Induction System

INTAKE MANIFOLD

The 4.0L engine standard production intake manifold is made of cast aluminum and uses eleven bolts to mount to the cylinder head (Figure 4-48). This mounting style improves sealing and reduces the chance of leaks.

Removal and Installation

The engine intake manifold and exhaust manifolds must be removed and installed together. The manifolds use a common gasket at the cylinder head. Refer to ***Exhaust Manifolds,*** 'Exhaust System' section of this chapter for more information.

MULTI-POINT FUEL INJECTION (MPI)

The 4.0L engine uses a sequential Multi-Port Fuel Injection (MPI) system. Fuel is injected into the intake manifold before the intake valve in precise metered amounts through electrically operated injectors. The injectors are fired in a specific sequence by the Powertrain Control Module (PCM). The PCM constantly adjusts the amount of fuel injected to meet changing operating conditions by controlling injector pulse width (the length of time the injector is energized). The PCM also adjusts ignition timing by controlling the ignition coil operation through the Ignition Control Module (ICM). The PCM determines air-fuel mixture and ignition timing based on inputs it receives from various sensors that monitor engine operating conditions.

The PCM receives inputs from sensors that react to exhaust gas oxygen content, coolant temperature, manifold absolute pressure, engine speed (crankshaft position), throttle position, battery voltage, intake manifold air temperature, engine knock and transmission gear selection. These inputs represent the engine's instantaneous operating conditions. Air-fuel mixture and ignition timing calibrations for various driving and atmospheric conditions are pre-programmed into the PCM. The PCM monitors and analyzes its various inputs, computes engine fuel and ignition timing requirements based on these inputs, and controls fuel delivery and ignition timing accordingly. The Engine Control System is comprised of **(1)** the sensors and switches that provide input to the PCM, (2) the PCM itself, and **(3)** the PCM outputs (engine control devices that the PCM constantly adjusts). The Engine Control System consists of:

- Battery Voltage
- Manifold Absolute Pressure (MAP) Sensor
- Coolant Temperature Sensor
- Manifold Air Temperature (MAT) Sensor
- Exhaust Oxygen (O_2) Sensor
- Engine Speedcrankshaft Position Sensor
- Throttle Position Sensor
- Injector Synchronization Signal
- A/C Select Signal
- A/C Request Signal
- Neutral Safety Switch
- Knock Sensor
- Fuel Pump Relay
- Fuel Injectors
- Idle Speed Stepper Motor
- B+ Latch Relay
- Oxygen Sensor Heater Relay
- EGR Valve Solenoid
- Ignition Control Module
- Shift Indicator Light (manual transmissions only)
- A/C Clutch Relay

Powertrain Control Module (PCM)

The Powertrain Control Module (PCM) is a digital microprocessor. Air-fuel mixture calibrations for various driving and atmospheric conditions are pre-programmed into the PCM. The PCM monitors and analyzes its various inputs, computes engine fuel and ignition timing requirements based on these inputs, and controls fuel delivery and ignition timing accordingly. As operating conditions change, the PCM adjusts injector pulse width and ignition timing for optimum performance and fuel economy.

Jeep High Performance Computer

Mopar Performance Parts computer provides more spark advance and increased fuel flow for off road racing applications. This computer will enhance other performance modifications. For 1987-90, 4.0L engines only.

P4529334 Jeep high performance computer.

PCM Inputs

The PCM is powered by the vehicle's battery. When the ignition is turned to the ON or START position, the following inputs are supplied to the PCM:

- Battery Voltage
- Manifold Absolute Pressure (MAP) Sensor
- Coolant Temperature Sensor

- Manifold Air Temperature (MAT) Sensor
- Exhaust Oxygen (O_2) Sensor
- Engine Speed/crankshaft Position Sensor
- Throttle Position Sensor
- Injector Synchronization Signal
- A/C Select Signal
- Neutral Safety Switch (gear selection – automatic transmission)
- **Knock** Sensor
- **Start** Signal

PCM Outputs

Based upon signals from various input sensors and switches, the PCM adjusts the following components (PCM outputs):

- Fuel Pump Relay
- B+ Latch Relay
- Oxygen Sensor Heater Relay
- A/C Clutch Relay
- Fuel Injectors
- Idle Speed Stepper Motor
- EGR Valve Solenoid
- Ignition Control Module (ICM)
- Shift Indicator Light (manual transmission only)

Modes of Operation

As input signals to the PCM change, the PCM adjusts its response to the output devices. For example, the PCM must calculate a different injector pulse width and ignition timing for idle than it does for wide open throttle. There are eight different modes of operation that determine how the PCM responds to the various input signals.

