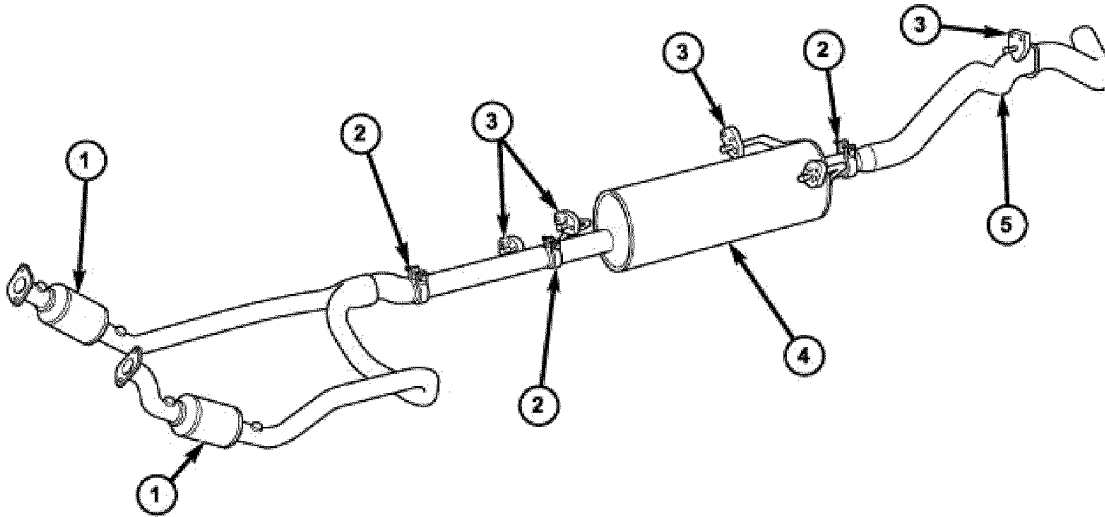


2012 ENGINE

Exhaust System - Ram Pickup

DESCRIPTION

DESCRIPTION

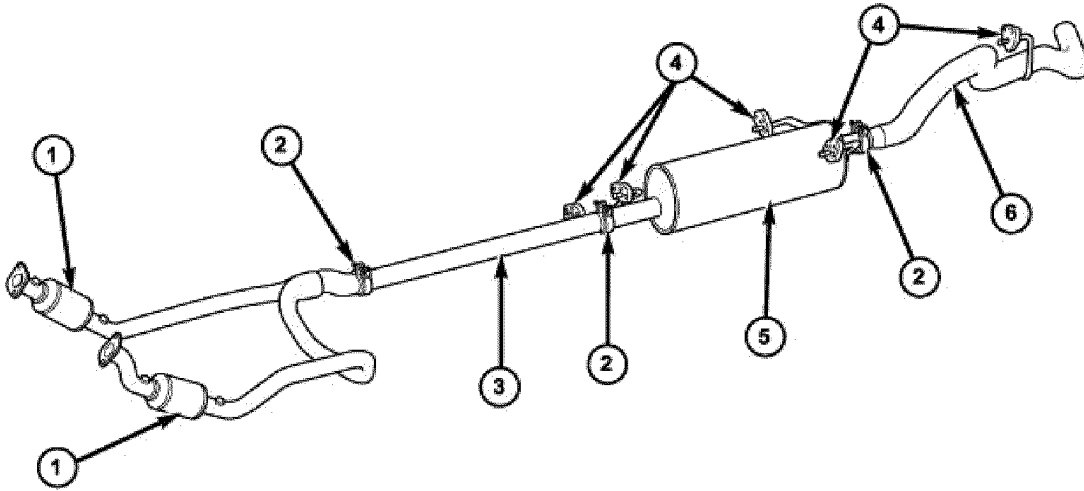


81220e6b

Fig. 1: Exhaust System - 3.7L - Typical
Courtesy of CHRYSLER GROUP, LLC

1 - CATALYTIC CONVERTER	4 - MUFFLER
2 - CLAMP	5 - TAILPIPE
3 - INSULATOR	

CAUTION: Avoid application of rust prevention compounds or undercoating materials to exhaust system floor pan exhaust heat shields. Light overspray near the edges is permitted. Application of coating will result in excessive floor pan temperatures and objectionable fumes.

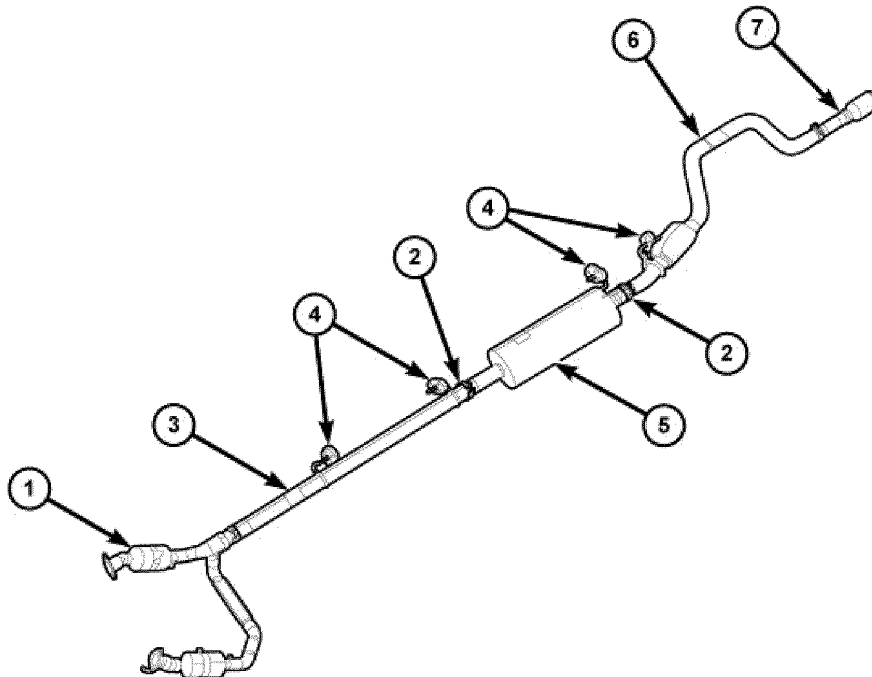


81220/06

Fig. 2: Exhaust System - 4.7L - Typical
 Courtesy of CHRYSLER GROUP, LLC

1 - CATALYTIC CONVERTER	4 - INSULATOR
2 - CLAMP	5 - MUFFLER
3 - EXTENSION PIPE	6 - TAILPIPE/RESONATOR

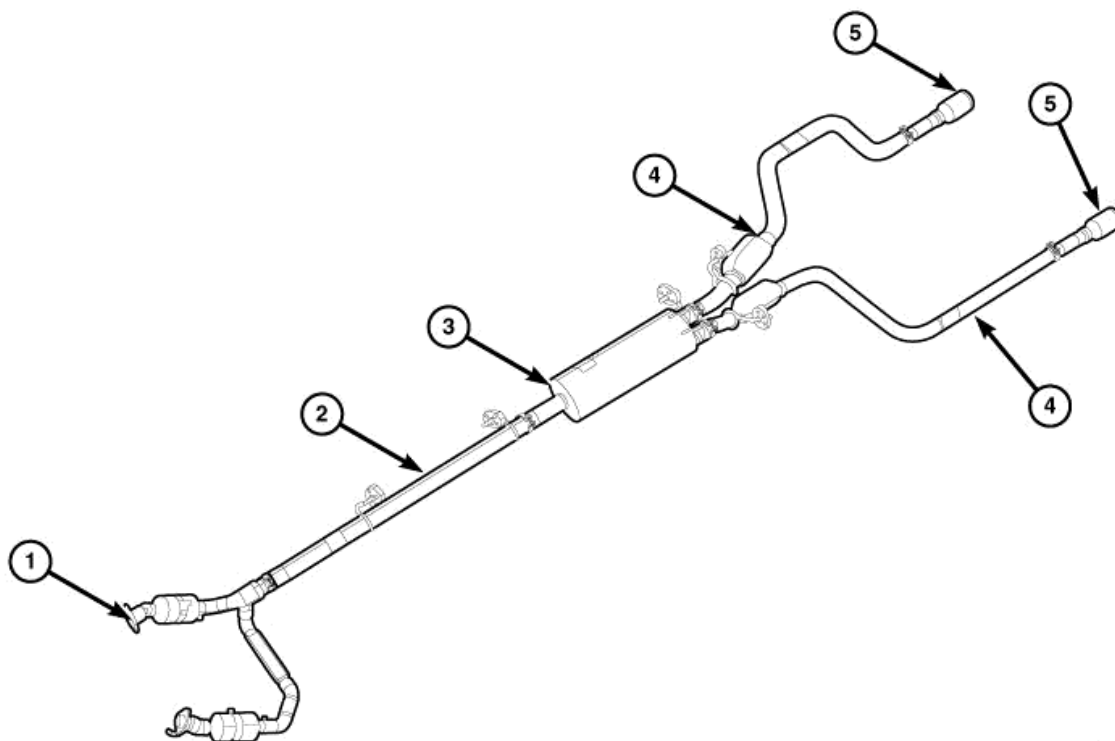
The federal gasoline engine exhaust system consists of engine exhaust manifolds, exhaust pipes, catalytic converter(s), extension pipe (if needed), exhaust heat shields, muffler and exhaust tailpipe.



1469449

Fig. 3: Exhaust System 5.7L Engine - Typical
 Courtesy of CHRYSLER GROUP, LLC

1 - CATALYTIC CONVERTER	4 - INSULATOR
2 - CLAMP	5 - MUFFLER
3 - EXTENSION PIPE	6 - TAILPIPE/RESONATOR



1473198

Fig. 4: Exhaust System 5.7L Engine - Dual
 Courtesy of CHRYSLER GROUP, LLC

1 - CATALYTIC CONVERTER	4 - INSULATOR
2 - CLAMP	5 - MUFFLER
3 - EXTENSION PIPE	6 - TAILPIPE/RESONATOR

The California emission vehicles exhaust system also contains the above components as well as mini catalytic converters added to the exhaust pipe.

The exhaust system must be properly aligned to prevent stress, leakage and body contact. Minimum clearance between any exhaust component and the body or frame is 25.4 mm (1.0 in.). If the system contacts any body panel, it may amplify objectionable noises from the engine or body.

DIAGNOSIS AND TESTING

EXHAUST SYSTEM

EXHAUST SYSTEM DIAGNOSIS CHART

CONDITION	POSSIBLE CAUSE	CORRECTION
EXCESSIVE EXHAUST NOISE OR LEAKING EXHAUST GASES	1. Leaks at pipe joints.	1. Tighten clamps/bolts at leaking joints.
	2. Rusted or blown out muffler.	2. Replace muffler. Inspect exhaust system.
	3. Broken or rusted out exhaust pipe.	3. Replace exhaust pipe.
	4. Exhaust pipe leaking at manifold flange.	4. Tighten/replace flange attaching nuts/bolts.
	5. Exhaust manifold cracked or broken.	5. Replace exhaust manifold.
	6. Leak between exhaust manifold and cylinder head.	6. Tighten exhaust manifold to cylinder head bolts.
	7. Catalytic converter rusted or blown out.	7. Replace catalytic converter assembly and gasket.
	8. Restriction in exhaust system.	8. Remove restriction, if possible. Replace restricted part if necessary.
CAUTION: When servicing and replacing exhaust system components, disconnect the oxygen sensor connector(s). Allowing the exhaust to hang by the oxygen sensor wires will damage the harness and/or sensor.		

LEAK TESTING

WARNING: The normal operating temperature of the exhaust system is very high. Therefore, never work around or attempt to service any part of the exhaust system until it is cooled. Special care should be taken when working near the catalytic converter. The temperature of the converter rises to a high level after a short period of engine operation time.

1. Raise and support vehicle.

CAUTION: The air pressure must not exceed 4 psi, otherwise engine damage can occur.

2. Connect Tool (special tool #8404-ECT, Exhaust Cone, Truck), Exhaust Cone to Air Pressure Regulator (with hose) W-18-MIL-1146AS.
3. Attach shop air to the air pressure regulator.
4. Adjust the air pressure regulator to 4 psi
5. Insert Tool (special tool #8404-EC, Exhaust Cone) or (special tool #8404-ECT, Exhaust Cone, Truck), Exhaust Cone into the vehicle tail pipe.
6. If the vehicle is equipped with dual exhaust, use Tool (special tool #8404-EC, Exhaust Cone) or (special

tool #8404-ECT, Exhaust Cone, Truck), Exhaust Cone with equipped attached plug. Plug one side of the dual exhaust pipe. Pressurize the other as described.

7. Apply a mixture of MOPAR® Air Leak Detector to the following areas:

- - All welded joints from 6 inches rearward of the downstream O2 sensor forward
- - O2 sensor seal points
- - O2 sensor boss welds
- - Flange/joint connection(s)
- - Exhaust manifold to cylinder head connection(s)
- - EGR solenoid gasket base and tube seal points (if equipped)

8. Watch for the Air Detector to bubble.

9. Use the following definitions to help determine if system or component repair/replacement is necessary:

- **Type 1 Leak** is defined as a leak where very small foam like bubbles 1mm (.039 in.) or less appear. Any Type 1 or greater leaks found in welded joints, O2 sensor seal points or O2 sensor boss welds must be repaired or the component must be replaced.
- **Type 2 Leak** is defined as a leak where larger bubbles 8mm (.32 in.) or greater appear. Any Type 2 or greater leaks found in flange or joint connections, exhaust manifold to cylinder head connections, or EGR gasket and tube seal points must be repaired or the components must be replaced.

Leak Location	Repair required if results at 4 psi reveal bubble size:
Welded joints	Type 1 - 1 mm (.039 in.) or greater
O2 Sensor seal points	Type 1 - 1 mm (.039 in.) or greater
O2 Sensor boss welds	Type 1 - 1 mm (.039 in.) or greater
Flange/joint connections	Type 2 - 8 mm (.32 in.)

	or greater
Exhaust Manifold to cylinder head connections	Type 2 - 8 mm (.32in.) or greater
EGR gasket and tube seal points	Type 2 - 8 mm (.32 in.) or greater

If a leak is found that matches the above definition, repair or replace the component as necessary.

Once the repair is complete, repeat the procedure to verify that all leaks have been repaired.

