

## Variable and Fixed Orifice PCV Valves



GM offers a modified PCV valve to address customer complaints of excessive oil consumption on several applications equipped with 4.8L, 5.3L or 6.0L engines. Excessive consumption would involve a vehicle that consumes one quart of oil per 2,000 miles. This is assuming the vehicle is a personal use, non-commercial type vehicle driven under normal conditions. Obviously, vehicles that are used in extreme service, such as heavily loaded trucks, or vehicles driven at high rates of speed would not be included, as their oil consumption rates may vary. Important, a minimum of a 4,000 mile engine break-in period should be performed, prior to condemning an engine for excessive oil consumption.

Some basic checks that should be performed first include:

- 1) Inspect the top and lower engine components and covers for evidence of leakage.
- 2) Verify the proper dipstick is being used and that the tube is secured in the engine.
- 3) After engine shut-down, allow five minutes for oil drain-back, prior to checking the oil level.
- 4) Make certain the vehicle is sitting in a level position when checking the oil level.
- 5) Has the vehicle been driven at excessive speeds?
- 6) Has the vehicle been heavily loaded or pulling a loaded trailer or camper?
- 7) Is there evidence of engine overheating?

Assuming that the basic checks and considerations have been satisfied, GM recommends installing a revised PCV valve. It has been determined that under certain operating conditions, the original equipment variable type PCV valve flow rate may promote excessive oil consumption. The original equipment valve may promote a siphoning of the oil back into the intake manifold where it would be consumed through the combustion process. Examine the hose that attaches the PCV valve to the intake manifold for evidence of an excessive amount of oil. If excessive oil is present, GM recommends installing a revised PCV valve. The new style valve (GM #12572717, Mighty #3-932) is a fixed orifice valve with no moving parts. The valve will not rattle when shaken. It is basically a shell of the OE style valve with an approximate .100 inch hole drilled in the bottom of the valve, providing a fixed flow rate. When servicing, technicians must be aware of the factory modification and be certain not to install the same type variable orifice valve that originally came on the vehicle. Doing so would reintroduce the performance condition that was corrected with the fixed orifice design. The use of the fixed orifice PCV valve was also recommended by GM, for conditions involving a sticking throttle plate sensation on many late model GM truck applications equipped with a mechanical throttle linkage. Other modifications in the campaign included a throttle bore and throttle plate cleanup, a rubber plug to seal the throttle plate hole, and a revised TPS adjustment, via the minimum air rate screw.