



Preliminary Information

PIP5197J Possible Oil Consumption / Leaks – Blue Smoke Exhaust – Whistle Noise – DTC P0171 and/or P0300 and/or P0299

Models

| Brand: | Model: | Model Years: | VIN: | | Engine: | Transmissions: |
|-----------|--------|--------------|------|-----|-------------|----------------|
| | | | from | to | | |
| Buick | Encore | 2013 - 2019 | All | All | LUJ and LUV | All |
| Chevrolet | Cruze | 2011 - 2016 | All | All | LUJ and LUV | All |
| Chevrolet | Sonic | 2012 - 2019 | All | All | LUJ and LUV | All |
| Chevrolet | Trax | 2013 - 2019 | All | All | LUJ and LUV | All |

Supersession Statement

This PI was superseded to update Title. Please discard PIP5197H.

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: P0171 P0300 or P0299.

Recommendations / Instructions

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.

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).

Please note that a weak or broken piston ring land can cause a P0300.

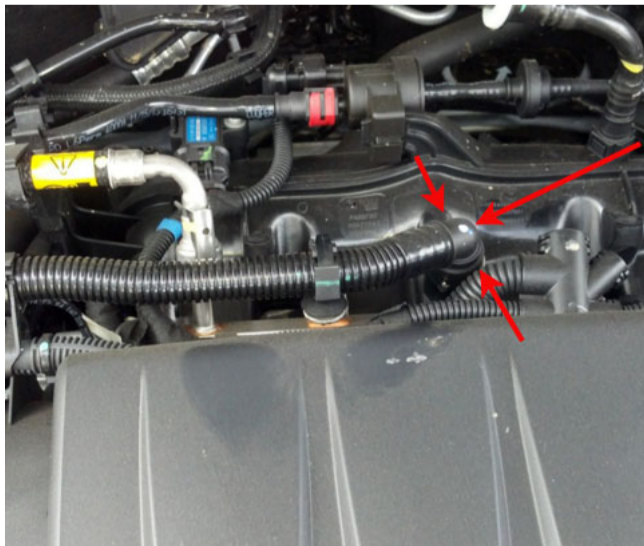
It may also damage the PCV orifice diaphragm causing a P0171.

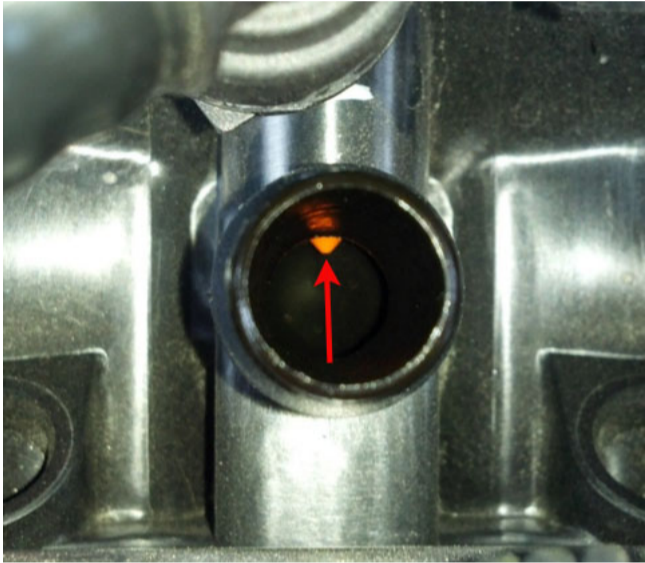
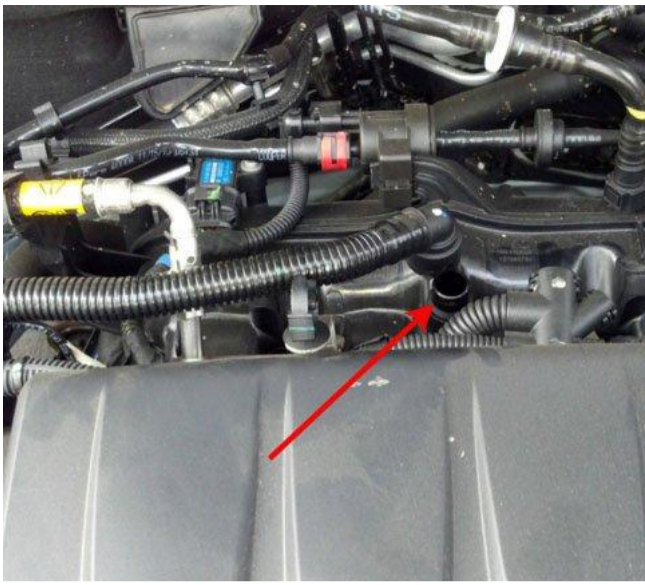


