



# Service Bulletin

## PRELIMINARY INFORMATION

**Subject:** Possible Oil Consumption - Oil Leaks - Blue Smoke From The Exhaust - MIL - Or Fuel Trim Codes

**Models:** 2011 - 2014 Chevrolet Cruze  
2013 - 2014 Buick Encore  
2013 - 2014 Chevrolet Sonic  
2013 - 2014 Chevrolet Trax (Canada Only)  
Equipped with 1.4L (RPO LUJ or LUV)

*This PI was superseded to update Condition/Concern. Please discard PIP5197A.*

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

### Condition/Concern

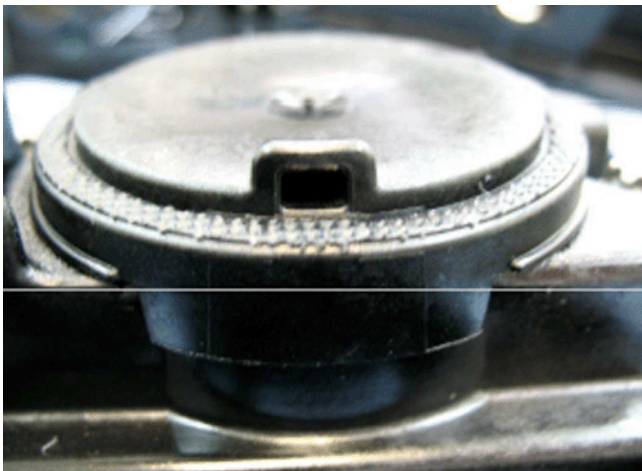
You may encounter a customer concern of excessive oil consumption, blue smoke from the exhaust, MIL or fuel trim codes.

Excessive oil consumption, not due to leaks, is the use of 0.9 L (1 qt) or greater of engine oil within 3 200 kilometers (2,000 miles).

Any or all of the following DTCs may be current or set in history: P0106 P0171 P0299 P0507 P1101 P2096

### Recommendation/Instructions

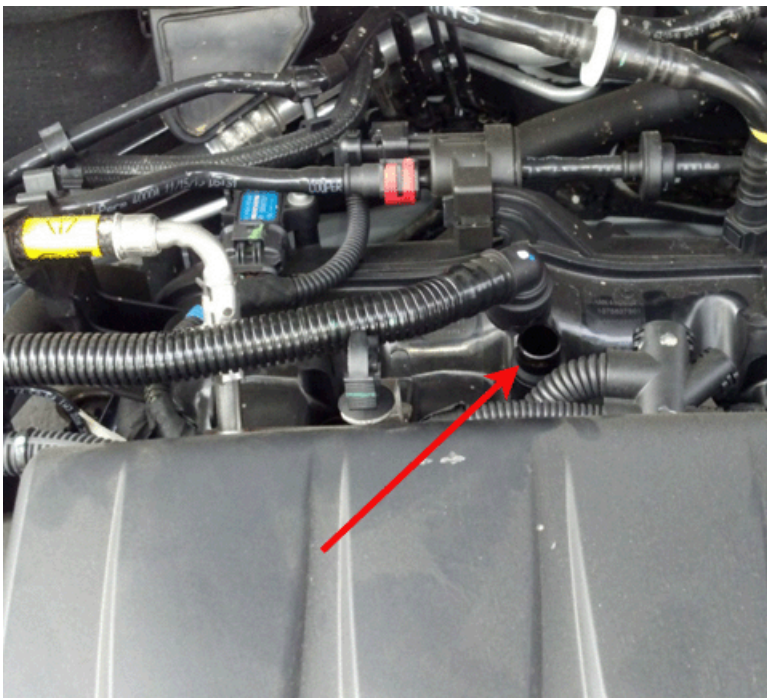
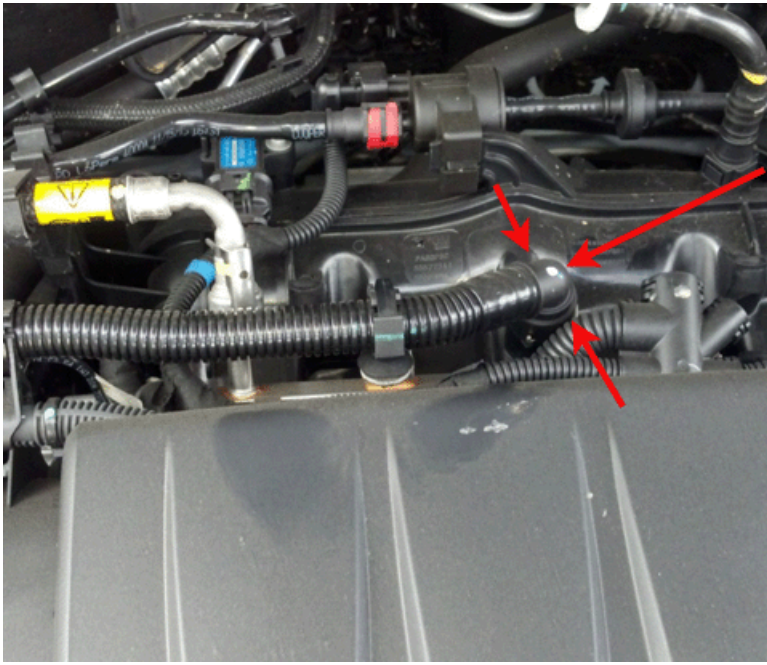
Check the PCV orifice for leaking oil or drawing vacuum at idle thru its external port. (The PCV orifice is an integral part of the camshaft cover). (See picture below).

