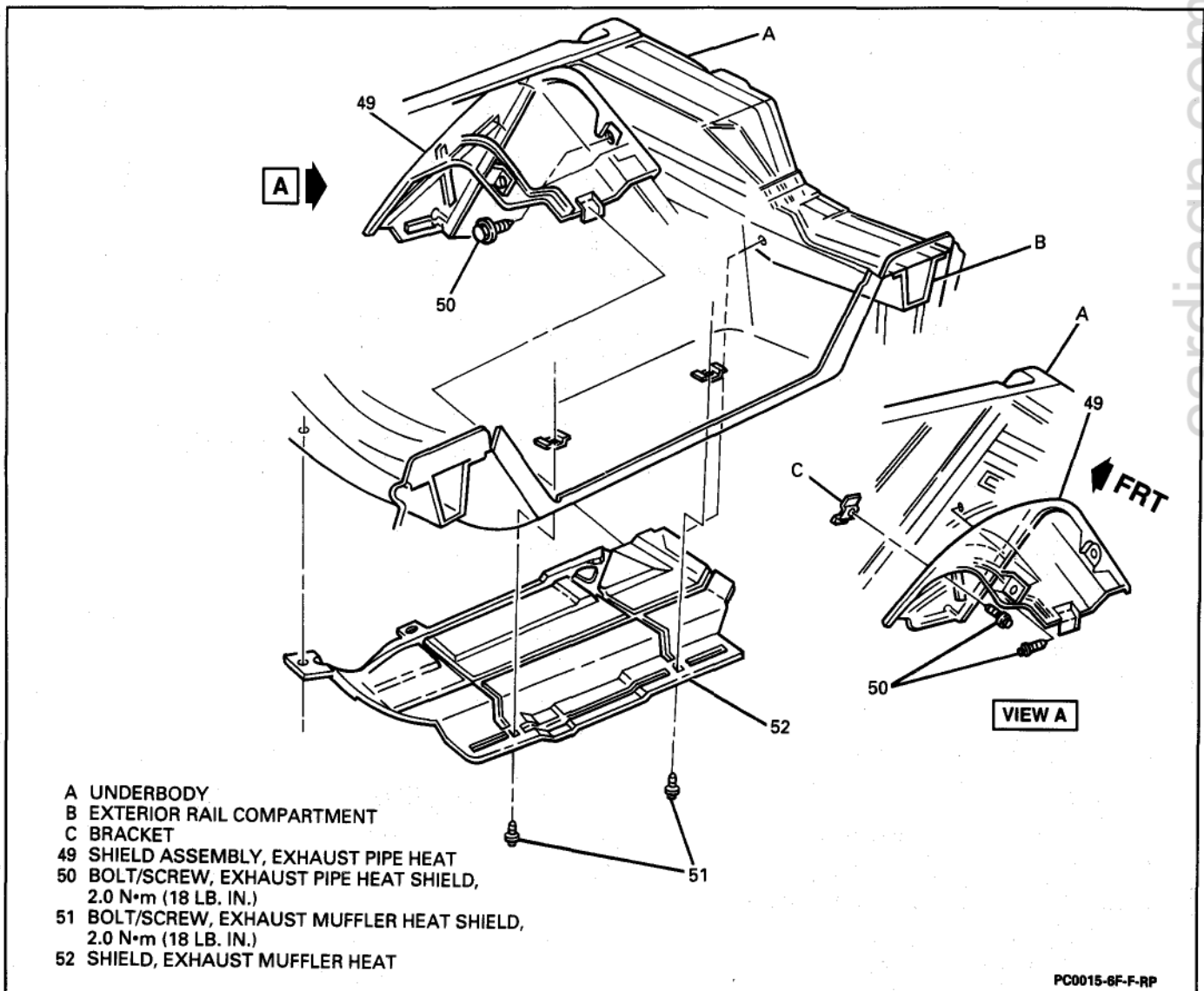