If the PCV orifice external port is leaking oil or vacuum, replace the camshaft cover assembly.

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).



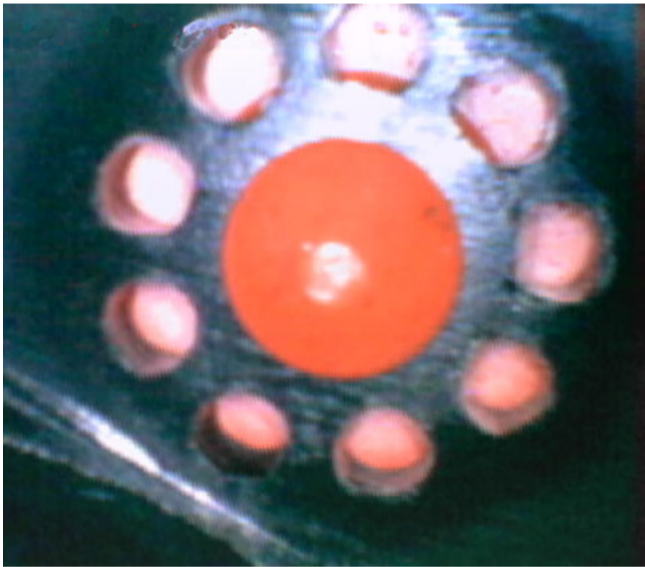


If the non return valve is not visible as shown in picture, then use a long cotton swab to wipe any excess oil from the valve to validate.

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

If the valve is present reinstall the intake manifold. Do not replace.

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.

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.

Record the crankcase pressure at hot idle in park as well as under snap throttle.

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



If the crankcase pressure is between -11 and -18 inches of H2O during the hot idle in park and during snap throttle testing, then clean oil from all induction system components and retest for oil consumption, leaks or DTCs resetting.

If the crankcase pressure is between -10 and 0 inches of water then a cylinder leakage / crankcase pressure concern exists.

This is likely caused by a weak or broken piston ring land.

Replace all four piston assemblies and retest for proper crankcase pressures.

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

Warranty Information

The correction for this concern may be one of several repairs described above.

For vehicles repaired under warranty, please use the appropriate labor code provided in the chart below based on the original cause.

| Labor Code | Description |
|------------|----------------------------|
| 4060930 | Camshaft Cover Replacement |
| | Encore/Trax |
| | Cruze |
| | Sonic |

| | |
|---------|---|
| | Diagnosis Time - You may claim up to the allowable labor hours depending on actual time to perform diagnosis. |
| 4060450 | Intake Manifold Replacement |
| | Encore/Trax |
| | Cruze |
| | Sonic |
| | Diagnosis Time - You may claim up to the allowable labor hours depending on actual time to perform diagnosis. |
| 4066890 | Piston, Connecting Rod, and Bearing Replacement |
| | Encore / Trax / Sonic |
| | AWD |
| | Base |
| | Cruze, LUJ, LUV |
| | To Recover and Recharge R-1234yf A/C System |
| | To Recover and Recharge R-134a A/C System |
| | |
| | To Assemble and Install New Pistons as required - Each Additional |
| | |
| | Note: For steering wheel angle and/or front toe adjustment times, refer to labor code 8070012 and add the applicable base times to base labor hours. |
| | |
| | Diagnosis Time: You may claim up to the allowable labor hours depending on actual time to perform diagnosis |

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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