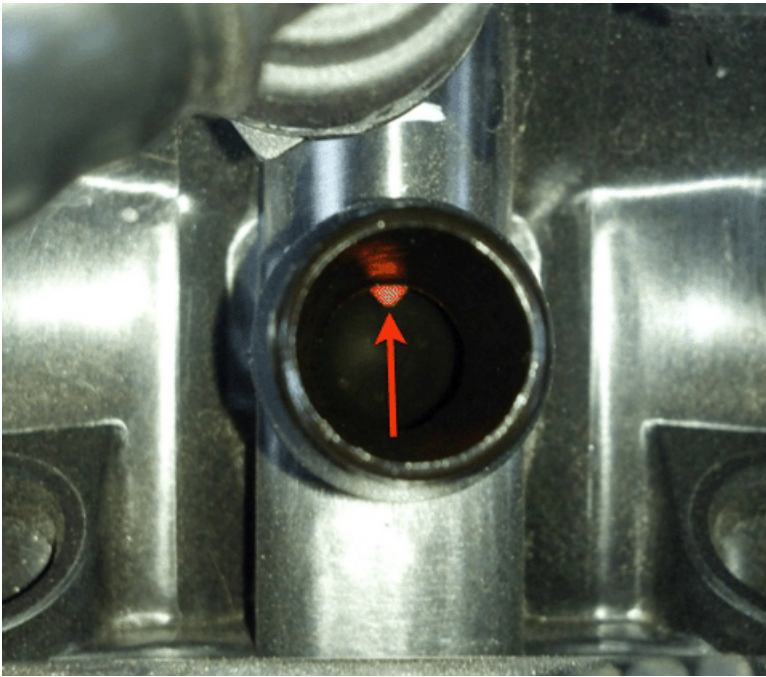


If the PCV orifice external port is leaking oil or vacuum, replace the camshaft cover assembly.

Clean oil from all induction system components and retest for oil consumption, leaks or DTCs resetting.

Check for a missing intake manifold Non Return Valve that may have damaged the PCV orifice diaphragm. (See pictures below for inspection procedure).

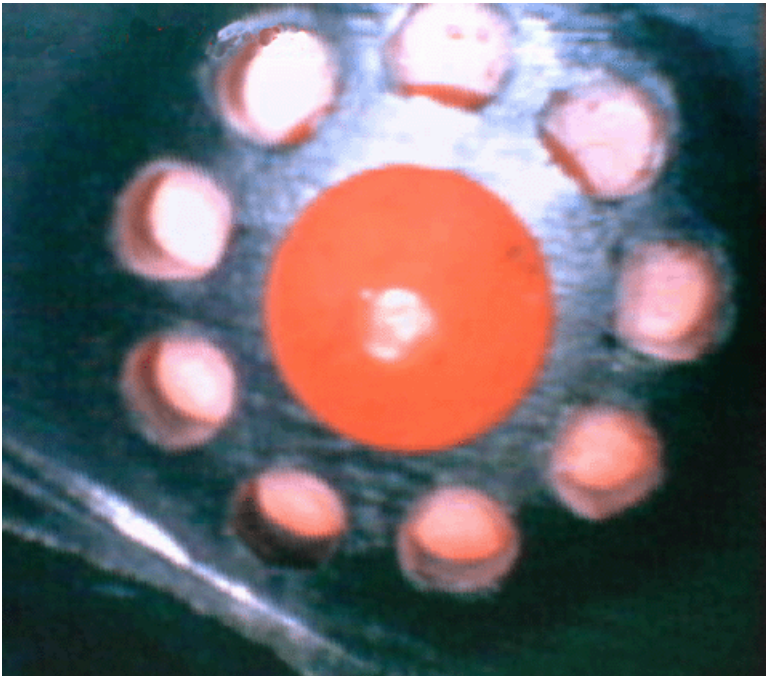




If the non return valve is not visible as shown in picture, then use a long cotton swab to wipe any excess oil from the valve to validate.

If the non return valve is still not visible, then intake manifold removal for inspection is required to validate.

Properly seated Non Return Valve as viewed with the intake manifold removed.



If the intake manifold Non Return Valve is missing, then replace the intake manifold assembly,

Clean oil from all induction system components and retest for oil consumption, leaks or DTCs resetting.

If the intake manifold Non Return Valve is seated properly, then perform the following.

Inspect the spark plugs for signs of oil fouling.

Engine cranking compression utilizing GDS2

Cylinder leakage testing utilizing proper tools.

Repair any issues with compression or leakage testing.

Refer to the latest version of PI0552 to check the engine oil dipstick and oil fill cap for proper sealing.

Refer to the latest version of PIP4925 to check for any air leaks to the intake system

Record the crankcase pressure. (Normal crankcase pressure readings are between -11 & -18 inches of water in park at hot idle) / (ESST gage works best,

see pictures below for connection of ESST at the engine oil dipstick hole in the camshaft cover ).

**Note:** The connection must be made with the engine off. The engine is then started and the pressure reading is recorded.





If the crankcase pressure is in the proper range, clean oil from all induction system components and retest for oil consumption, leaks or DTCs resetting.

If the crankcase pressure is excessively positive, above 0 inches of water (0 inches of HG / vacuum) then a cylinder leakage / crankcase pressure concern exists.

If the crankcase pressure is excessively negative, below -30 inches of water (-2 inches of HG / vacuum) then excessive intake vacuum is being applied to the crankcase, requiring further PCV system testing.

## Warranty Information

The correction for this concern may be one of several repairs described above. For vehicles repaired under warranty, please use the appropriate warranty labor operation based on the original cause in addition to well documented straight time

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

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GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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