SPECIFICATIONS

SPECIFICATIONS

DESCRIPTION	N.m	Ft. Lbs.	In. Lbs.
Bolt-Adjusting Strap	23	17	-
Nuts-Air Heater Power Supply	14	10	124
Nuts-Cab Heater Supply/Return Line	24	18	-
Nuts-Exhaust Clamp	54	40	-
Bolts-Exhaust Pipe to Manifold	31	23	-
Bolts-Generator Mounting	41	30	-
Nuts and Bolts-Heat Shield	11	8	97
Band Clamp Nut	54	40	-

SPECIAL TOOLS

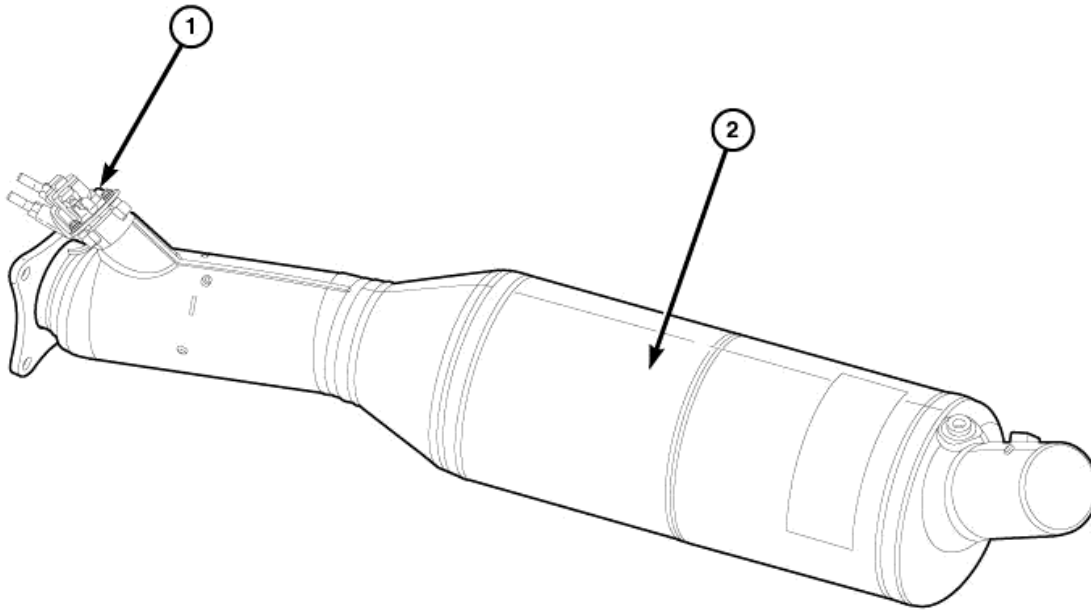
SPECIAL TOOLS

8404-EC - Exhaust Cone 8404-ECT - Exhaust Cone, Truck (Originally Shipped In Kit Number(s) 8404-ECT.)

CATALYST, SELECTIVE CATALYTIC REDUCTION (SCR)

DESCRIPTION

DESCRIPTION



2792163

Fig. 5: Identifying Selective Catalytic Reduction (SCR)

Courtesy of CHRYSLER GROUP, LLC

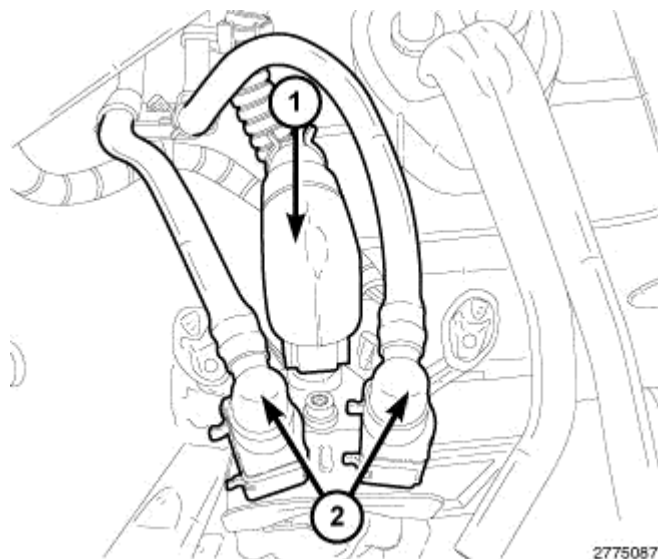
The Selective Catalytic Reduction (SCR) is a catalyst element made of low precious metals used in reducing nitrous oxide gases (NO_x) to an element of nitrogen. By injecting a Diesel Exhaust Fluid (DEF) solution upstream of a catalyst. The DEF solution will vaporize and decompose to form ammonia and carbon dioxide. When the ammonia vapor is introduced to the NO_x gas, it converts it to a harmless nitrogen and water by product

REMOVAL

REMOVAL

WARNING: If torches are used when servicing the exhaust system, do not allow any flame near the fuel lines or the fuel tank. Failure to follow these instructions may result in possible serious or fatal injury.

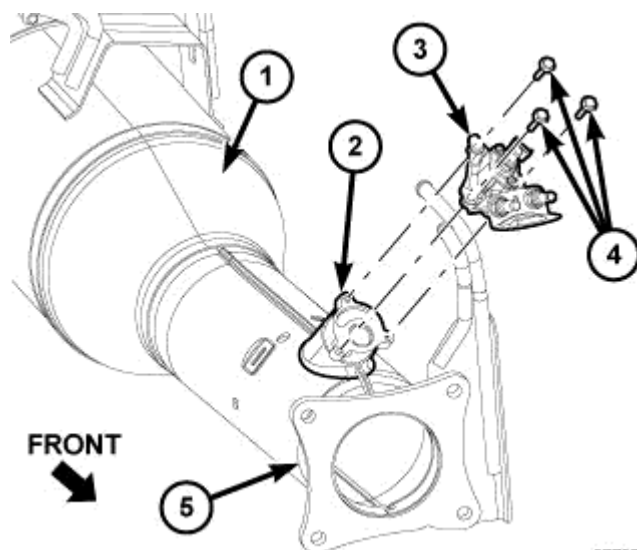
1. Disconnect both negative battery cables.
2. Raise vehicle.
3. If equipped, remove skid plates.
4. Disconnect the temperature and NO_x sensors.
5. Saturate bolts and nuts with heat valve lubricant. Allow 5 minutes for penetration.



2775087

Fig. 6: Cooling Lines & Urea Supply Line
 Courtesy of CHRYSLER GROUP, LLC

NOTE: Do not remove the cooling lines (2) or the Urea supply line (1) to the Diesel Exhaust Fluid injector unless replacing the injector.



2778764

Fig. 7: DEF Injector & SCR Catalyst
 Courtesy of CHRYSLER GROUP, LLC

6. Remove the DEF injector (3) from the SCR catalyst (1) and position aside.
7. Remove the tailpipe assembly. Refer to **TAILPIPE, EXHAUST, REMOVAL.**

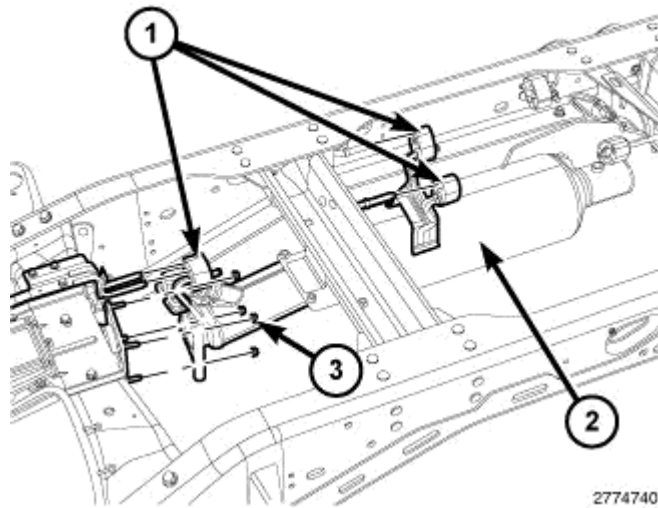


Fig. 8: Isolators, Flange Nuts & SCR
 Courtesy of CHRYSLER GROUP, LLC

8. Remove the isolators (1).
9. Remove the flange nuts (3).
10. Remove the SCR (2).
11. Remove and discard flange gaskets.

INSTALLATION

INSTALLATION

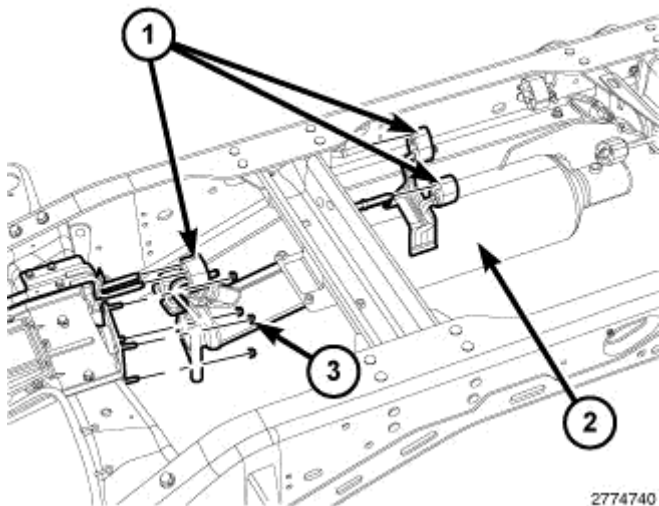


Fig. 9: Isolators, Flange Nuts & SCR
 Courtesy of CHRYSLER GROUP, LLC

1. Install new exhaust flange gasket between the Selective Catalytic Reduction Catalyst (SCR) (2) and the

extension pipe.

2. Position the SCR (2) onto flange.
3. Install flange nuts (3). Hand tighten only.
4. Install the isolators (1).

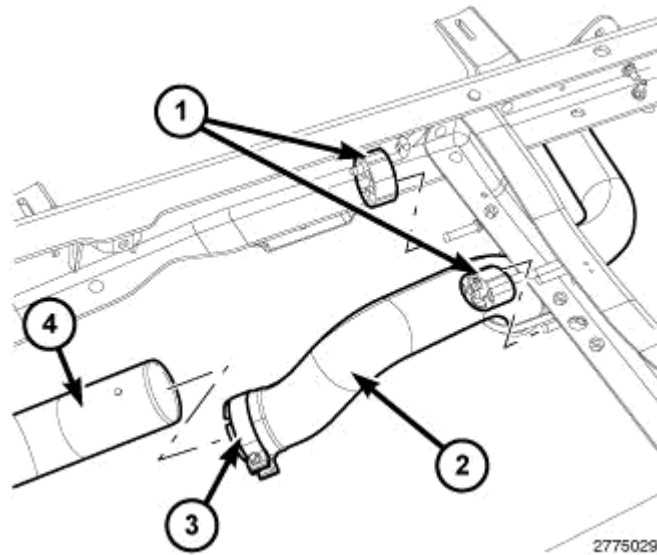


Fig. 10: Tail Pipe Assembly
Courtesy of CHRYSLER GROUP, LLC

5. Install the tail pipe assembly. Refer to **TAILPIPE, EXHAUST, INSTALLATION**.
6. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.
7. Tighten flange nuts (5) to 54 N.m (40 ft. lbs.).

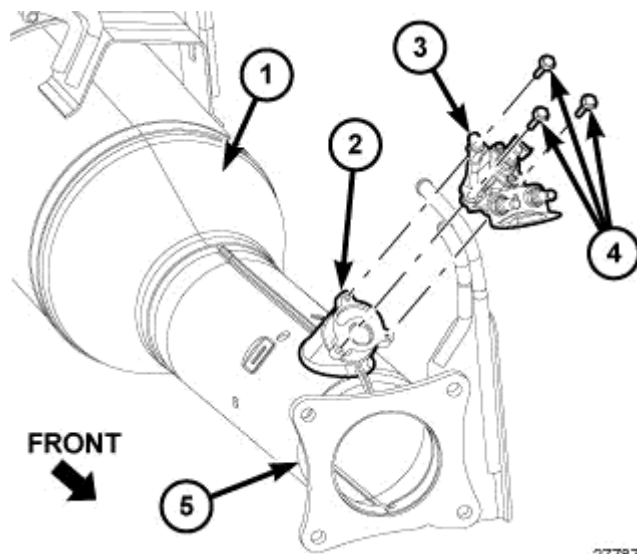


Fig. 11: DEF Injector & SCR Catalyst

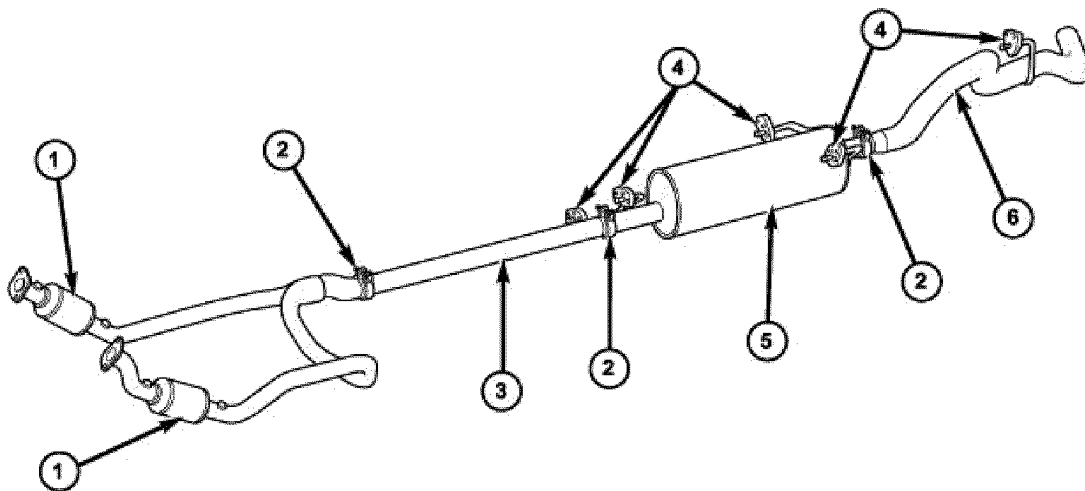
Courtesy of CHRYSLER GROUP, LLC

8. Install the DEF injector. Refer to **INJECTOR, DIESEL EXHAUST FLUID, INSTALLATION** .
9. Connect temperature and NOx sensors.
10. If equipped, install skid plates.
11. Lower vehicle.
12. Connect negative battery cables.
13. Using a scan tool, perform RESET REGENERATIVE FILTER TIMERS function found under ENGINE MISC. FUNCTIONS.

CONVERTER, CATALYTIC

DESCRIPTION

DESCRIPTION



8122006

Fig. 12: Exhaust System - 4.7L - Typical
Courtesy of CHRYSLER GROUP, LLC

1 - CATALYTIC CONVERTER	4 - INSULATOR
2 - CLAMP	5 - MUFFLER
3 - EXTENSION PIPE	6 - TAILPIPE/RESONATOR

WARNING: The normal operating temperature of the exhaust system is very high. Therefore, never work around or attempt to service any part of the exhaust system until it is cooled. Special care should be taken when working near the catalytic converter. The temperature of the converter rises to a high level after a short period of engine operation time.

