Air Cleaner It is recommended that the provided dry element air cleaner be used. However, if an alternative air cleaner is used it must be of the dry element variety. **NOTE: Emissions compliance and fueling cannot be guaranteed if a different part is used.**

Oxygen Sensors

NOTE: It is critical that the Oxygen Sensors are mounted per the instructions below. The exhaust system MUST be properly sealed—any leak near the sensors (upstream or downstream) can cause incorrect operation of the fuel control system. Vehicle performance and/or driveability may be affected if sensors are not mounted as recommended or if an exhaust leak exists. Leak check the exhaust system to ensure adequate sealing (even small leaks can affect fuel control).

Pre-Catalysts (Front) Oxygen Sensors should be mounted in the collector area of the exhaust manifolds in a location that allows exhaust from all cylinders to be sampled equally (stock exhaust manifolds include a mounting boss for the oxygen sensors). Be sure the connectors and wiring are routed away from high heat areas. The oxygen sensors should be mounted with the sensor tip pointing between horizontal and fully downward – do not mount with the tip oriented upward. Weld in the mounting bosses supplied (7/8" hole) if using headers.

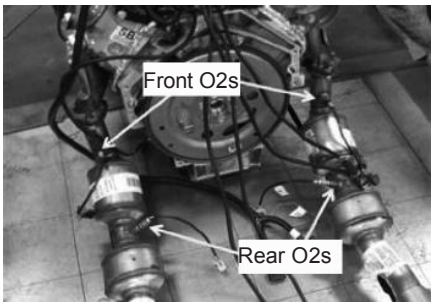
Post-Catalysts (Rear) Oxygen Sensors should be mounted in the provided locations in the catalyst assembly. It is highly recommended that the Oxygen Sensor bosses in catalyst assemblies be used without modification. If they need to be moved or mounted differently to fit your vehicle, the sensors need to be mounted between 2.5 inches and 4 inches from the rear of the front catalyst's brick/honeycomb. The oxygen sensors should be mounted with the sensor tip pointing between horizontal and fully downward—do not mount with the tip oriented upward.

Exhaust Manifolds It is recommended that you use the provided exhaust manifolds or similar LS Engine style Exhaust Manifolds.

Catalytic Converters

NOTE: It is critical that the Catalytic Converters are mounted per the instructions below.

The provided catalytic converters, LH#92225676 and RH#92225677 must be mounted between 16" to 20" from the closest cylinder head exhaust port face. Be careful not to mix up left and right hand converters (see the picture below) . Rear oxygen sensors should angle toward the center of the vehicle.



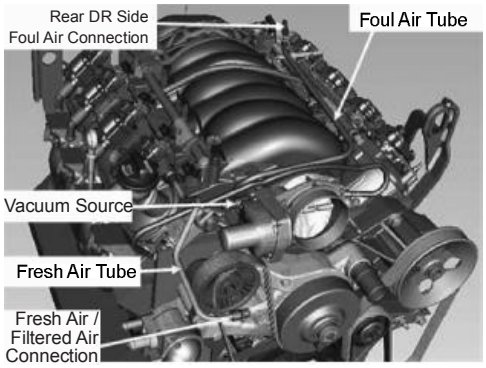
Positive Crankcase Ventilation System (PCV)

How to set up your PVC system:

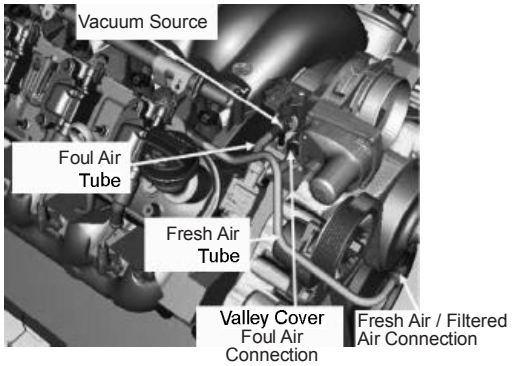
There are three ports on the engine that make up the PCV system. There are two possible foul side ports. One or both of these ports should be connected to the intake manifold and be exposed to vacuum at idle. If you choose to use only one of these ports, and the other one is part of your engine, make sure it is capped off. The ports on the engine are 1) Front port on the valley cover(LS3 only). 2) Left rear (driver side) valve cover. 3) Top center of the inlet manifold (LC9 only). The ports with silver tubes may look simple but, they should not be modified. The tubes have a small orifice within them that is used in place of a PCV valve of earlier designs.

There is one fresh air port which is on the front of the right (passenger side) valve cover. Again this is a silver tube that faces forward on the valve cover. This port should be connected to filtered clean air. This connection must be within the engines air cleaner system and must be between the MAF (Mass Air Flow Sensor) and engine's throttle body. The engine burns the air that enters the PCV system so, if the fresh air port is prior to the MAF then, this air will enter the engine without being measured by the MAF and adverse engine operation may occur.

Rear Driver's Side Foul Air Example



Valley Cover Foul Air Example



Evaporative System

Your kit comes with an evaporative emissions canister. The canister can be mounted anywhere between the tank and the engine (It is not recommended to mount the canister on the engine itself). This canister needs to plumbed to the fuel tank vapor line and to the purge solenoid on the engine. It is important that you use an evaporative compatible fuel tank system so that the fuel tank is not vented to atmosphere.

NOTE: It is also very important that the fuel tank have a vapor dome. A tank with a vapor dome is a tank that has approximately 10% of its volume capacity left unfilled after a maximum fill so that the fuel vapors can be routed from this volume to the canister. We suggest using an OE certified tank if you can find one to fit your application. On some tank systems it may be necessary to have a liquid check valve installed in the vapor line between the tank and the canister to prevent liquid fuel from being sucked into the canister. Also make sure that all hoses used are fuel and alcohol compatible. Use a late model, 2001 or newer, fuel fill pressure relief cap that doesn't vent to atmosphere.

ALL INFORMATION WITHIN ABOVE BORDER TO BE PRINTED EXACTLY AS SHOWN ON 8 1/2 x 11 WHITE 16 POUND BOND PAPER. PRINT ON BOTH SIDES, EXCLUDING TEMPLATES.
TO BE UNITIZED IN ACCORDANCE WITH GM SPECIFICATIONS.

DATE	REVISION	AUTH