Modes of operation are of two different types: OPEN LOOP and CLOSED LOOP.

During OPEN LOOP modes the PCM receives input signals and responds only according to preset PCM Programming. Input from the oxygen (O_2) sensor is not monitored during OPEN LOOP modes.

During CLOSED LOOP modes the PCM does monitor the O_2 sensor input. This input indicates to the PCM whether or not the calculated injector pulse width results in the ideal air-fuel ratio (14.7 parts air to 1 part fuel). By monitoring the exhaust oxygen content through the O_2 sensor, the PCM can 'fine tune' the injector pulse width to achieve optimum fuel economy combined with low emission engine Performance.

The MPI system has the following modes of operation:

- Ignition Switch ON
- Engine Start-Up (Crank)
- Engine Warm-up
- Idle
- Cruise
- Deceleration
- Wide Open Throttle
- Ignition Switch OFF

The ignition switch ON, engine start-up (crank), engine warm-up, deceleration, and wide open throttle modes are OPEN LOOP modes. The idle and cruise modes, ***with the engine at operating temperature,*** are CLOSED LOOP modes.

Throttle Body

Filtered air from the air cleaner enters the intake manifold through the throttle body. Fuel does not enter the intake manifold through the throttle body. Fuel is sprayed into the manifold by the fuel injectors. This throttle body, mounted on the intake manifold, contains an *air* bypass passage that is used to supply air for idle conditions, and a throttle valve for above idle conditions.

The throttle position sensor and idle speed stepper motor are attached to the throttle body. The accelerator cable is connected to the throttle valve through a bellcrank and linkage mounted to the intake manifold.

There are different throttle bodies for automatic and manual transmission equipped vehicles. The throttle valve is not controlled by the PCM.

Fuel Rail

The fuel rail supplies fuel to the injectors and is mounted to the intake manifold (Figure 4-47). The fuel pressure regulator is attached to the rail and the fuel pressure test port is integral with the rail. The fuel rail is not repairable.

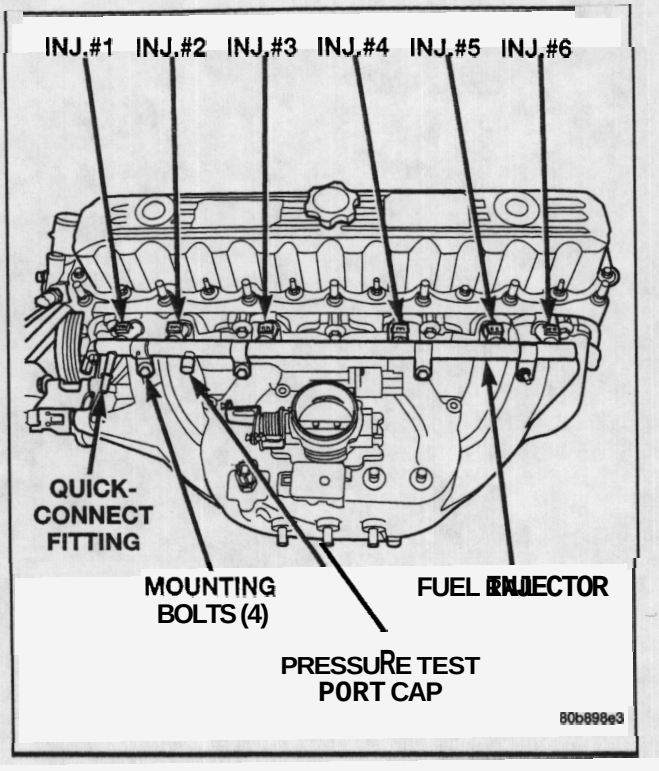


Figure 4 - 47

Fuel Pressure Regulator

The fuel pressure regulator used with the MPI fuel system is a vacuum assisted, non-adjustable type. The regulator is mounted on the output end of the fuel rail and is connected to intake manifold vacuum. The regulator is calibrated to maintain fuel system pressure at approximately 214 kPa (31 psi) with vacuum applied while the engine is at idle. Fuel pressure will be 55-69 kPa (8-10 psi) higher if vacuum is not applied to the regulator.