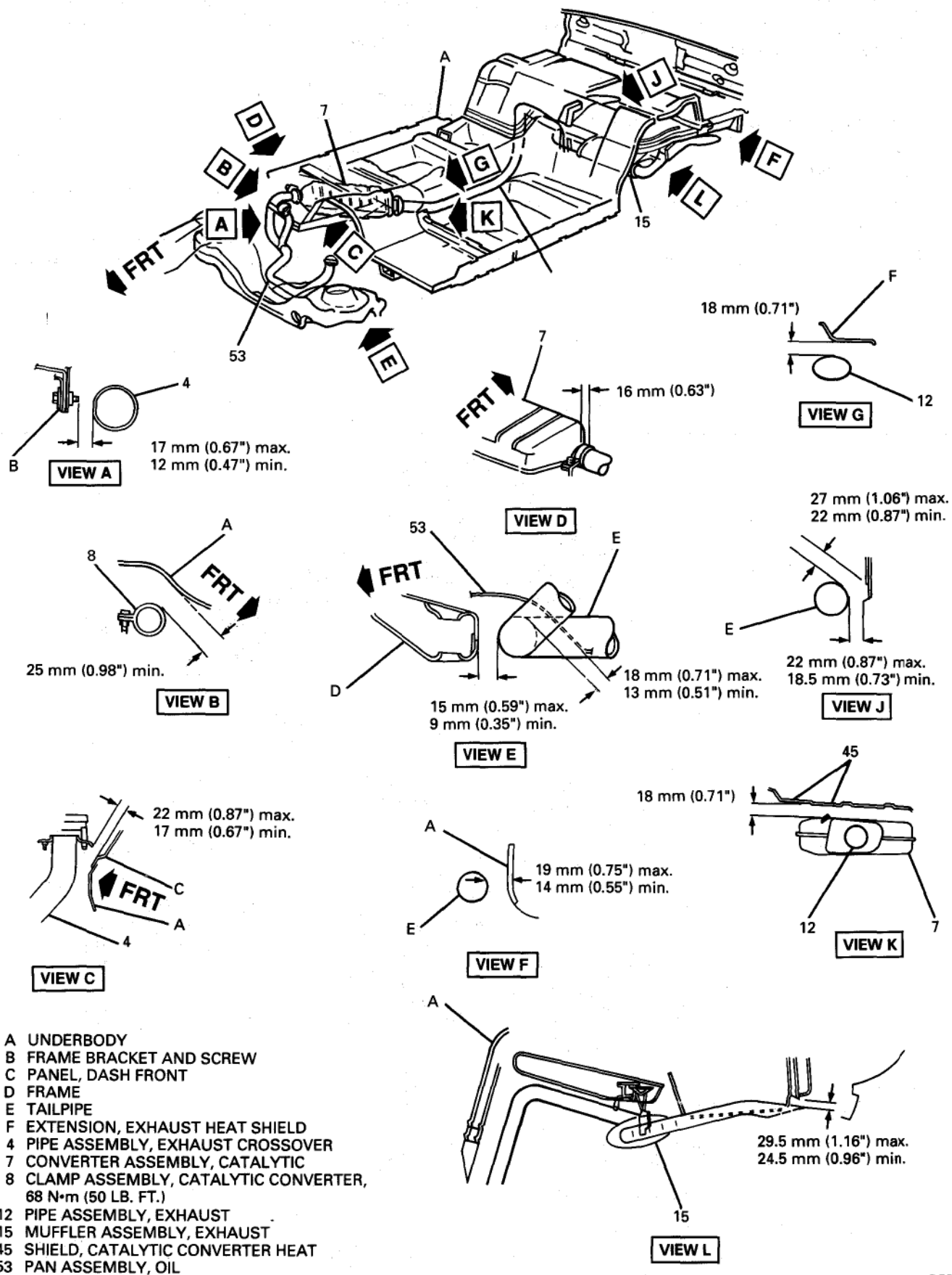