CAUTION: DO NOT remove spark plug wires from plugs or by any other means short out cylinders. Failure of the catalytic converter can occur due to a temperature increase caused by unburned fuel passing through the converter.

There are two catalytic converters welded to the front exhaust pipe (1) near each bank inlet. One converter collects the exhaust from the right bank and a second one collects the exhaust from the left bank. The catalytic converters are not serviceable separate from the front exhaust pipe. If either catalytic converter requires service, the front pipe will need to be replaced. Refer to **PIPE, EXHAUST, REMOVAL**.

INSPECTION

INSPECTION

Look at the stainless steel body of the Catalytic Converter assembly, inspect for bulging or other distortion that could be a result of overheating. Inspect for:

- Indication of exhaust gas leakage such as soot trails.
- Temperature sensor wiring for damage
- Joint misalignment
- Denting of greater than 6.3 mm (0.25 in.)
- Outer shell torn, cracked or otherwise damaged
- Loose or damaged core

FILTER, DIESEL PARTICULATE

DESCRIPTION

DESCRIPTION

1. The Aftertreatment System consists of three catalyst elements, all working together to drastically reduce tailpipe emissions:

DIESEL OXIDATION CATALYST (DOC)

The Diesel Oxidation Catalyst (DOC) is a ceramic flow through substrate coated with a catalyst washcoat that is integral to the DOC assembly. The close coupled DOC treats engine exhaust gases by converting harmful carbon monoxide, unburned hydrocarbons and other compounds into water, carbon dioxide and heat.

Pick-up vehicles use a separate DOC assembly.

Cab-Chassis vehicles use a combination Diesel Oxidation Catalyst/Diesel Particulate Filter (DOC/DPF)

CLOSE COUPLED CATALYST (CCC)

The CCC is basically a diesel oxidation catalyst (DOC) that is mounted very close to the turbocharger exhaust outlet. It is a metallic flow through substrate coated with a catalyst washcoat that is essential to the integrated operation of the aftertreatment assembly. The close coupled DOC treats engine exhaust gases by converting harmful carbon monoxide, unburned hydrocarbons and other compounds into water, carbon dioxide and heat. The ability to create heat is an important part of the system regeneration process.

NOX ADSORBER CATALYST (NAC)

The NAC is located downstream of the CCC. Using the heat and exhaust constituents coming from the CCC, the NAC traps various oxides of nitrogen, and then converts those into Carbon Dioxide, Nitrogen (N₂) and water via a regeneration process controlled by the engine's electronic control module (ECM). The NAC also plays a role in reducing non-methane hydrocarbons (NMHC) from the exhaust gas.

DIESEL PARTICULATE FILTER

The NAC is located downstream of the CCC. Using the heat and exhaust constituents coming from the CCC, the NAC traps various oxides of nitrogen, and then converts those into Carbon Dioxide, Nitrogen (N₂) and water via a regeneration process controlled by the engine's electronic control module (ECM). The NAC also plays a role in reducing non-methane hydrocarbons (NMHC) from the exhaust gas. **DIESEL PARTICULATE FILTER (DPF):** The diesel particulate filter (DPF) is a wall-pass ceramic filter substrate coated with a catalyst washcoat. It is located just downstream of the NAC. Exhaust gases flow from the NAC into the catalyzed diesel particulate filter (DPF) which traps and accumulates particulate matter, and further treats the exhaust gases to reduce any remaining unburned hydrocarbons and other harmful compounds. The trapped particulate matter will be periodically removed from the DPF via a regeneration process controlled by the engine's electronic control module (ECM).

OPERATION

OPERATION

The oxidation catalyst raises the exhaust gas temperatures to regenerate the DPF, which is passive regeneration. If the passive regeneration cannot keep up with the build up of soot in the DPF, the ECM will actively regenerate the DPF to burn off the soot. Residue remains inside the DPF in the form of non burnable ash. Ash comes from the oils and other materials that are trapped in the oils and are present in the soot. The catalyst contains a large number of parallel channels, which run in the axial direction and are separated by thin porous walls. The channels are alternatively open at one end, but plugged at the other. The exhaust gases flow through the walls and escape through the pores in the wall material. Particulates, however, are too large to escape and are trapped in the monolith walls. The ECM starts the regeneration of the DPF if the soot load exceeds a performance map value. The ECM determines the load condition of the DPF based upon the exhaust gas pressure upstream and downstream of the DPC/DPF. A pressure differential sensor provides the pressure input to the ECM. During the regeneration process, the ECM raises the temperature in the DOC/DPF to burn off the soot accumulated. Under normal operation, the engine does not produce enough heat to oxidize the soot inside the DOC/DPF. This process requires temperatures above 550 °C (1,022 °F). After regeneration, the ECM reads the actual pressure difference at the DOC/DPF and compares it with a reference value. From this comparison, the ECM determines the ash quantity inside the DOC/DPF.

DIAGNOSIS AND TESTING

DIAGNOSIS AND TESTING - DIESEL PARTICULATE FILTER

EVIC MESSAGE CENTER - MESSAGE - CATALYST FULL

The engine Electronic Control Module (ECM) monitors the soot load in the diesel particulate filter. Under normal operating conditions the diesel particulate filter is self-cleaning, where accumulated soot is converted to ash. Under light load operating conditions, the driver may be notified via the vehicle's Electronic Vehicle Information Center (EVIC) message center "**CATALYST FULL: SEE OWNERS MAN**" will be displayed on the overhead console of your vehicle if the exhaust particulate filter reaches 80% of its maximum storage capacity. Under conditions of exclusive short duration and low speed driving cycles, your Cummins engine and exhaust aftertreatment system may never reach the conditions required to remove the trapped PM. If this occurs, "Catalyst Full See Owner Manual" will be displayed on the overhead console in your vehicle. If this message is displayed you will hear one chime to assist in alerting you of this condition. Catalyst Stat:.....80% Catalyst Stat:.....80% will replace the message "Catalyst Full See Owner Manual" after it is displayed for one minute. The engine Powertrain Control Module (PCM) will continue to monitor the amount of particulate matter trapped in the particulate filter. This message indicates the percentage of the particulate filter capacity that has been used. By simply driving your vehicle at highway speeds for as little as 45 minutes you can remedy the condition in the particulate filter system and allow your Cummins engine and exhaust aftertreatment system to remove the trapped PM and restore the system to normal operating condition. Catalyst Stat:.....80%, 90%, 99% Catalyst Stat:.....80%, 90%, 99% If you are unable to drive your vehicle under these conditions for an extended period of time after the initial warning notification, the Engine PCM will continue to monitor the particulate filter and will display the progression of particulate filter usage (80, 90, 99%) on the EVIC message center. **CATALYST FULL SERVICE REQD** If the particulate filter reaches 99% of its capacity, the overhead console in your vehicle will chime twice and display the message **CATALYST FULL SERVICE REQD**. At this point the engine PCM will register a fault code, the instrument panel will display a MIL light and the engine PCM will derate the truck, reducing its horsepower and torque output. The PCM derates the engine in order to limit the likelihood of permanent damage to the aftertreatment system. If this condition is not corrected and a dealer service is not performed, extensive exhaust aftertreatment damage can occur. In order to correct this condition it will be necessary to have the truck serviced by your local authorized dealer.

Intervention Regeneration Strategy - EVIC Message Process Flow (Late Build) The Cummins diesel engine meets all EPA Heavy Duty Diesel Engine Emissions Standards, resulting in the lowest emitting diesel engine ever produced. NOTE: Depending on the build date of your vehicle or if the software has been updated, the EVIC may display the following messages. To achieve these emissions standards, your vehicle is equipped with a state-of-the-art engine and exhaust system. The engine and exhaust after-treatment system work together to achieve the EPA Heavy Duty Diesel Engine Emissions Standards. These systems are seamlessly integrated into your vehicle and managed by the Cummins Powertrain Control Module (PCM). The PCM manages engine combustion to allow the exhaust system's catalyst to trap and burn Particulate Matter (PM) pollutants, with no input or interaction on your part. Additionally, the overhead console in your vehicle has the ability to alert you to additional maintenance required on your truck or engine. Refer to the following messages that may be displayed on your Electronic Vehicle Information Center (EVIC):

Exhaust System - Regeneration Required Now "Exhaust System-Regeneration Required Now" will be displayed on the overhead console of your vehicle if the exhaust particulate filter reaches 80% of its maximum storage capacity. Under conditions of exclusive short duration and low speed driving cycles, your Cummins diesel engine and exhaust aftertreatment system may never reach the conditions required to remove the trapped PM. If this occurs, "Exhaust System - Regeneration Required Now" will be displayed on the overhead console in your vehicle. If this message is displayed, you will hear one chime to assist in alerting you of this condition.

By simply driving your vehicle at highway speeds for as little as 45 minutes, you can remedy the condition in the particulate filter system and allow your Cummins diesel engine and exhaust after-treatment system to remove the trapped PM and restore the system to normal operating condition. Exhaust Filter XX% Full Indicates that the Diesel Particulate Filter (DPF) is approaching full. Exhaust System - Regeneration in Process Indicates that the Diesel Particulate Filter (DPF) is selfcleaning. Maintain your current driving condition until regeneration is completed. Exhaust System - Regeneration Completed Indicates that the Diesel Particulate Filter (DPF) selfcleaning is completed. If this message is displayed, you will hear one chime to assist in alerting you of this condition. Service Required - See Dealer Now Regeneration has been disabled due to a system malfunction. At this point the engine PCM will register a fault code, the instrument panel will display a MIL light. IMMEDIATE SERVICE IS REQUIRED. See your authorized dealer as damage to the exhaust system could occur soon with continued operation. Exhaust Filter Full - Power Reduced See Dealer The PCM derates the engine in order to limit the likelihood of permanent damage to the after-treatment system. If this condition is not corrected and a dealer service is not performed, extensive exhaust after-treatment damage can occur. In order to correct this condition it will be necessary to have your vehicle serviced by your local authorized dealer. IMMEDIATE SERVICE IS REQUIRED. See your authorized dealer, as damage to the exhaust system could occur soon with continued operation.

STANDARD PROCEDURE

STANDARD PROCEDURE - STATIONARY DESOOT

WARNING: Due to the fact that the vehicle may be left unattended for up to one hundred (100) minutes during this procedure, every precautionary measure must be taken to ensure that the vehicle cannot be stolen and that no person comes in contact with the hot exhaust or hot exhaust gases during the procedure.

NOTE: Stationary DeSoot will not perform without a P1451 DTC. Updating the ECM will automatically clear the P1451 DTC from the ECM's memory. If the soot threshold is great enough where a Stationary DeSoot is required, it may be necessary to drive the vehicle so that the P1451 DTC will reset.

NOTE: When using Diagnostic Scan Tool software at release 9.05, the fuel minimum specification to run the test is 1/4 of a tank of fuel.

1. Fill the vehicle with three (3) gallons of Ultra Low Sulfur diesel fuel to perform the procedure.

NOTE: In order for Stationary DeSoot to begin, the vehicle must be parked with the parking brake engaged, be at normal operating temperature, have no active DTC's unrelated to DeSoot, and have at least three gallons of fuel. If any of these conditions are violated after Stationary DeSoot begins, or if the service brake or accelerator pedal is pressed, Stationary DeSoot will abort.

2. Position the vehicle on a NONFLAMMABLE surface such as concrete.

WARNING: Exhaust temperatures will be extremely high. Do not perform this procedure on flammable surfaces such as asphalt, grass, etc. or adjacent to property that may be damaged by the exhaust gases, or in a location where individuals may be required to pass adjacent to the exhaust.

3. Apply the parking brake.
4. Position the shift lever in Park or Neutral.
5. Lower the spare tire down as far as possible. It is not necessary to remove the spare tire from the vehicle.
6. Mark an area 12 feet (3.66 meters) by 12 feet (3.66 meters) surrounding the exhaust outlet. The exhaust outlet should be six feet from the fore and aft ends of the marked off area.

NOTE: Ensure that the "HOT EXHAUST" labels are facing outward.

7. Ensure that the hood remains closed during the stationary regeneration operation.
8. If not already performed, connect the Diagnostic Scan Tool to the vehicle.
9. Start the engine.
10. Power ON the Diagnostic Scan Tool.
11. Scroll to the ECM menu
12. Select Stationary DeSoot

NOTE: During Stationary DeSoot, engine RPM will be elevated to 1, 100 RPM. When the engine RPM returns to normal idle, the Stationary DeSoot has completed or aborted.

13. Initiate Stationary DeSoot.

NOTE: Stationary DeSoot may take up to one hundred (100) minutes to complete. It is not necessary to monitor the stationary regeneration cycle the entire one hundred minutes. In addition, it is not necessary to leave the Diagnostic Scan Tool connected to the vehicle once the stationary regeneration has been initiated. Periodic monitoring of the cycle can be accomplished by monitoring the percent of completion through the EVIC or by connecting the Diagnostic Scan Tool and reviewing the percent of completion on the scan tool.

14. Stationary DeSoot will automatically abort once the cycle is complete. If Stationary DeSoot needs to be aborted prior to the end of the cycle, any of the following manual methods can be used:

Turning the ignition OFF Depressing the brake pedal Moving the PRNDL from P/N to D/R
--

15. Once Stationary DeSoot is complete, remove the anti-theft device.
16. Position the spare tire back into its stowage position.

REMOVAL

6.7L DIESEL - CAB CHASSIS

WARNING: If torches are used when servicing the exhaust system, do not allow any flame near the fuel lines or the fuel tank. Failure to follow these instructions may result in possible serious or fatal injury.