The pressure regulator contains a diaphragm, calibrated spring and fuel return valve. Fuel pressure operates on the bottom side of the diaphragm while spring pressure and intake manifold vacuum operate on the top side of the diaphragm. Spring pressure tries to force the return valve closed. Fuel pressure, with assistance from manifold vacuum on the spring side, acts against the spring pressure to open the return valve. Thus, ***system fuel pressure*** is the amount of fuel pressure required to force against spring pressure and unseat the fuel return valve.

Without vacuum applied to the spring side of the regulator, the spring is calibrated to open the fuel return outlet when the pressure differential between the fuel injectors and the intake manifold reaches approximately 269 kPa (39 psi). Since manifold vacuum varies with engine operating conditions, the amount of vacuum applied to the spring side of the diaphragm varies. For this reason, fuel pressure varies depending upon intake manifold vacuum. With low vacuum, such as during wide open throttle conditions, minimal vacuum assistance is available and full spring pressure is exerted to seal the fuel outlet causing system pressure to increase. With high vacuum, such as during idle, fuel pressure on the bottom of the diaphragm is assisted by intake manifold pressure on the spring side of the diaphragm, resulting in lower system fuel pressure. The fuel pressure regulator is not controlled by the PCM.

Racing Modifications

By their nature, unlike carbureted engine set-ups, fuel injection systems deliver fuel equally among all six cylinders. It's because of this excellent fuel distribution characteristic that fuel injection is preferred over carburetors, even over high performance 2 and 4-Bbl. carburetors.

And don't disconnect those stock fuel injection sensors! Today's engines run a lot hotter because they run a lot leaner; because of this, fuel injection temperature is very critical. It is something that has to be constantly monitored and stabilized to keep the fuel injection and the power level in their proper places. Mopar Performance Parts recommends the use of all sensors, even in high-performance racing set-ups. These sensors constantly input vital information to the PCM, and the PCM corrects the mixture accordingly.

And don't abandon that oxygen sensor, either. Since racing set-ups don't use catalytic converters, use an EGT probe to locate the hottest spot in the exhaust system and install the oxygen sensor there.

AIR FILTERS

High Performance Air Filter Element

Special reusable filter element for high performance. Increases air flow versus stock filters which increases engine output.

P5249792	High performance air filter element, 1993-97 Jeep Grand Cherokee 4.0L only.
P5249918	High performance air filter element, 1991-96 Jeep Wrangler 4.0L only.
P4876273	High performance air filter element, 1997-98 Jeep Wrangler 4.0L only.
P4876272	High performance air filter element, 1987-96 Jeep Cherokee 4.0L only.

Air Filter Cleaning Fluid

Mopar Performance Parts long-life high performance air filters are reusable. This cleaning fluid is designed to remove dirt to extend the life of the filter.

P4529392	Air filter cleaning fluid.

Air Filter Oil

Long life, high performance air filters trap dirt with a special oil on the filter. After cleaning air filters, re-oil them with this special fluid.

P4529393 Air filter oil.

TURBOCHARGING

Turbocharging is not for the amateur. People who want turbochargers on their race vehicles are those looking for an added amount of horsepower to their already well-running engines.

Turbocharging is not a new engineering feature. It has been used for many years in many applications. Even some production models of the mid-1960s had a turbocharging option. However, after a year or two in production, these options were dropped.

Over the past several years, interest in turbocharging has increased rapidly. Much of this interest is centered around the Street Machine, Street Rod, and recreational vehicle segments of the automotive high performance scene. We have been evaluating the turbocharging of Jeep engines for several years. We have been primarily interested in gaining experience and knowledge in the area and have left the marketing of kits, etc., to the aftermarket manufacturers.

Turbocharging is best suited to small engines with low compression ratios because of the quality of gasoline currently available. Turbochargers can add a lot of power to an engine without having to change engine displacement, swap engines, or disassemble the engine. Most aftermarket systems just bolt right on. Jeep engines are particularly well-suited to turbocharging because of their heavy duty construction and reliability.

