



Service Bulletin

PRELIMINARY INFORMATION

Subject: Oil Leak from Rear of Engine After Extended Driving in Cold Temperatures Below 0 F (-18 C)

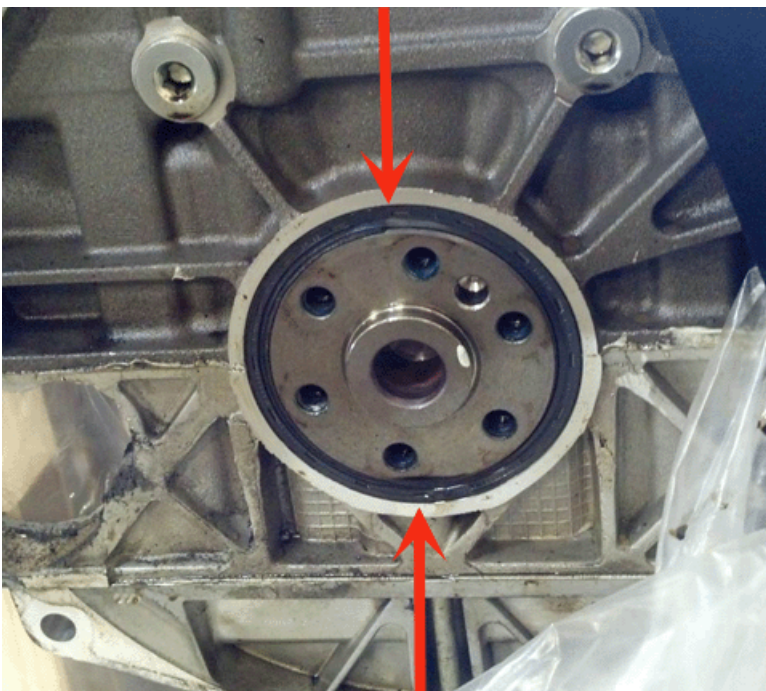
Models: 2010-2014 Buick Lacrosse
2011-2014 Buick Regal
2012-2014 Buick Verano
2013-2014 Chevrolet Captive Sport
2010-2014 Chevrolet Equinox
2010-2013 Chevrolet Malibu
2010-2014 GMC Terrain
with 2.4L Engine (RPO LAF, LEA or LUK)

This PI was superseded to add model years, pictures, and RPO, and update recommendations. Please discard PIP5093.

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

Condition/Concern

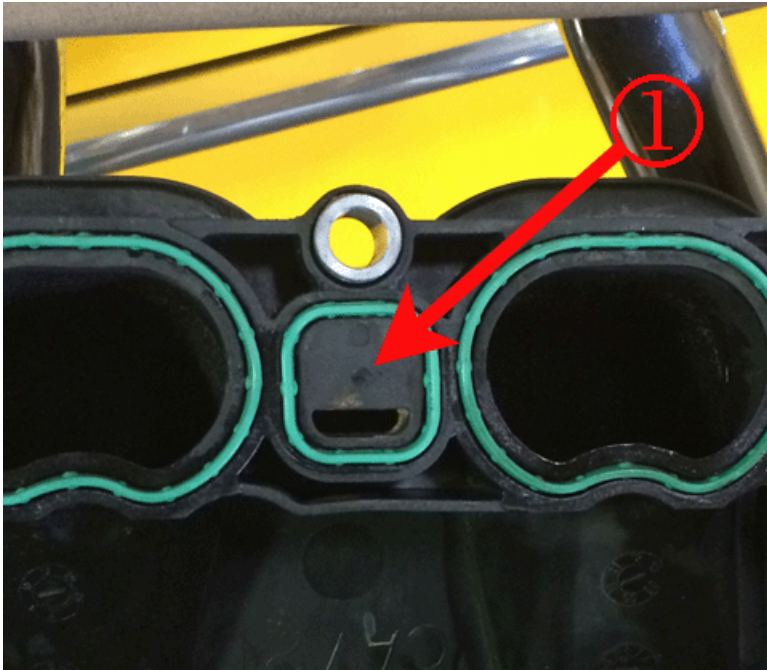
Some customers may complain of an engine oil leak that appeared as they were driving the vehicle in extremely cold ambient temperatures (Generally 0 F / -17 C or Colder). They may also comment that they heard a single "pop" noise right before the oil leak started. Upon inspection, the technician will find that the oil leak is coming from the rear main oil seal of the engine as shown below. This may be the result of a frozen PCV system and excessive crankcase pressure. If a leaking rear main oil seal is found in warmer climates, this PI does not apply.