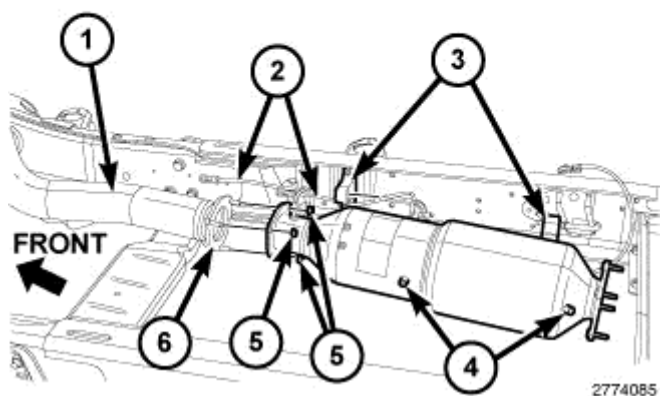


Fig. 13: Front Temperature Sensors, Isolators, Exhaust Down Pipe To DOC/DPF Flange Nuts, Courtesy of CHRYSLER GROUP, LLC

1. Disconnect and isolate negative battery cables.
2. Raise and support vehicle.
3. If equipped, remove skid plates.
4. On 4X4 models, remove transmission crossmember. Refer to **CROSSMEMBER, TRANSMISSION, REMOVAL** .
5. Saturate bolts and nuts with heat valve lubricant. Allow 5 minutes for penetration.
6. Remove flexible tubing from particulate filter pressure sensor tubing.
7. Loosen and remove particulate filter pressure sensor tubing from Diesel Oxidation Catalytic/Diesel Particulate Filter (DOC/DPF) at the ports (4).
8. Disconnect and remove front temperature sensors (2).
9. Remove the rear temperature sensor.
10. Remove NOx sensor.
11. Remove the isolators (3).
12. Remove the Selective Catalytic Reduction (SCR) Catalyst and the tail pipe assembly and move toward

rear of vehicle.

13. Remove exhaust down pipe to DOC/DPF flange nuts (5).
14. Remove DOC/DPF from the down pipe (1).
15. Remove and discard flange gaskets.

6.7L DIESEL - P/U

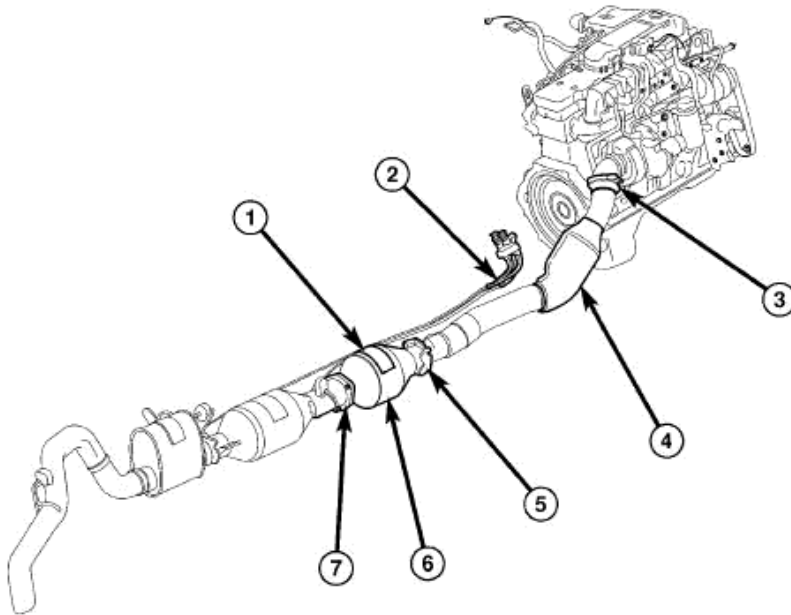


Fig. 14: Catalytic Converter 6.7L - Diesel - P/U
Courtesy of CHRYSLER GROUP, LLC

1 - TUBING SUPPORT BRACKET

2 - FLEXIBLE PRESSURE DIFFERENTIAL TUBING

3 - TURBOCHARGER CLAMP

4 - DIESEL OXYGEN CATALYST (DOC)

5 - DOC TO
NO_x
ABSORBER
CATALYST
(NAC)
FLANGE

6 - NAC

7 - NAC TO
DPF FLANGE

8 - DIESEL
PARTICULATE
FILTER (DPF)

1. Disconnect and isolate negative battery cables.
2. Raise and support vehicle.
3. Saturate bolts and nuts with heat valve lubricant. Allow 5 minutes for penetration.
4. Disconnect flexible exhaust differential pressure sensor tubing (2).
5. Remove exhaust pressure differential sensor tubing from Diesel Particulate Filter (DPF) (1).

6. When equipped, remove skid plates.
7. On 4X4 models, remove transmission crossmember. Refer to **CROSSMEMBER, TRANSMISSION, REMOVAL** .
8. Remove Diesel Particulate Filter (DPF) to NOx Absorber Catalyst (NAC) flange nuts (7).
9. Remove NAC to Diesel Oxidation Catalyst (DOC) to NAC flange nuts (5). Discard gasket.
10. Remove NAC (7) from isolators.
11. Remove DOC to muffler band clamp.
12. Remove DOC from vehicle.

INSTALLATION

6.7L DIESEL - CAB CHASSIS

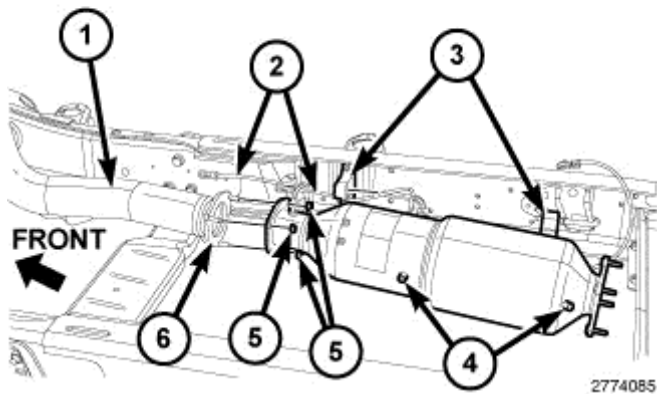


Fig. 15: Front Temperature Sensors, Isolators, Exhaust Down Pipe To DOC/DPF Flange Nuts,
Courtesy of CHRYSLER GROUP, LLC

1. Position new exhaust flange gasket on exhaust down pipe (1) flange (6).
2. Mount the DOC/DPF input to the down pipe (1).
3. Install flange nuts (5). Hand tighten only.
4. Install the isolators (3).
5. Position new exhaust flange gasket on DOC/DPF output flange.
6. If equipped, install the extension pipe.
7. Install the Selective Catalytic Reduction (SCR) catalyst. Refer to **CATALYST, SELECTIVE CATALYTIC REDUCTION (SCR), INSTALLATION**.
8. Install flange nuts. Hand tighten only.
9. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.

10. Tighten flange nuts to 54 N.m (40 ft. lbs.).
11. Install temperature sensors (2). Tighten to 30 N.m (22 ft. lbs.).
12. Install NOx sensor. Tighten to 50 N.m (37 ft. lbs.).

NOTE: Make sure there is not a dip in the pressure differential tubing.

13. Install exhaust differential pressure tubing. Tighten to 30 N.m (22 ft. lbs.).
14. Install flexible exhaust differential pressure sensor tubing.
15. Connect electrical connectors.
16. On 4X4 models, install transmission crossmember. Refer to **CROSSMEMBER, TRANSMISSION, INSTALLATION**.
17. If equipped, install skid plates.
18. Lower vehicle.
19. Connect negative battery cables.
20. Using a scan tool, perform RESET REGENERATIVE FILTER TIMERS function found under ENGINE MISC. FUNCTIONS.

6.7L DIESEL - P/U

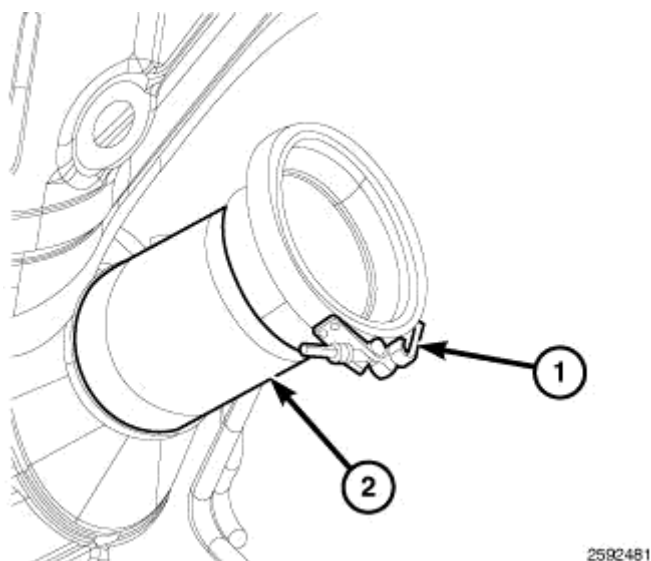


Fig. 16: Turbocharger Exhaust Outlet V-clamp
Courtesy of CHRYSLER GROUP, LLC

1. Position the catalytic converter onto the turbocharger with the clamp (1) facing down as shown in illustration. Install the clamp (1) finger tight.

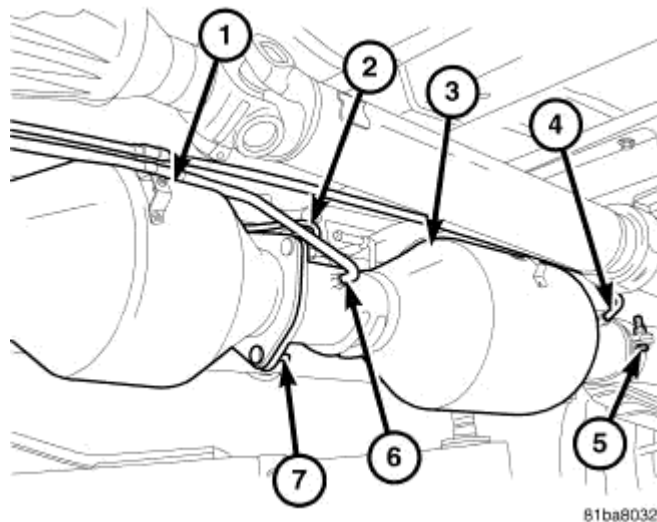


Fig. 17: DPF - 6.7L Diesel- P/U
 Courtesy of CHRYSLER GROUP, LLC

- | |
|--|
| 1 - MOUNTING BOLT
2 - TEMPERATURE SENSOR
3 - DIESEL PARTICULATE FILTER
4 - REAR DIFFERENTIAL PRESSURE TUBE
5 - BAND CLAMP
6 - FRONT DIFFERENTIAL PRESSURE TUBE
7 - CATALYTIC CONVERTER TO DPF FLANGE |
|--|

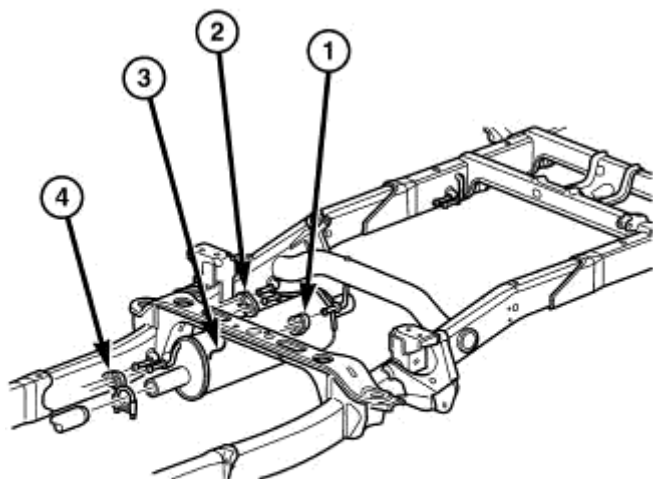
2. Position new exhaust flange gaskets on catalytic converter to DPF flange.
3. Install flange bolts. Hand tighten only.
4. Install muffler and tailpipe assembly.
5. Install new band clamp. Hand tighten only.
6. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.
7. Tighten flange nuts to 54 N.m (40 ft. lbs.).
8. Tighten band clamp nuts to 52 N.m (40 ft. lbs.).
9. Install temperature sensor. Tighten to 29.8 N.m (22 ft. lbs.).
10. Install front and rear (6 and 4) exhaust differential pressure tubing. Tighten to 30 N.m (22 ft. lbs.).
11. Tighten the catalytic converter to turbocharger clamp to 17 N.m (13 ft. lbs.). Using a rubber mallet, hit the DOC to turbocharger clamp three times around the perimeter of the clamp and tighten the clamp to 17 N.m (13 ft. lbs.).
12. Install flexible exhaust differential pressure sensor tubing.
13. On 4X4 models, install transmission crossmember. Refer to **CROSSMEMBER, TRANSMISSION, INSTALLATION**.

14. When equipped, install skid plates.
15. Reconnect negative battery cables.
16. Using a scan tool, perform RESET REGENERATIVE FILTER TIMERS function found under ENGINE MISC. FUNCTIONS.

MUFFLER, EXHAUST

REMOVAL

3.7L/4.7L/5.7L ENGINE EXHAUST



80dd50bc

Fig. 18: Muffler & Insulators

Courtesy of CHRYSLER GROUP, LLC

1 - INSULATOR
2 - INSULATOR
3 - MUFFLER
4 - INSULATOR

1. Raise and support the vehicle.
2. Saturate the clamp nuts with spray lubricant. Allow 5 minutes for penetration.
3. Remove the tailpipe assembly. Refer to **TAILPIPE, EXHAUST, REMOVAL**.
4. Loosen clamps and nuts from muffler assembly (3).
5. Remove the muffler assembly (3) from the isolators (1, 2 and 4). Refer to **Fig. 18**.

5.7L ENGINE DUAL EXHAUST

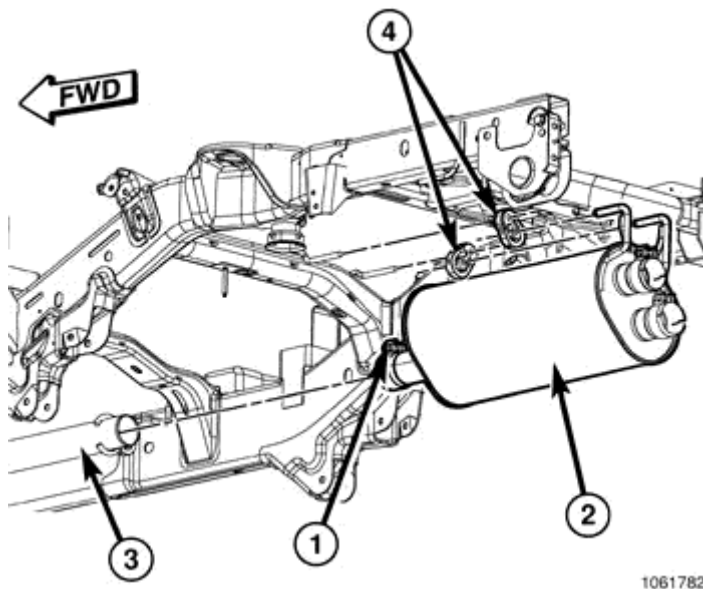
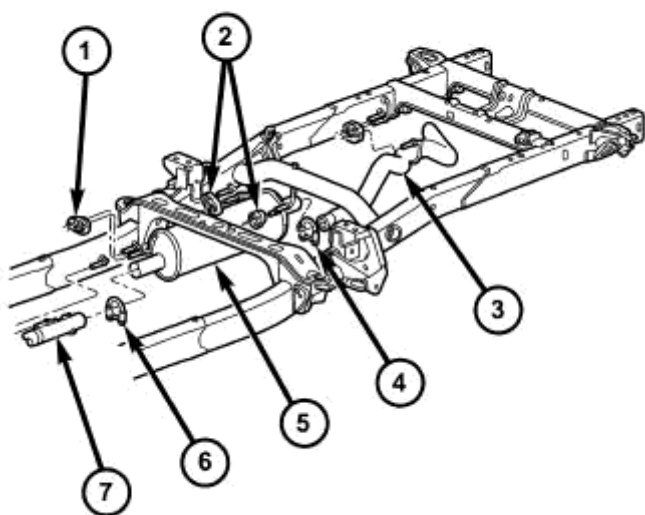


Fig. 19: Muffler, Isolators & Clamp
Courtesy of CHRYSLER GROUP, LLC

1. Raise and support the vehicle.
2. Remove the tailpipe assembly. Refer to **TAILPIPE, EXHAUST, REMOVAL**.
3. Saturate the muffler exhaust clamp nut (1) located on the front of the muffler assembly (2) with spray lubricant.
4. Loosen the muffler exhaust clamp (1).
5. Remove the muffler (2) from the isolators (4) and remove from the exhaust pipe (3).