Choosing a turbocharger can be a complicated task which is beyond the scope of this discussion. For details, we suggest that you contact the various turbo manufacturers. In general, small engines should use small turbochargers. Also, small turbochargers are best suited for general purpose use. The larger turbochargers are designed for high engine speeds and high outputs, which make them best suited for actual racing applications. The boost pressure from the turbocharger for a general purpose application would be in the 5 to 10 psi range. For boost pressures over 10 psi and/or higher compression ratios (over 8.0:1), water and/or alcohol injection is needed. For general purpose use, a conservative camshaft is an advantage because it improves low speed response. Also, for general purpose use, water injection is not recommended because if the water is allowed to run out, excessive detonation and engine failure would quickly result.

In a turbocharging application, the most likely parts to fail in an engine are the pistons and/or rings, which will fail from detonation. Therefore, low compression ratios and lower boost pressures are recommended for general purpose use, and water injection should be used in racing applications. For general purpose turbocharger applications, a spark advance retard system sensitive to positive manifold pressure should be added to the distributor.

Some general tips on turbocharging are as follows. A wastegate increases the engine's performance, especially at lower engine speeds. **A** turbocharger unit needs to be oiled from the engine. It should also have a much larger oil return line to the sump than the line that is used to supply the oil to the turbo under pressure.

If you have further questions on turbocharging, we suggest that you contact the manufacturer of the turbocharging system you are interested in.

SUPERCHARGING

Supercharging is not for the amateur. People who want superchargers on their race vehicles are those looking for an added amount of horsepower to their already well-running engines.

There are many types of superchargers on the market. There are roots blowers and centrifugal blowers. There are names like Paxton, Latham, Judson, B & M, Weiand, and many others. But to most racers and performance enthusiasts, the blower that they want on either their race or dual purpose vehicle is a 6-71. It is a roots blower, but it's better known as the blower the pros have used in Top Fuel and Funny Car racing dating back to the late 1960s.

The 6-71 roots blower makes power (and torque) by putting a positive pressure in the intake manifold. In a typical dual purpose application, this pressure is in the 5 to 7 psi range.

6-71 blowers were designed and built originally for diesel engines. They have never been standard production on any gasoline engine. However, they have become very popular additions for Street Machines and Street Rods. These "automotive" units are remanufactured and/or specially built for racing/high performance purposes.

There are two general types of 6-71 blowers for high performance applications–Gas/Fuel "pro" racing and dual purpose. These two look the same externally but are different internally and use a different drive arrangement. We'll leave the "Gas/Fuel" racing blowers to the pros. They are much more expensive.

Dual purpose 6-71 blowers bolt to a specially modified intake manifold usually based on a carbureted intake for the specific engine. In some cases, it is a unique casting.

4.0 LITRE 4.0 LITRE 4.0 LITRE

Once you have the special intake manifold, the blower can be bolted on to your engine. After the carburetor or fuel injection is added to the top of the blower, a hole is cut in the hood, fuel lines and throttle linkage added, and everything is done except for the blower drive, which is added to the front of the engine. The adaptation of the blower to the intake for your specific engine and the blower drive itself are best left to the dual purpose blower specialists that make the kits.

Note: Due to the increased air flow, supercharging an engine requires a large increase in fuel delivery. Production fuel injection systems are not capable of meeting this fuel demand. To supercharge an engine which has production fuel injection, the injection system must be substantially modified or else removed and a carburetion system installed.

Sources

The various engine builders and suppliers in the supercharging area are very important people to keep in touch with to be able to keep up-to-date. Their addresses are listZed below.

Keith Black Racing Engines
11120 Scott Avenue
South Gate, California 90280

Milodon Engineering Co.
20716 Plummer Street
Chatsworth, California 91311

B & M
9142 Independence Avenue
Chatsworth, California 91311
www.bmracing.com

Crane Cams
530 Fentress Boulevard
Daytona Beach, Florida 32114
www.cranecams.com

Exhaust System

INTRODUCTION

The basic exhaust system consists of an exhaust manifold, exhaust pipe with oxygen sensor, catalytic converter, heat shield(s), muffler and tailpipe.

The 4.0L engine uses a seal between the exhaust manifold and exhaust pipe to assure a tight seal and strain-free connection, a single muffler, and a single, monolithic-type catalytic converter.

The exhaust system must be properly aligned to prevent stress, leakage, and body contact. If the system contacts any body panel, it may amplify objectionable noises originating from the engine or body.

