GM

Service Bulletin

PRELIMINARY INFORMATION

Subject: DTCs P0011 P0014 P0016 Or P0017 After Cylinder Head Or Cam Actuator Removal

Models: **2012 Chevrolet Sonic**
2011 - 2012 Chevrolet Cruze
2009 - 2011 Chevrolet Aveo
2009 - 2010 Pontiac Wave (Canada Only)
2009 - 2010 Pontiac G3
2008 - 2009 Saturn Astra
With 1.6L or 1.8L Engine RPO LXV, 2HO, LUW

This PI was superseded to update recommended field. Please discard PIP4543A.

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

Condition/Concern

A technician may comment that "ONE" or more of the following DTCs set in the ECM after a repair that involved the removal of one or both of the camshaft actuators: P0011 Intake Camshaft Position (CMP) System Performance, P0014 Exhaust Camshaft Position (CMP) System Performance, P0016 Crankshaft Position (CKP) Intake Camshaft Position (CMP) Correlation, P0017 Crankshaft Position (CKP) Exhaust Camshaft Position (CMP) Correlation.

The Typical cause of these DTCs are a missing actuator oil sleeve and set after the technician has removed or replaced a cam actuator. If normal GSI diagnostics do not reveal the cause of the concern and the engine timing is correct when checked the following may help.

Recommendation/Instructions

Remove the cam actuators and inspect for a missing actuator oil sleeve. These engines have a unique black plastic oil sleeve that is between the end of the cam actuator and camshaft. This sleeve directs oil to the actuator to advance or retard the cam timing. If a sleeve is missing or damaged, the ECM cannot control the actuator movement, which may result in one or more timing DTCs.

Note: When removal of the actuator is required, insure installation of these sleeve's during the reassembly of the engine. These sleeves are not shown in the parts imager and are only available as part of the camshaft actuator assembly.

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.