Figure 11 – Exhaust Pipe Heat Shield Assembly and Exhaust Muffler Heat Shield



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Figure 12 – Exhaust System Clearance Dimensions (3.4L L32 Engine)

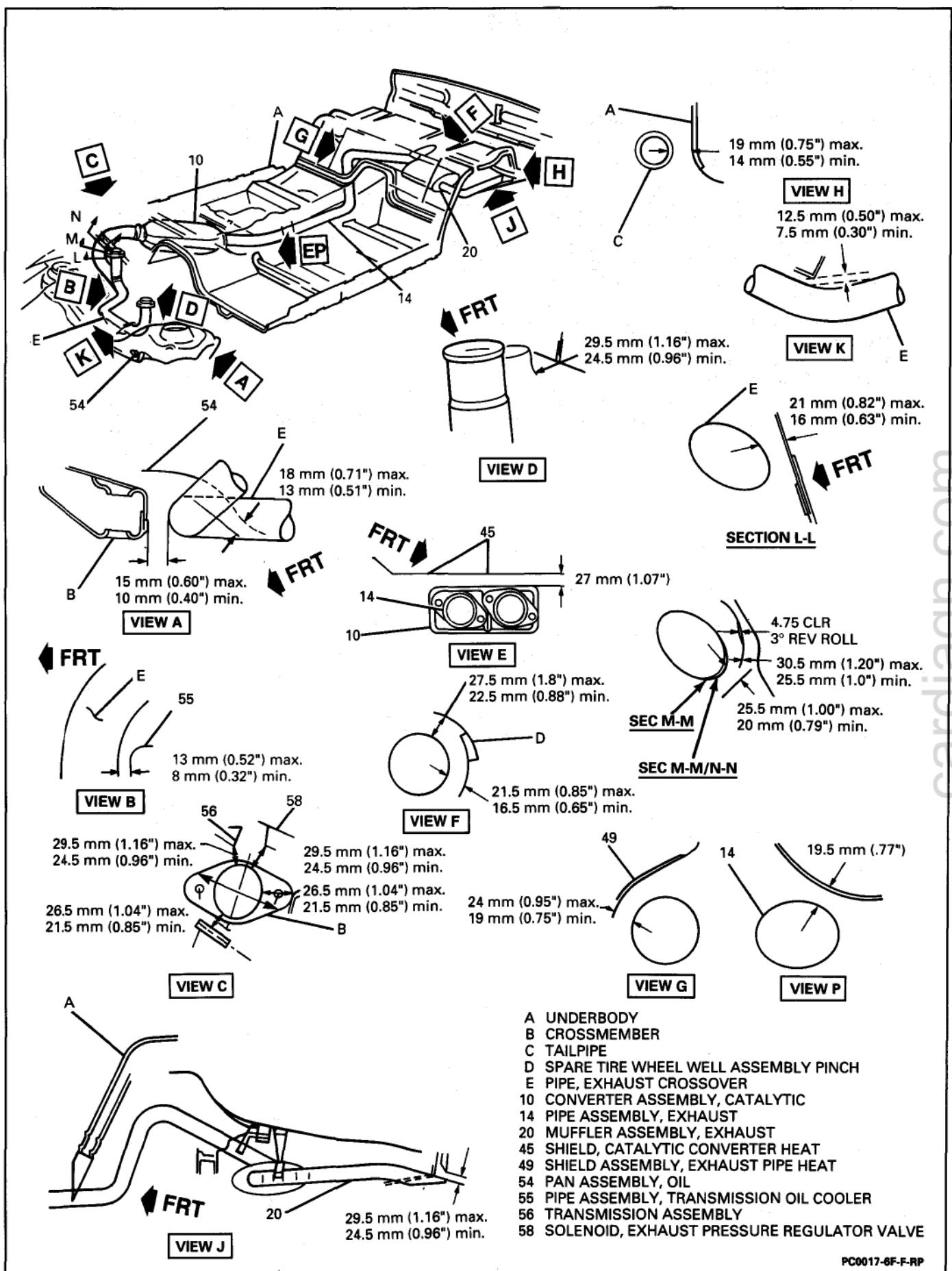


Figure 13 - Exhaust System Clearance Dimensions (5.7L LT1 Engine)

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Catalytic Converter Clamp Assembly	68 N•m (50 lb. ft.)
Catalytic Converter Hanger Bolt/Screw	41 N•m (30 lb. ft.)
Catalytic Converter Heat Shield Bolt/Screw	2.0 N•m (18 lb. in.)
Exhaust Crossover Pipe Nut	35 N•m (26 lb. ft.)
Exhaust Heat Shield Bolt/Screw	2.0 N•m (18 lb. in.)
Exhaust Muffler Hanger Bracket Bolt/Screw	15 N•m (11 lb. ft.)
Exhaust Muffler Hanger Nut	25 N•m (18 lb. ft.)
Exhaust Muffler Heat Shield Bolt/Screw	2.0 N•m (18 lb. in.)
Exhaust Muffler Interior Hanger Bolt/Screw	15 N•m (11 lb. ft.)
Exhaust Pipe Bolt/Screw	20 N•m (15 lb. ft.)
Exhaust Pipe Hanger Nut	15 N•m (11 lb. ft.)
Exhaust Pipe Heat Shield Bolt/Screw	2.0 N•m (18 lb. in.)
Exhaust Tailpipe Extension Clamp Assembly	70 N•m (52 lb. ft.)
Muffler Clamp Assembly	68 N•m (50 lb. ft.)
Rear Axle Torque Arm Bracket Nut	41 N•m (30 lb. ft.)
Rear Axle Torque Arm Outer Bracket Bolt/Screw	27 N•m (20 lb. ft.)