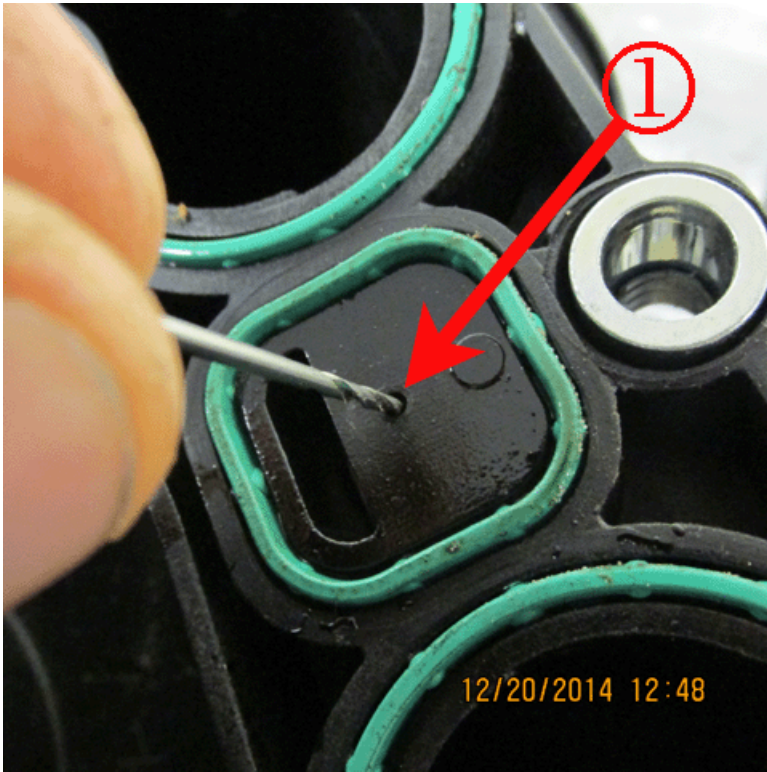


Recommendation/Instructions

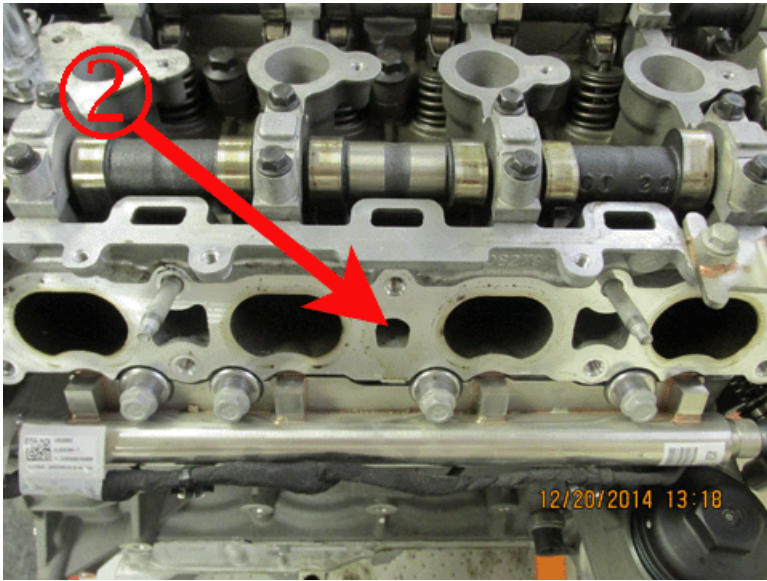
If this concern is experienced, determine if the concern is the result of a frozen PCV system by inspecting the PCV system, dipstick, and engine oil fill cap for signs of ice, moisture, and/or sludge build up. If this is not due to a frozen PCV system, follow Service Information Procedures to diagnose and repair. If this is the result of a frozen PCV system, follow the steps below:

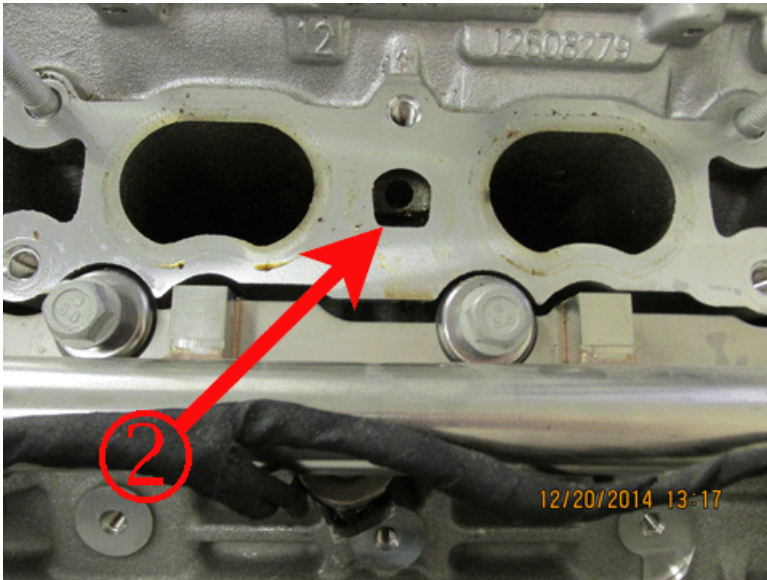
1. Check for proper thermostat operation by following Thermostat Diagnosis as outlined in SI and replace the thermostat as necessary.
2. Remove the cam cover, inspect the PCV baffle inside, and replace the cam cover if obvious sludge build up is present.
3. Clean any ice/sludge/water/carbon out of the PCV pipes/hoses, the PCV nipple on the cam cover, the PCV orifice between the #2 and #3 intake runners (use a 1/16 inch drill bit as illustrated below), PCV orifice in the head as illustrated below and the throttle body. Also inspect the related PCV hoses/connections for potential damage and replace if necessary.
4. Allow the engine to idle at operating temperature for at least 15 minutes, turn the engine off, and drain the engine oil for at least 15 minutes to remove all oil and condensation/water from the crankcase.
5. Follow SI repair procedures to repair any oil leaks that were induced as a result of the frozen PCV system and excessive crankcase pressure.
6. Clean any oil residue left under the vehicle from the original oil leak.
7. Replace the oil filter and fill the crankcase with engine oil. In the future, the customer may want to consider changing their engine oil right before winter starts in order to prepare for the colder weather.
8. To complete the repairs, ensure that the latest ECM calibrations have been installed to adjust the engine oil life monitor to a maximum of 7,500 miles (12,070 KM) as well.





#1 above is the PCV orifice in the intake manifold





#2 above is the PCV passage in the head

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.

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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