DIESEL



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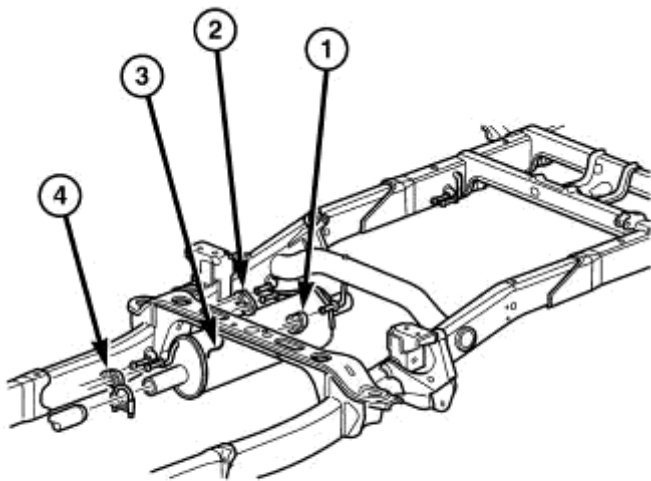
Fig. 20: Muffler Mounting Components
 Courtesy of CHRYSLER GROUP, LLC

1 - INSULATOR
2 - ISOLATOR
3 - TAILPIPE
4 - CLAMP
5 - MUFFLER
6 - CLAMP
7 - EXTENSION PIPE

1. Disconnect the battery negative cables.
2. Raise and support the vehicle.
3. Remove the muffler to tail pipe and extension pipe clamps.
4. Disconnect the muffler from the hanger isolators.
5. Disconnect the muffler from the tailpipe.
6. Disconnect the muffler from the extension pipe and remove from the vehicle.

INSTALLATION

3.7L/4.7L/5.7L ENGINE EXHAUST



80dd50bc

Fig. 21: Muffler & Insulators

Courtesy of CHRYSLER GROUP, LLC

1 - INSULATOR
2 - INSULATOR
3 - MUFFLER
4 - INSULATOR

1. Assemble muffler assembly (3) and clamps loosely to permit proper alignment of all parts.
2. Hang the muffler assembly (3) to the isolators (1, 2 and 4).
3. Tighten the clamp nuts to 54 N.m (40 ft. lbs.) torque.
4. Install the tailpipe assembly. Refer to **TAILPIPE, EXHAUST, INSTALLATION.**
5. Insure isolators (1, 2, and 4) are fully seated on exhaust hangers.
6. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.
7. Lower the vehicle.
8. Start the engine and inspect for exhaust leaks. Repair exhaust leaks as necessary.

5.7L ENGINE DUAL EXHAUST

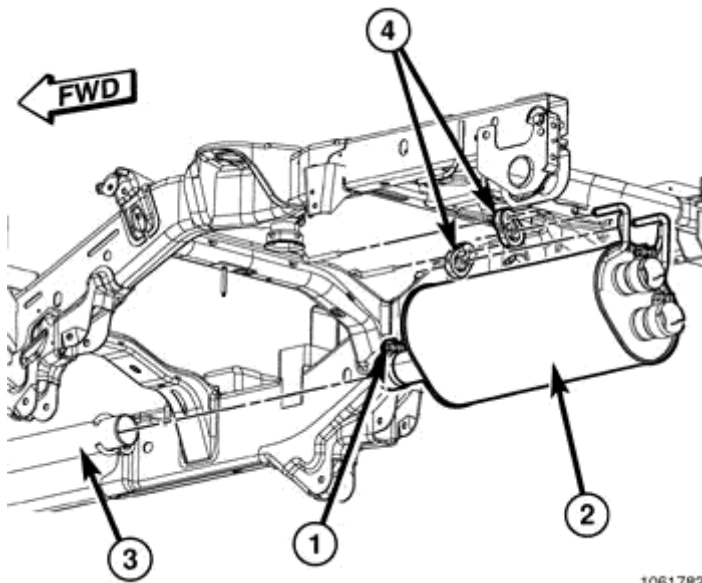
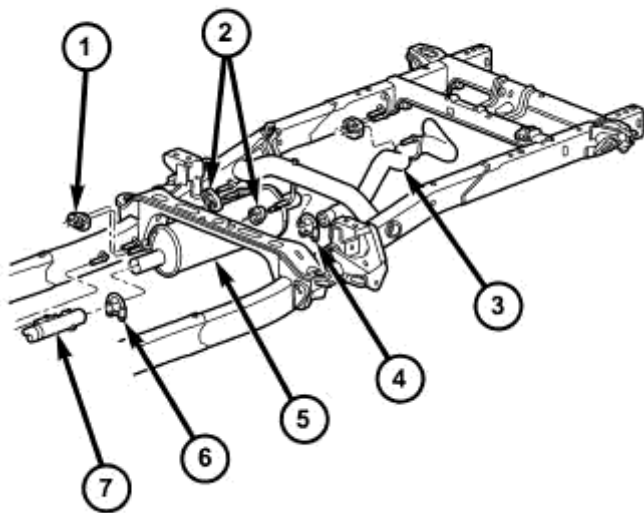


Fig. 22: Muffler, Isolators & Clamp
Courtesy of CHRYSLER GROUP, LLC

1. Pre-assemble muffler (2) and clamp (1) loosely to permit proper alignment of all parts.
2. Raise and support the vehicle.
3. Hang the dual outlet muffler (2) on the isolators (4).
4. Install muffler (2) on the exhaust pipe (3). Tighten to 54 N.m (40 ft. lbs.).
5. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.

DIESEL



8087ef04

Fig. 23: Muffler Mounting Components
 Courtesy of CHRYSLER GROUP, LLC

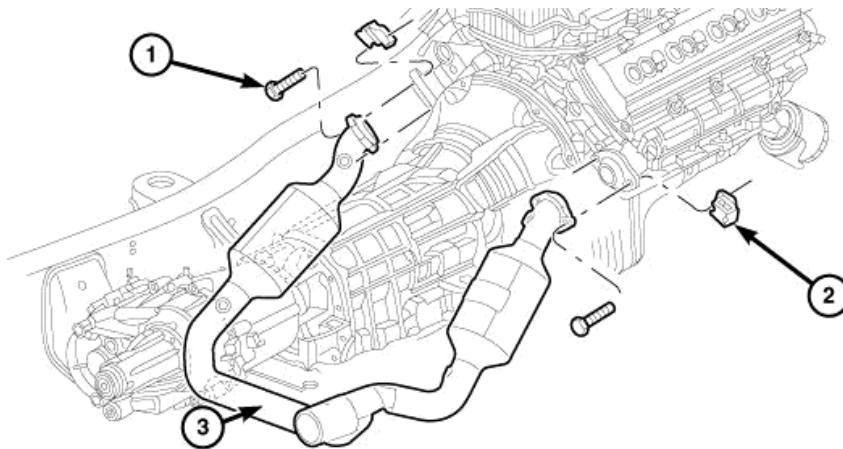
1 - INSULATOR
2 - ISOLATOR
3 - TAILPIPE
4 - CLAMP
5 - MUFFLER
6 - CLAMP
7 - EXTENSION PIPE

1. Install the muffler hanger rods into the isolators.
2. Install the muffler into the extension pipe.
3. Install the muffler into the tail pipe.
4. Install the exhaust clamps, align the exhaust system, and tighten the exhaust clamps to 54 N.m (40 ft. lbs.).
5. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.
6. Insure isolators are fully seated on exhaust hangers.
7. Lower the vehicle.
8. Connect the battery negative cables.
9. Start the engine and inspect for exhaust leaks. Repair exhaust leaks as necessary.

PIPE, EXHAUST

REMOVAL

3.7L/4.7L/5.7L ENGINE



3818186

Fig. 24: Exhaust Pipe, Manifold Bolts & J-Nuts
Courtesy of CHRYSLER GROUP, LLC

1. Raise and support the vehicle.
2. Unplug the upstream and downstream oxygen sensors. Swap over the sensors as necessary.
3. Remove and **discard** the exhaust pipe to manifold bolts (1) and J-nuts (2).
4. Loosen the exhaust pipe to Y-pipe clamp and separate the two pipes.
5. Shift the rear exhaust pipe rearward.
6. Carefully remove the exhaust system Y-pipe.

6.7L DIESEL

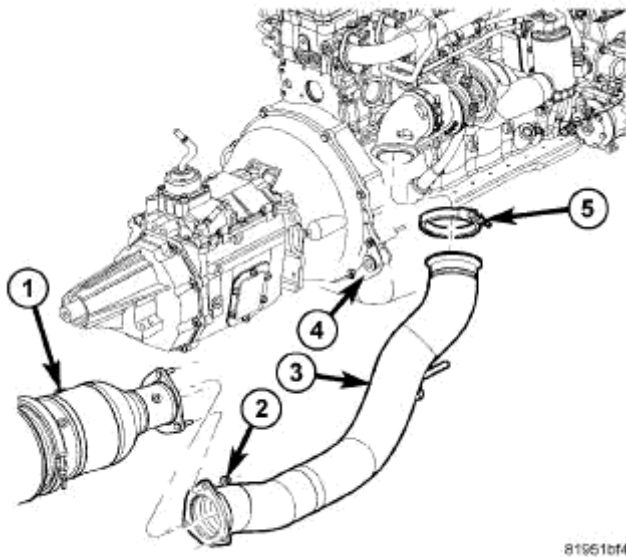


Fig. 25: 6.7L Exhaust Pipe Components
 Courtesy of CHRYSLER GROUP, LLC

1 - DOC/DPF
2 - NUTS
3 - EXHAUST PIPE -
4 - EXHAUST PIPE SUPPORT
5 - TURBOCHARGER CLAMP

1. Raise and support the vehicle on a hoist.
2. Saturate the bolts and nuts with heat valve lubricant. Allow 5 minutes for penetration.
3. Remove the exhaust pipe-to-DOC/DPF flange nuts (2).
4. 4X4 Vehicles - Remove transfer case skid plate. Refer to **PLATE, SKID, TRANSFER CASE, REMOVAL**.
5. 4X4 Vehicles - Remove transmission crossmember. Refer to **CROSSMEMBER, TRANSMISSION, REMOVAL**.
6. Remove the exhaust pipe-to-turbocharger clamp (5) and discard.
7. Remove the transmission mounted exhaust pipe support (4).
8. Separate the exhaust pipe (3).
9. Remove exhaust pipe (3).

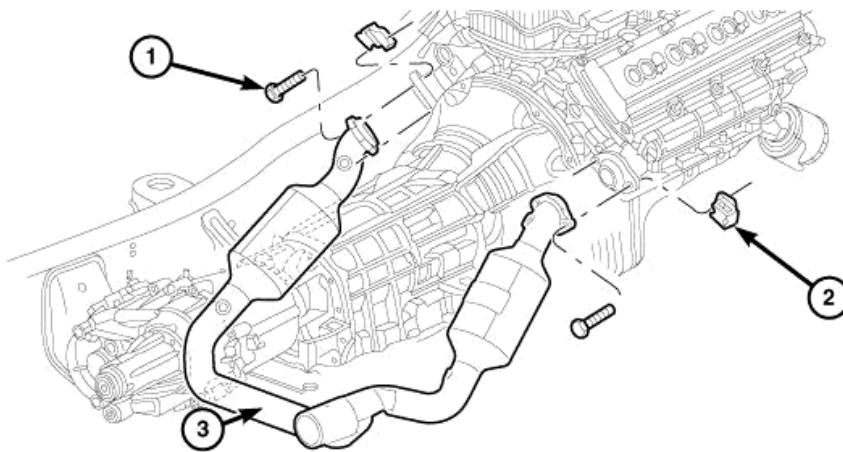
INSPECTION

INSPECTION

Discard rusted clamps, broken or worn supports and attaching parts. Replace a component with original equipment parts, or equivalent. This will assure proper alignment with other parts in the system and provide acceptable exhaust noise levels.

INSTALLATION

3.7L/4.7L/5.7L

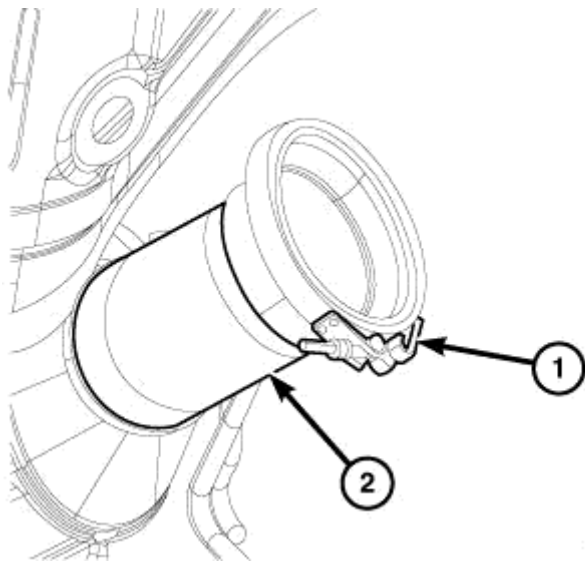


3818186

Fig. 26: Exhaust Pipe, Manifold Bolts & J-Nuts
Courtesy of CHRYSLER GROUP, LLC

1. Position the exhaust pipe (3) with proper clearance between the frame and underbody parts. A minimum clearance of 25 mm (1.0 in.) is required.
2. Position the exhaust pipe (3) to manifolds. Install the **new** bolts (1) and **new** J-nuts (2).
3. Hand tighten the nuts while making sure the flange is **evenly** positioned around the pipe.
4. Alternate tightening sequence to further ensure the flange stays even around the pipe. Tighten the nuts to 31 N.m (23 ft. lbs.).
5. Tighten the clamp nuts to 54 N.m (40 ft. lbs.) torque.
6. Lower the vehicle.
7. Start the engine and inspect for exhaust leaks and exhaust system contact with the body panels. Adjust the alignment, if needed. Refer to **DIAGNOSIS AND TESTING**.