When inspecting an exhaust system, critical items to look for are cracked or loose joints, stripped screw or bolt threads, corrosion damage, and worn, cracked or broken hangers. Replace all components that are badly corroded or damaged. DO NOT attempt to repair. When replacement is required, use original equipment parts (or their equivalent). This will assure proper alignment and provide acceptable exhaust noise levels.

All exhaust systems should be checked for leaks. A leak in the exhaust system is unsafe and will cost you power. DO NOT, under any circumstances, use flexible tubing anywhere in the exhaust system as the efficiency of the flow will be reduced.

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

Intake/Exhaust Manifold Gasket

The 4.0L engine uses a common intake and exhaust manifold gasket. This gasket is designed for original replacement. For 4.0L engine only.

P4529243 Intake/Exhaust manifold gasket.

Intake/Exhaust Manifold Race Gasket

Made from special high temperature material for added durability in racing. Can be used as a service replacement. 4.0L engine only.

P4876112 Intake/Exhaust manifold race gasket.

Intake/Exhaust Manifold Attaching Package

Package of factory original nuts and bolts to attach intake and exhaust manifolds. Includes 15 bolts, 12 washers, two studs, two spacers, two pins and one tube. For 1986-89, 4.0L engines only.

P4529680 Intake/Exhaust manifold attaching package.

Catalytic Converter

There is no regularly scheduled maintenance on any DaimlerChrysler catalytic converter. If damaged, the converter must be replaced.

The stainless steel catalytic converter body is designed to last the life of the vehicle. Excessive heat can result in bulging or other distortion, but excessive heat will not be the fault of the converter. A fuel system, air injection system or ignition system malfunction that permits unburned fuel to enter the converter will usually cause overheating: If a converter is heat-damaged, correct the cause of the damage at the same time the converter is replaced. Also, inspect all other components of the exhaust system for heat damage.

Caution: Due to exterior physical similarities of some catalytic converters with pipe assemblies, extreme care should be taken when selecting replacement parts. For availability and pricing, contact your local Chrysler-Plymouth-Dodge-Jeep dealer.

The combustion reaction caused by the catalyst releases additional heat in the exhaust system, causing temperature increases in the area of the reactor under severe operating conditions. Such conditions can exist when the engine misfires or otherwise does not operate at peak efficiency. DO NOT remove spark plug wires from plugs or by any other means short out cylinders if exhaust system is equipped with a catalytic converter. Failure of the catalytic converter can occur due to temperature increases caused by unburned fuel passing through the converter.

Unleaded gasoline MUST be used to avoid poisoning the catalyst core. DO NOT allow engine to operate above 1,200 rpm in neutral for extended periods over 5 minutes. This condition may result in excessive exhaust system/floor pan temperatures because of no air movement under the vehicle.

CONDITION	POSSIBLE CAUSE	CORRECTION
EXCESSIVE EXHAUST NOISE	1. Leaks at pipe joints.	1. Tighten clamps at leaking joints.
	2. Burned or blown out muffler.	2. Replace muffler assembly. Check exhaust system.
	3. Burned or rusted-out exhaust pipe.	3. Replace exhaust pipe.
	4. Exhaust pipe leaking at manifold flange.	4. Tighten connection attaching nuts.
	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 stud nuts or bolts.
	7. Restriction in muffler or tailpipe.	7. Remove restriction, if possible. Replace muffler or tailpipe, as necessary.
	8. Exhaust system contacting body or chassis.	8. Re-align exhaust system to clear surrounding components.
LEAKING EXHAUST GASES	1. Leaks at pipe joints.	1. Tighten/replace clamps at leaking joints.
	2. Damaged or improperly installed gaskets.	2. Replace gaskets as necessary

Heat Shields

Heat shields are needed to protect both the vehicle and the environment from the high temperatures developed in the vicinity of the catalytic converter. The combustion reaction facilitated by the catalyst releases additional heat in the exhaust system. Under severe operating conditions, the temperature increases in the area of the reactor. Such conditions can exist when the engine misfires or otherwise does not operate at peak efficiency. 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.

DO NOT allow the engine to operate at fast idle for extended periods (over five minutes). This condition may result in excessive temperatures in the exhaust system and on the floor pan.

Exhaust Gas Recirculation (EGR)

To assist in the control of oxides of nitrogen (NO^X) in engine exhaust, all engines are equipped with an exhaust gas recirculation (EGR) system. The use of gas to dilute incoming air/fuel mixtures lowers peak flame temperature during combustion, thus limiting the formation of NO^X.