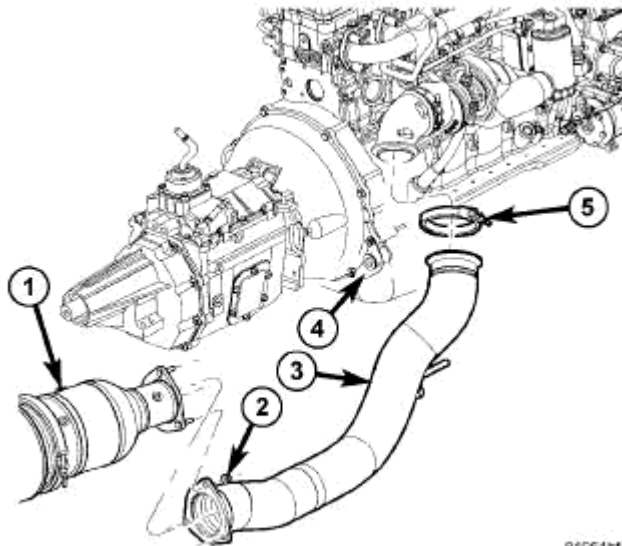
6.7L DIESEL



2592481

Fig. 27: Turbocharger Exhaust Outlet V-clamp
 Courtesy of CHRYSLER GROUP, LLC

1. Position DOC onto the turbocharger with the clamp (1) facing down as shown in illustration. Install the clamp (1) finger tight.



81561bf4

Fig. 28: 6.7L Exhaust Pipe Components
 Courtesy of CHRYSLER GROUP, LLC

1 - DOC/DPF
2 - NUTS
3 - EXHAUST PIPE -
4 - EXHAUST PIPE SUPPORT
5 - TURBOCHARGER CLAMP

2. Using a new flange gasket, position exhaust pipe (3) on DOC/DPF flange and turbocharger flange.
3. Install flange nuts (2). Tighten nuts (2) to 54 N.m (40 ft. lbs.).
4. Install transmission mounted exhaust pipe support (4). Tighten bolts to 43 N.m (32 ft. lbs.).
5. 4X4 Vehicles - Install transmission crossmember. Refer to **CROSSMEMBER, TRANSMISSION, INSTALLATION**.
6. 4X4 Vehicles - Install transfer case skid plate. Refer to **PLATE, SKID, TRANSFER CASE, INSTALLATION**.
7. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.
8. Tighten the DOC to turbocharger clamp to 17 N.m (13 ft. lbs). Using a rubber mallet, hit the DOC to turbocharger clamp three times around the perimeter of the clamp and tighten the clamp to 17 N.m (13 ft. lbs).
9. Lower the vehicle.
10. Start the engine and inspect for exhaust leaks. Repair exhaust leaks as necessary.

SENSOR, DIFFERENTIAL PRESSURE

DESCRIPTION

DESCRIPTION

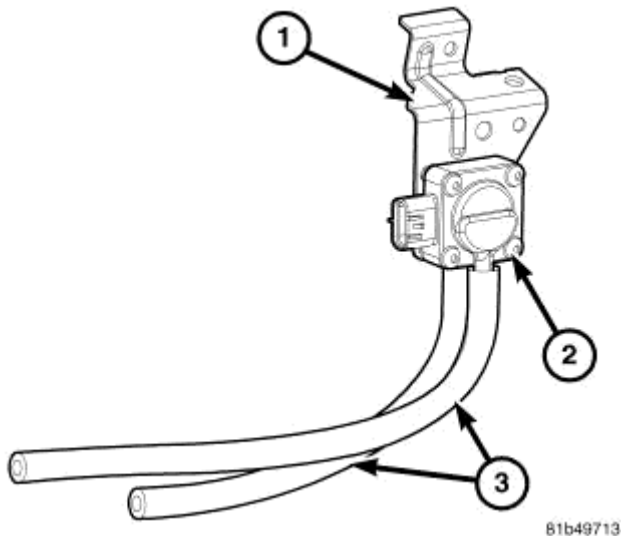


Fig. 29: Identifying Pressure Differential Sensor
 Courtesy of CHRYSLER GROUP, LLC

1 - MOUNTING BRACKET
2 - PRESSURE DIFFERENTIAL SENSOR
3 - HOSE

The Exhaust Differential Pressure Sensor is remotely mounted on the transmission housing. Two pressure tubes measure pressure before and after the Diesel Particulate Filter (DPF)/Diesel Oxidation Catalyst (DOC). The sensor is critical for fail-safe of regeneration strategy, because it interprets high pressure drops as possible high soot loads.

REMOVAL

REMOVAL

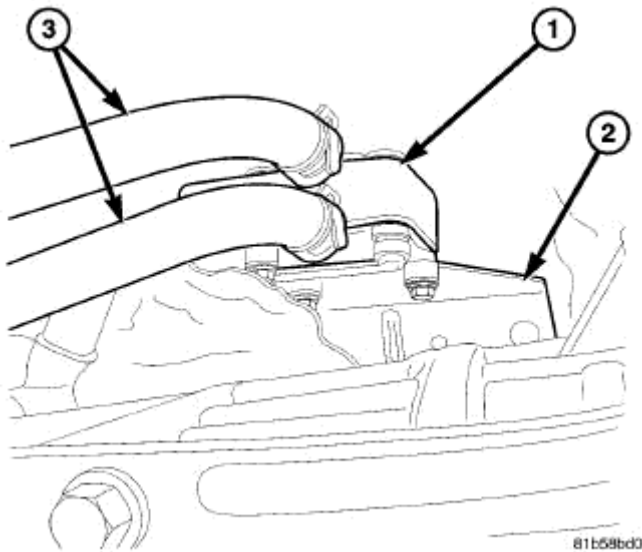
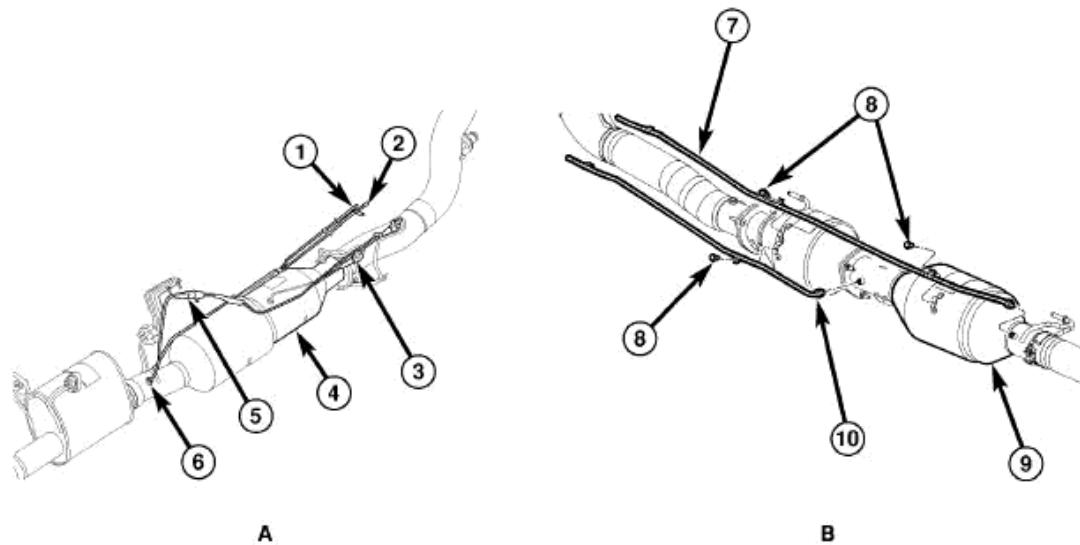


Fig. 30: Pressure Differential Sensor & Bracket
Courtesy of CHRYSLER GROUP, LLC

1. Raise and support vehicle.
2. Disconnect electrical connector.
3. Disconnect hoses at pressure differential pressure sensor.
4. Remove mounting bolt and differential pressure sensor.
5. Remove mounting bolts (1).



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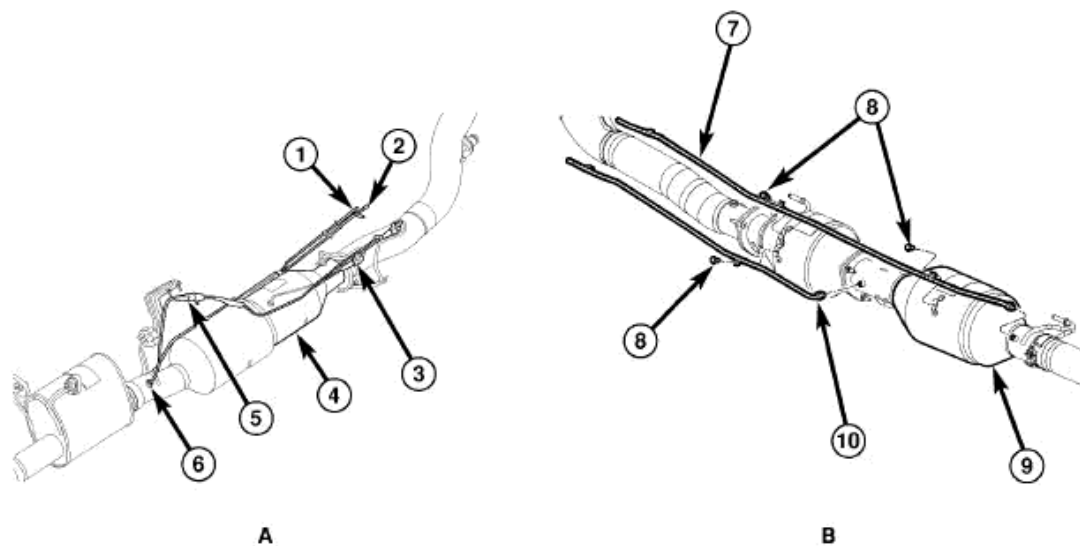
Fig. 31: Identifying Pressure Differential Tubing
 Courtesy of CHRYSLER GROUP, LLC

A - CAB CHASSIS	5 - REAR EXHAUST TEMP SENSOR CONNECTOR-CAB/CHASSIS
	6 - REAR EXHAUST TEMP SENSOR - CAB/CHASSIS
B - P/U	7 - REAR PRESSURE DIFFERENTIAL TUBING - P/U
1 - REAR DIFFERENTIAL PRESSURE SENSOR TUBING - CAB/CHASSIS	8 - MOUNTING BOLTS
2 - FRONT DIFFERENTIAL PRESSURE SENSOR TUBING - CAB/CHASSIS	9 - DPF - P/U
3 - FRONT EXHAUST TEMP SENSOR CONNECTOR - CAB/CHASSIS	10 - FRONT PRESSURE DIFFERENTIAL TUBING - P/U
4 - DOC/DPF - CAB/CHASSIS	

6. Remove pressure differential pressure tubing.

INSTALLATION

INSTALLATION



81b49784

Fig. 32: Identifying Pressure Differential Tubing
Courtesy of CHRYSLER GROUP, LLC

A - CAB CHASSIS

B - P/U

1 - REAR DIFFERENTIAL PRESSURE SENSOR TUBING - CAB/CHASSIS

2 - FRONT DIFFERENTIAL PRESSURE SENSOR TUBING - CAB/CHASSIS

3 - FRONT EXHAUST TEMP SENSOR CONNECTOR - CAB/CHASSIS

4 - DOC/DPF - CAB/CHASSIS

5 - REAR
EXHAUST
TEMP SENSOR
CONNECTOR-
CAB/CHASSIS

6 - REAR
EXHAUST
TEMP SENSOR
- CAB/CHASSIS

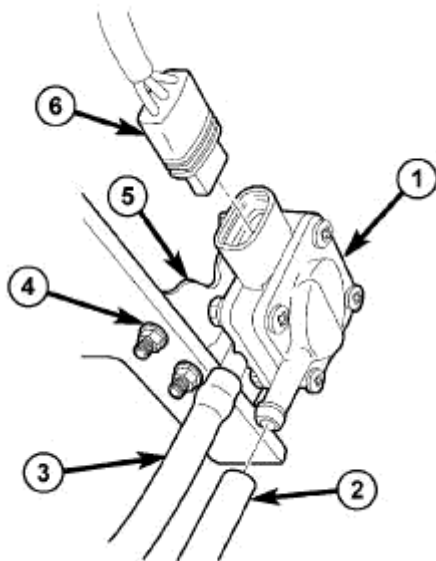
7 - REAR
PRESSURE
DIFFERENTIAL
TUBING - P/U

8 - MOUNTING
BOLTS

9 - DPF - P/U

10 - FRONT
PRESSURE
DIFFERENTIAL
TUBING - P/U

1. Install differential pressure tubing, if removed. Tighten fittings to 30 N.m (22 ft. lbs.).



81b61755

Fig. 33: Pressure Differential Sensor, Hoses & Connector
 Courtesy of CHRYSLER GROUP, LLC

- | |
|---|
| 1 - DIFFERENTIAL PRESSURE SENSOR
2 - REAR HOSE
3 - FRONT HOSE
4 - MOUNTING NUT
5 - MOUNTING BRACKET
6 - ELECTRICAL CONNECTOR |
|---|

2. Position differential pressure sensor (1).
3. Install mounting nuts (5) and bolts. Tighten to 10 N.m (89 in. lbs.).

NOTE: Before installing, inspect both pressure hoses and make sure there is not any dip across the hoses. In cases where water is frozen, a dip across the hoses can cause condensation which can set a MIL.

4. Install hose (2) to the rear DPF tubing.
5. Install hose (3) to the front DPF tubing.
6. Connect electrical connector (6).
7. Lower vehicle.

SENSOR, EXHAUST TEMPERATURE

DESCRIPTION

DESCRIPTION

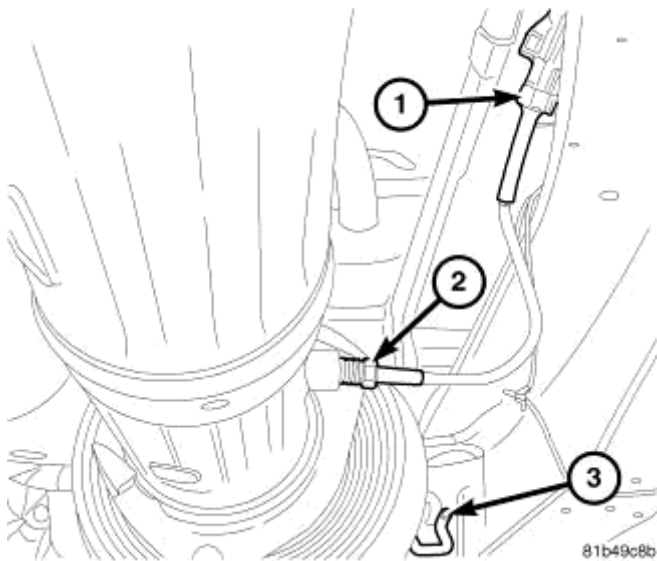


Fig. 34: Diesel Exhaust Temperature Sensor
Courtesy of CHRYSLER GROUP, LLC

1 - ELECTRICAL CONNECTOR
2 - DIESEL EXHAUST TEMPERATURE SENSOR

The Diesel Exhaust Temperature Sensors are thermistors and change resistance based on the temperature being measured. The Engine Control Module (ECM) provides a 5 volt reference voltage to the sensor. The ECM monitors the change in signal voltage and converts this to a temperature value.

OPERATION

OPERATION

When the exhaust gas temperature is cold, the sensor resistance is high, the Engine Control Module (ECM) will sense the resistance and sense the exhaust temperature as cold.

When the exhaust gas temperature is high, the sensor resistance is low, the ECM will sense the resistance and sense the exhaust temperature as high.

REMOVAL

REMOVAL

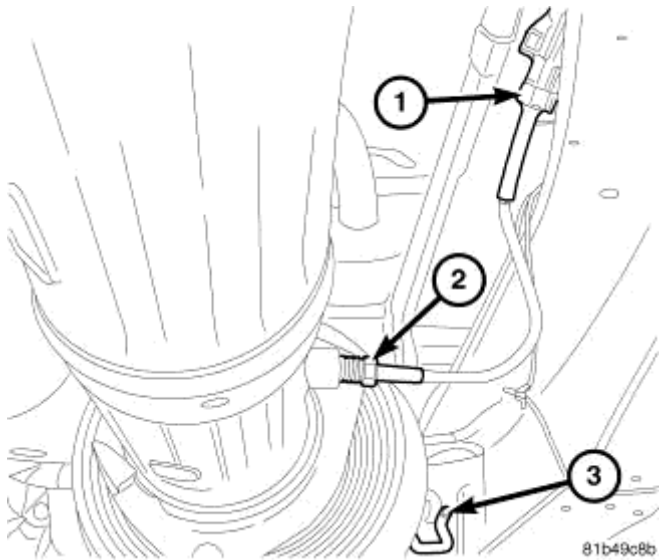


Fig. 35: Diesel Exhaust Temperature Sensor
 Courtesy of CHRYSLER GROUP, LLC

1 - ELECTRICAL CONNECTOR
2 - DIESEL EXHAUST TEMPERATURE SENSOR

1. Raise and support vehicle.
2. Disconnect diesel exhaust temperature sensor electrical connector (1).
3. Remove diesel exhaust temperature sensor (2).

INSTALLATION

INSTALLATION

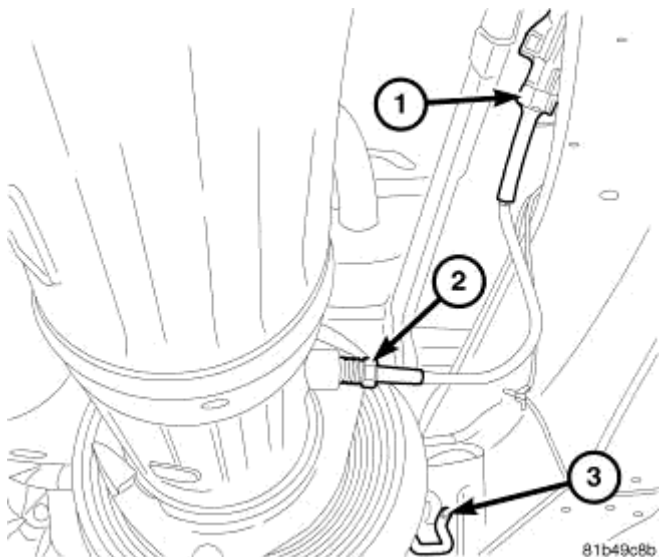


Fig. 36: Diesel Exhaust Temperature Sensor

Courtesy of CHRYSLER GROUP, LLC

1 - ELECTRICAL CONNECTOR

2 - DIESEL EXHAUST TEMPERATURE SENSOR

1. Install the diesel exhaust temperature sensor (2). Tighten sensor to 30 N.m (22 ft. lbs.).
2. Connect diesel exhaust temperature sensor electrical connector (1)
3. Lower vehicle.

SHIELD, HEAT

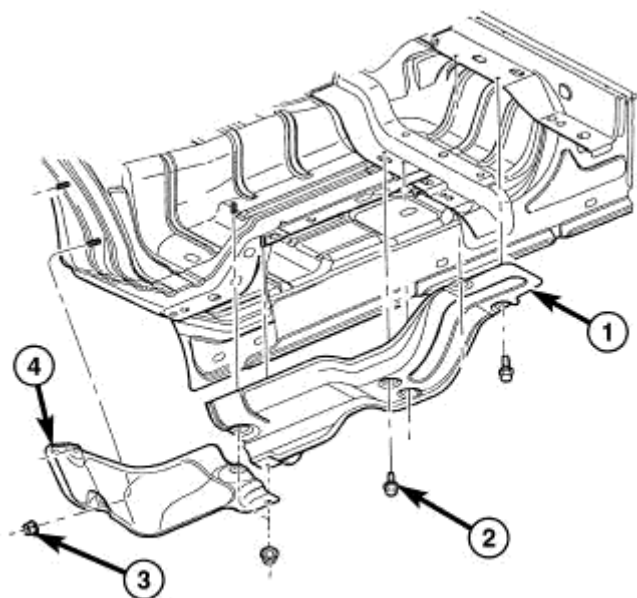
DESCRIPTION

DESCRIPTION

There are two types of heat shields used. One is stamped steel the other is molded foil sheets. The shields attach to the vehicle around the exhaust system to prevent heat from the exhaust system from entering the passenger area and other areas where the heat can cause damage to other components.

REMOVAL

REMOVAL



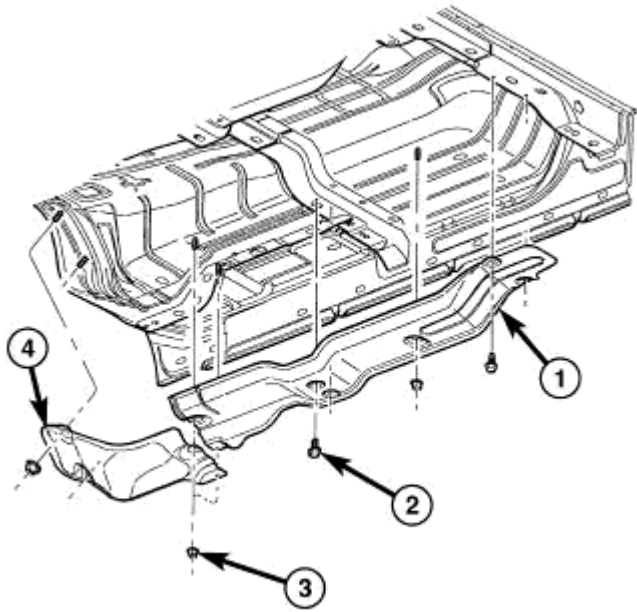
80dd66ac

Fig. 37: Heat Shields - RH - Reg Cab

Courtesy of CHRYSLER GROUP, LLC

1 - HEAT SHIELD
2 - FASTENER
3 - NUT
4 - HEAT SHIELD

1. Raise and support the vehicle.

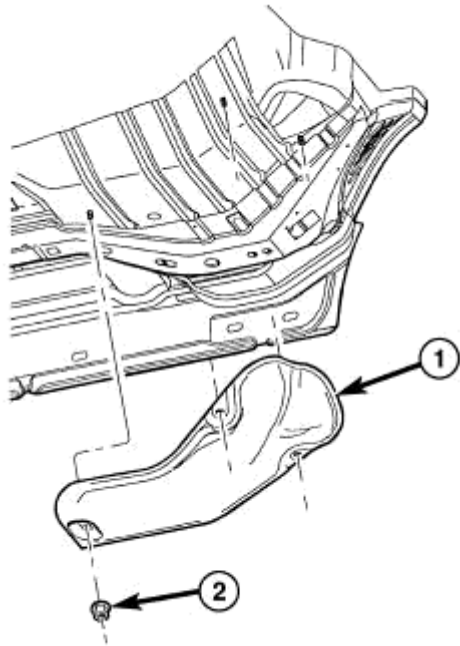


80dd6735

Fig. 38: Heat Shields - RH - Quad Cab
 Courtesy of CHRYSLER GROUP, LLC

1 - HEAT SHIELD
2 - FASTENER
3 - NUT
4 - HEAT SHIELD

2. Remove the nuts (3) or bolts (2) holding the exhaust heat shield (1) to the floor pan, crossmember or bracket. Refer to **Fig. 39** or **Fig. 38** or **Fig. 37**.



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Fig. 39: Heat Shield LH
Courtesy of CHRYSLER GROUP, LLC

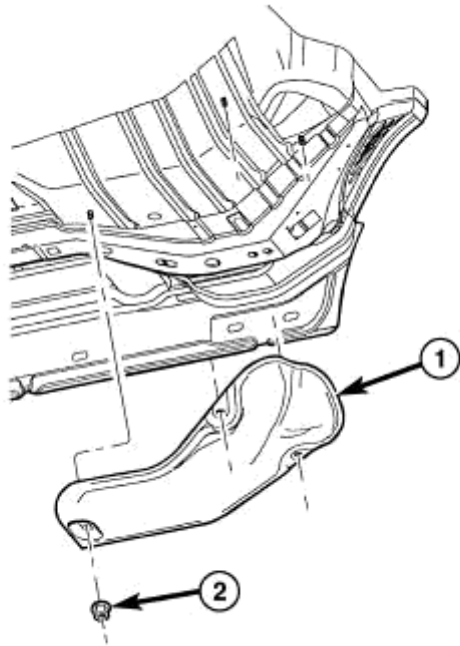
1 - HEAT SHIELD

2 - NUT

3. Slide the shield (1) out around the exhaust system.

INSTALLATION

INSTALLATION



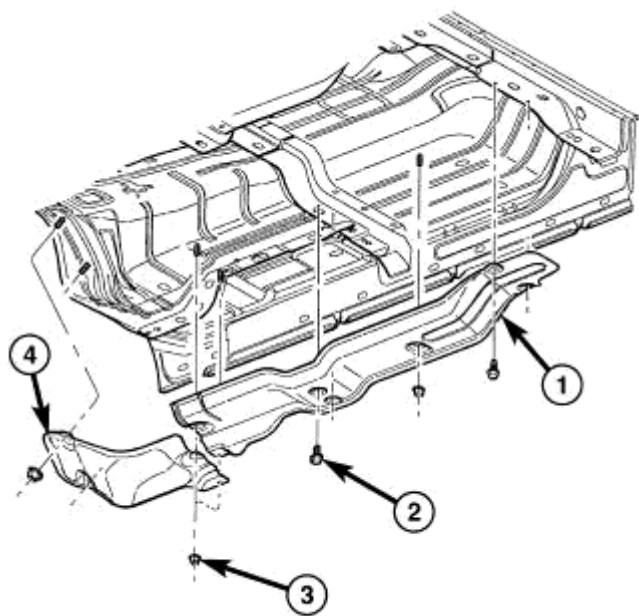
80dd676c

Fig. 40: Heat Shield LH

Courtesy of CHRYSLER GROUP, LLC

1 - HEAT SHIELD
2 - NUT

1. Position the exhaust heat shield (1) to the floor pan, crossmember or bracket and install the nuts (2) or bolts.

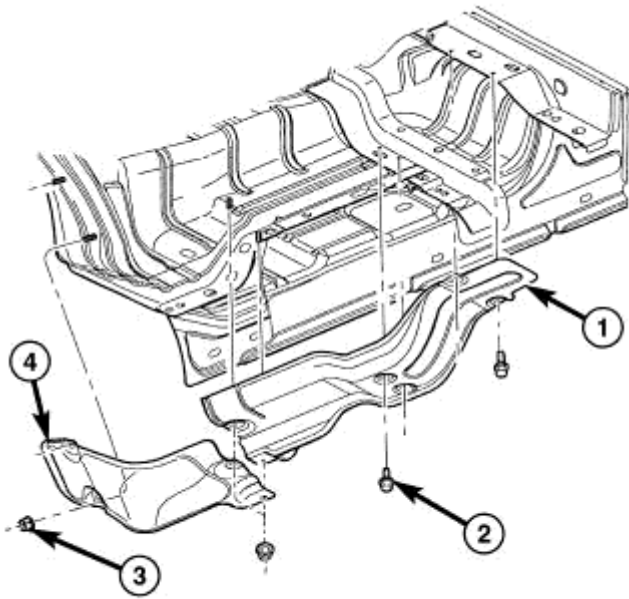


80dd6735

Fig. 41: Heat Shields - RH - Quad Cab
Courtesy of CHRYSLER GROUP, LLC

1 - HEAT SHIELD
2 - FASTENER
3 - NUT
4 - HEAT SHIELD

2. Tighten the nuts (3) and bolts (2) to 11 N.m (97 in. lbs.).



80dd66ac

Fig. 42: Heat Shields - RH - Reg Cab
Courtesy of CHRYSLER GROUP, LLC

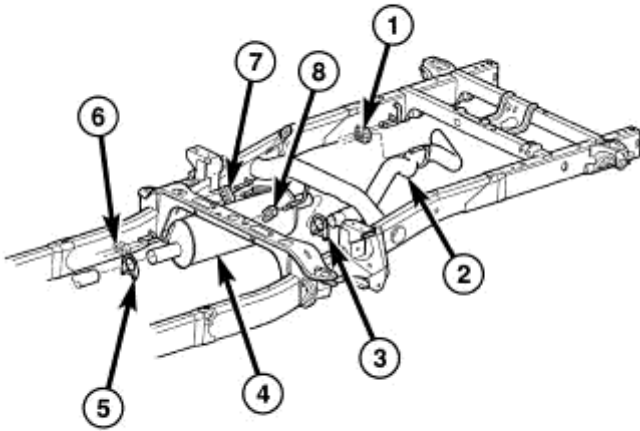
1 - HEAT SHIELD
2 - FASTENER
3 - NUT
4 - HEAT SHIELD

3. Lower the vehicle.

TAILPIPE, EXHAUST

REMOVAL

3.7L/4.7L/5.7L



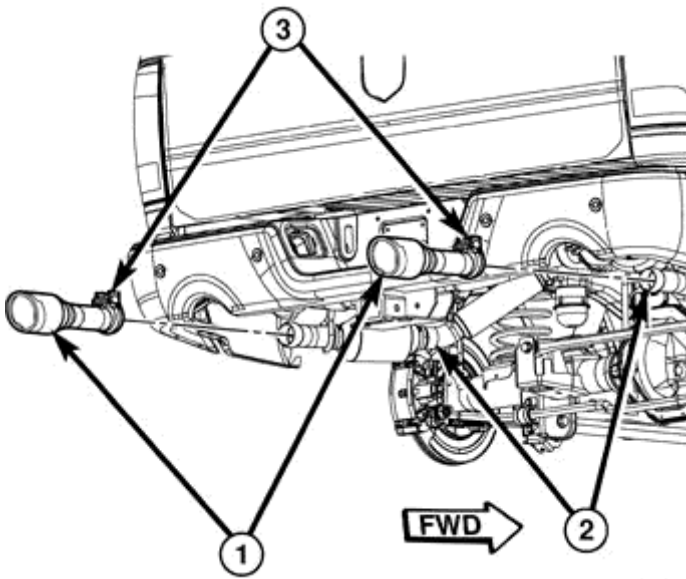
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Fig. 43: Tailpipe Components
 Courtesy of CHRYSLER GROUP, LLC

1 - INSULATOR
2 - TAILPIPE
3 - CLAMP
4 - MUFFLER
5 - CLAMP
6 - INSULATOR
7 - INSULATOR
8 - INSULATOR

1. Raise and support the vehicle.
2. Saturate the clamp (3) nuts with heat valve lubricant. Allow 5 minutes for penetration.
3. Remove clamps and nuts.
4. Disconnect the exhaust tailpipe (2) from the isolator (1).
5. Remove the exhaust tailpipe (2).