Exhaust gases are taken from openings in the exhaust gas crossover passage in the intake manifold. Refer to the service manual for complete description, diagnosis and Proper service procedures.

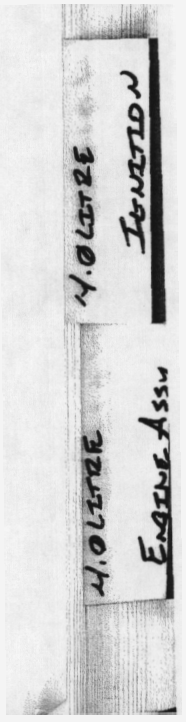
EXHAUST AND INTAKE MANIFOLDS

The two exhaust manifolds are log style and are made of high silicon molybdenum cast iron. The exhaust manifolds share a common gasket with the intake manifold. The exhaust manifolds also incorporate ball flange outlets for improved sealing and strain free connections.

Removal

Note: The engine intake and exhaust manifold must be removed and installed together. The manifolds use a common gasket at the cylinder head.

1. Disconnect the battery negative cable.
2. Remove air cleaner inlet hose from throttle body assembly.
3. Remove the air cleaner assembly.
4. Remove the throttle cable, vehicle speed control cable (if equipped) and the transmission line pressure cable (if equipped).
5. Disconnect the following electrical connections and secure their harness out of the way:
   - Throttle Position Sensor
   - Idle Air Control Motor



- o Coolant Temperature Sensor (at thermostat housing)
- o Intake Air Temperature Sensor
- Oxygen (02) Sensor
- Crank Position Sensor
- Six (6) Fuel Injector Connectors

6. Disconnect the MAP sensor, HVAC, and brake booster vacuum supply hoses at the intake manifold.
7. Perform the fuel pressure release procedure. (Refer to the proper service manual for correct procedure.)
8. Disconnect and remove the fuel system supply line from the fuel rail assembly. (Refer to the proper service manual for correct procedure.)
9. Loosen the accessory drive belt and tensioner. (Refer to the proper service manual for correct procedure.)
10. Remove the power steering pump and bracket from the intake manifold and set aside.
11. Raise the vehicle.
12. Disconnect the exhaust pipe from the engine exhaust manifold. Discard the seal.
13. Lower the vehicle.
14. Remove the intake manifold and engine exhaust manifold.

Installation

If the manifold is being replaced, ensure all fittings, etc., are transferred to the replacement manifold.

1. Install a new engine exhaust/intake manifold gasket over the alignment dowels on the cylinder head.
2. Position the engine exhaust manifold to the cylinder head. Install fastener Number 3 and finger tighten at this time (Figure 4-48).
3. Install intake manifold on the cylinder head dowels.
4. Install washer and fastener Numbers 1, 2, 4, **5**, 8, 9, 10 and 11 (Figure 4-48).
5. Install washer and fastener Numbers **6** and 7 (Figure 4-48).
6. Tighten the fasteners in sequence and to the specified torque (Figure 4-48):
   - Fastener Numbers 1 through 5 - Tighten to 33 N•m (24 ft-lbs) torque.
   - Fastener Numbers 6 and 7 - Tighten to 31 N•m (23 ft-lbs) torque.
   - Fastener Numbers 8 through 11 - Tighten to 33 N•m (23 ft-lbs) torque.
7. Install the power steering pump and bracket to the intake manifold. Tighten the belt to specification. (Refer to the proper service manual for correct procedure.)
8. Install the fuel system supply line to the fuel rail assembly. Before connecting the fuel supply line to the fuel rail inspect the O-rings and replace if necessary. (Refer to the proper service manual for correct procedure.)
9. Connect all electrical connections on the intake manifold.
10. Connect the vacuum hoses previously removed.
11. Install the throttle cable and vehicle speed control cable (if equipped).
12. Install the transmission line pressure cable (if equipped). (Refer to the proper service manual for correct procedure.)
13. Install air cleaner assembly.
14. Connect air inlet hose to the throttle body assembly.
15. Raise the vehicle.
16. Using a new exhaust manifold seal, connect the exhaust pipe to the engine exhaust manifold. Tighten the bolts to 31 N•m (23 ft-lbs).
17. Lower the vehicle.
18. Connect the battery negative cable.
19. Start the engine and check for leaks:

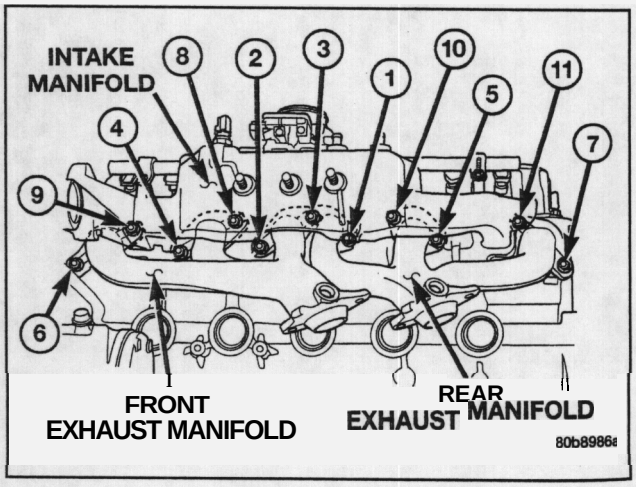


*Figure **4 - 48***

EXHAUST SYSTEM MODIFICATIONS

Using straight-through type mufflers and steel tubing headers on your stock vehicle doesn't mean that you will gain horsepower. Today's car and truck exhaust systems are specifically tuned to the engines they come with. In other words, the best all-around, dual purpose exhaust set-up is the stock set-up that came with your vehicle. OK, you might gain 5 extra horsepower by using a header and a straight-through type muffler, but the noise level, the disturbance in engine back pressure (via the exhaust system) and the high cost of these performance parts do not justify making these modifications. However, if the vehicle is to be raced and the modifications to that vehicle include a high performance camshaft and valve train set-up, then a header and straight-through type muffler can be very beneficial, and the cost justified.

Note: All exhaust systems should be checked for leaks. A leak in the exhaust system is unsafe and will cause you to lose power.

Headers

Steel tubing headers are a very popular exhaust system modification. When shopping for headers, the most important thing to remember is to match the headers to both the engine AND the vehicle. This will save you a lot of time when installing the headers.

Mopar Performance Parts Exhaust Headers

Bolt on a set of our Mopar Performance Parts headers and feel the power. Manufactured from heavy 14 gauge tubing with 3/8" thick flanges, mandrel bent, and triple nickel-chrome finish makes these headers the most durable on the market. Each header is engineered to achieve minimum back pressure and maximum flow, resulting in increased horsepower and torque. Headers carry a lifetime warranty and are emissions exempt. Kits include all necessary installation hardware. For 4.0L engines only. (Vehicle application as listed.)

P5249972	Wrangler, 1995.
P4876260	Wrangler, 1997-98.
P4529530	Wrangler (all), stainless steel.
P4876918	Cherokee, 1986-91.
P5249971	Cherokee and Grand Cherokee, 1996-98.

Exhaust Collector and Feeder Gaskets

These exhaust collector and feeder gaskets are made from special extra high temperature material for added strength and durability. For use with Mopar Performance Parts headers.

P4876351	Exhaust collector gasket, 2-1/2", 3-bolt.
P4876352	Exhaust collector gasket, 3", 3-bolt.
P4876353	EGR feeder gasket (1995 and prior models).

Mufflers

Cat-Back Performance Exhaust

Our Mopar Performance Parts cat-back exhaust systems are specifically engineered to fit your vehicle – no modifications are required. These kits simply bolt into the OE hangers and brackets. Features include heavy wall, 16 gauge aluminized tubing with true mandrel bends allowing for maximum flow and minimum back pressure. A low restriction, aluminized case, flow-through muffler with a 3" core produces a deep mellow exhaust tone. No fiberglass packing to bum out. Kits include all necessary installation hardware. For 4.0L engines only.

P5249739	Cat-Back performance exhaust, 1993-95 Wrangler.
P4876277	Cat-Back performance exhaust, 1997-98 Wrangler.
P4876359	Cat-Back performance exhaust, 1986-96 Cherokee.
P4876089	Cat-Back performance exhaust, 1997-98 Cherokee.
P4876627	Cat-Back performance exhaust, 1993-98 Grand Cherokee.

Note: For maximum performance, this system should be used in conjunction with Mopar Performance headers.