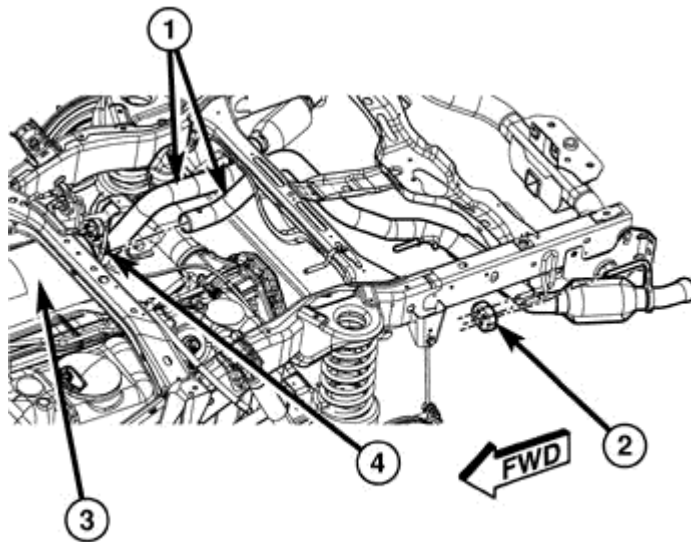
5.7L ENGINE DUAL EXHAUST



1062235

Fig. 44: Exhaust Tailpipe Tips
 Courtesy of CHRYSLER GROUP, LLC

1. Raise and support the vehicle.
2. Saturate the tailpipe tip clamp nuts (3) with spray lubricant.
3. Loosen the exhaust tailpipe tip clamp nuts (3) and remove the exhaust tailpipe tips (1).
4. Saturate the muffler exhaust clamp nuts located on the muffler assembly (3) with spray lubricant.
5. Loosen the muffler exhaust clamp nuts located on the rear muffler assembly (3).



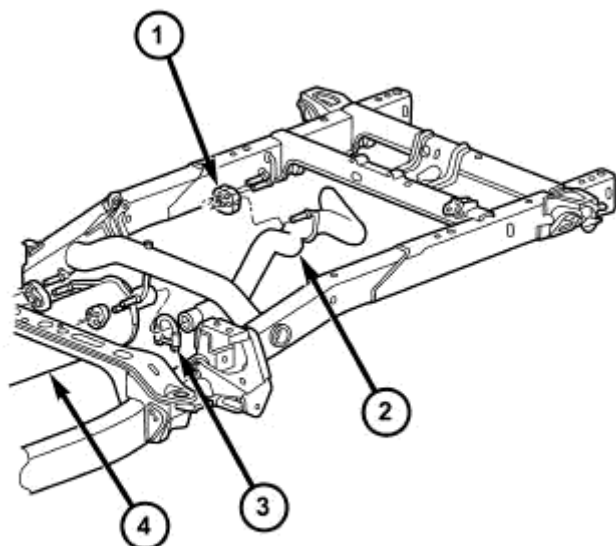
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Fig. 45: Exhaust Isolator
 Courtesy of CHRYSLER GROUP, LLC

6. Pull the exhaust tailpipes off the isolators (2) and remove the exhaust tailpipes (1) from the dual outlet

muffler assembly (3).

6.7L DIESEL ENGINE



8067e125

Fig. 46: Identifying Tailpipe - 5.9L Diesel
Courtesy of CHRYSLER GROUP, LLC

1 - ISOLATOR
2 - TAILPIPE
3 - CLAMP
4 - MUFFLER

1. Disconnect the battery negative cables.
2. Raise and support the vehicle.
3. Saturate the clamp nuts with heat valve lubricant. Allow 5 minutes for penetration.
4. Disconnect the exhaust tailpipe support hanger isolators.
5. Remove the muffler-to-tailpipe clamps.
6. Remove the tailpipe from the vehicle.

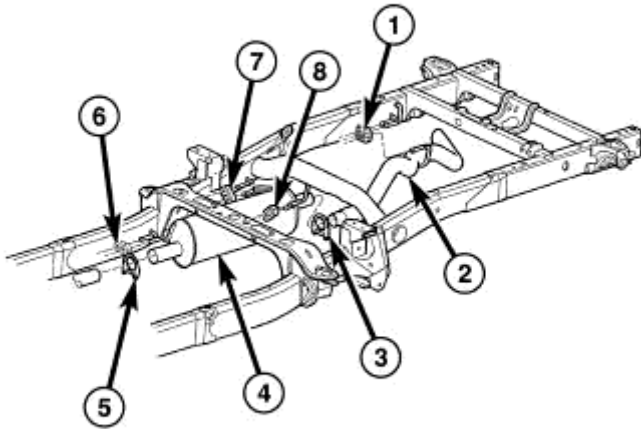
INSPECTION

INSPECTION

Discard rusted clamps, broken or worn supports and attaching parts. Replace a component with original equipment parts, or equivalent. This will assure proper alignment with other parts in the system and provide acceptable exhaust noise levels.

INSTALLATION

3.7L/4.7L/5.7L ENGINE



80dd531a

Fig. 47: Tailpipe Components

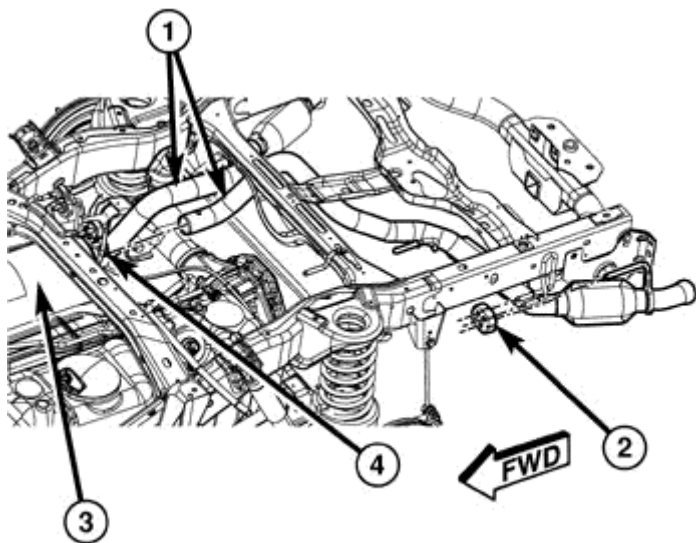
Courtesy of CHRYSLER GROUP, LLC

1 - INSULATOR
2 - TAILPIPE
3 - CLAMP
4 - MUFFLER
5 - CLAMP
6 - INSULATOR
7 - INSULATOR
8 - INSULATOR

1. Loosely assemble exhaust tailpipe (2) and clamp (2) to permit proper alignment of all parts.
2. Position the exhaust tailpipe (2) for proper clearance with the underbody parts.
3. Tighten all clamp nuts to 54 N.m (40 ft. lbs.) torque.
4. Hang the tailpipe (2) onto the isolator (1).
5. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.
6. Lower the vehicle.
7. Start the engine and inspect for exhaust leaks. Repair exhaust leaks as necessary. Refer to **DIAGNOSIS**

AND TESTING.

5.7L ENGINE DUAL EXHAUST

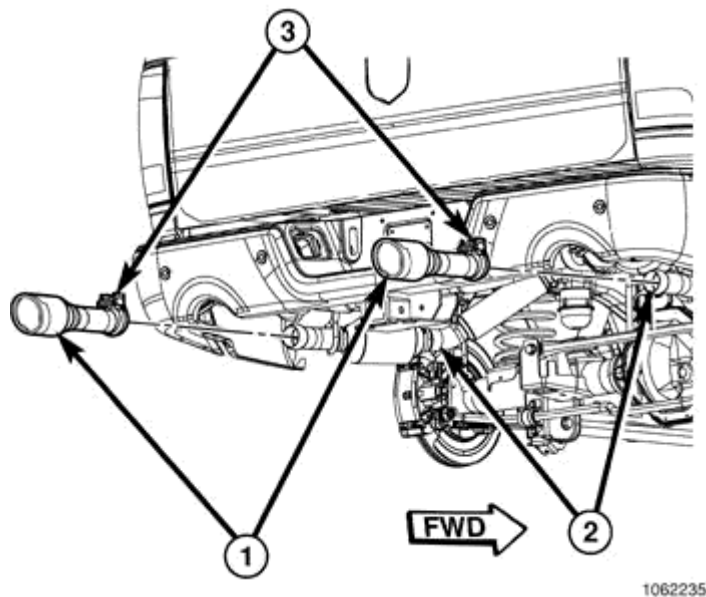


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Fig. 48: Exhaust Isolator

Courtesy of CHRYSLER GROUP, LLC

1. Pre-assemble tailpipe (2) and clamp (1) loosely to permit proper alignment of all parts.
2. Raise and support the vehicle.
3. Hang the driver side tailpipe assembly (1) on the isolator (2).
4. Install driver side tailpipe assembly (1) to the top left outlet of the muffler assembly (3). Tighten to 54 N.m (40 ft. lbs.).
5. Install passenger side tailpipe assembly (1) to the lower right outlet of the muffler assembly (3). Tighten to 54 N.m (40 ft. lbs.).

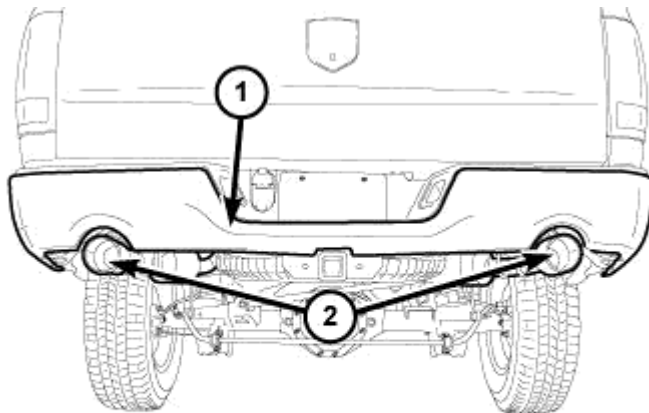


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Fig. 49: Exhaust Tailpipe Tips
 Courtesy of CHRYSLER GROUP, LLC

6. Loosely install tailpipe tips (1) to the tailpipe assembly (2).

NOTE: DO NOT tighten tailpipe tips at this time.



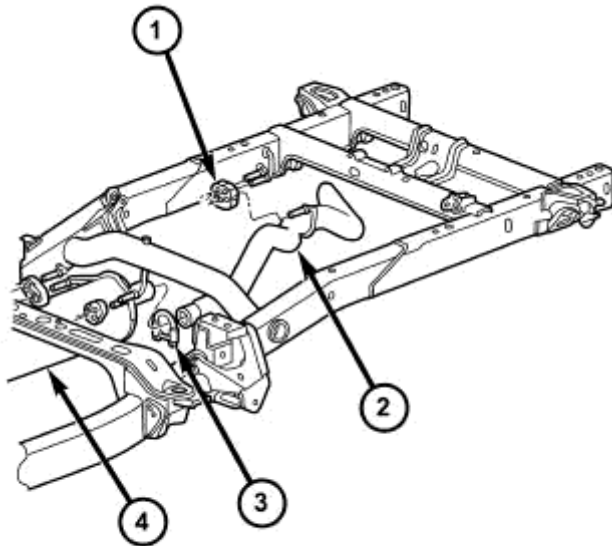
1062351

Fig. 50: Tailpipe Tips
 Courtesy of CHRYSLER GROUP, LLC

7. Check the exhaust system components for any contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.
8. One properly aligned, tighten the tailpipe tips (2) to 25 N.m (19 ft. lbs.).

9. Lower the vehicle.
10. Start the engine and inspect for exhaust leaks. Repair exhaust leaks as necessary. Refer to **DIAGNOSIS AND TESTING**.

6.7L DIESEL ENGINE



8067ef25

Fig. 51: Identifying Tailpipe - 5.9L Diesel
Courtesy of CHRYSLER GROUP, LLC

1 - ISOLATOR
2 - TAILPIPE
3 - CLAMP
4 - MUFFLER

1. Install the tailpipe into the muffler.
2. Install the tailpipe hanger rods into the isolators
3. Install the exhaust clamp, align the exhaust system, and tighten the clamp 48 N.m (35 ft. lbs.) torque.
4. Check the exhaust system for contact with the body panels. A minimum of 25 mm (1.0 in.) is required between the exhaust system components and body/frame parts. Make the necessary adjustments, if needed.
5. Lower the vehicle.
6. Connect the battery negative cables.
7. Start the engine and inspect for exhaust leaks. Repair exhaust leaks as necessary.