

PI1296: Diagnostic Tip for Engine Misfire and/or Popping Noise on Cold Startup after Cylinder Head or Fuel Rail/Injector Repair - (Aug 19, 2014)

Subject: Diagnostic Tip for Engine Misfire and/or Popping Noise on Cold Startup after Cylinder Head or Fuel Rail/Injector Repair

Models: 2009-2015 Buick Enclave Models  
2010-2015 Buick La Crosse, Allure (Canada)  
2008-2011 Cadillac STS  
2009-2015 Cadillac CTS Models  
2010-2015 Cadillac SRX  
2013-2015 Cadillac ATS, XTS  
2009-2015 Chevrolet Traverse  
2010-2015 Chevrolet Camaro, Equinox  
2012-2015 Chevrolet Captiva, Impala  
2015 Chevrolet Colorado  
2009-2015 GMC Acadia Models  
2010-2015 GMC Terrain  
2015 GMC Canyon  
2009-2010 Saturn OUTLOOK  
Equipped with HFV6 Engine RPOs LF1, LFW, LFX, LLT, LF3 or LFR

#### Condition/Concern

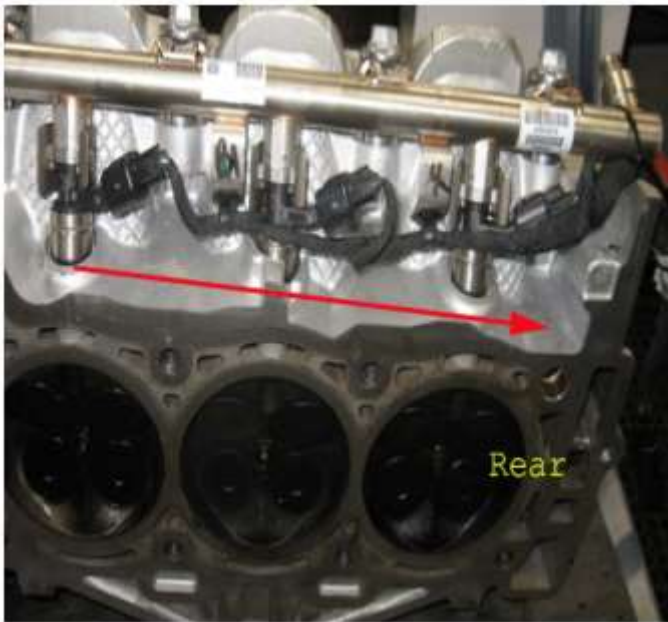
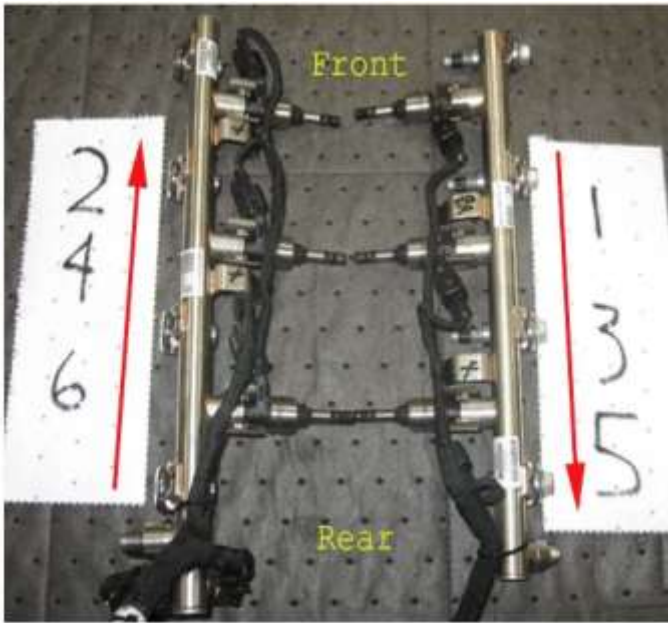
Some customers may comment on a engine misfire and/or popping noise within the first few minutes of a cold start after a recent cylinder head and/or fuel rail/injector repair has been performed.

This may be caused by improper orientation of the fuel injectors due to the previous repair. The injector spray pattern is not in a circular shape, but an oval shape. An improperly installed injector redirects the ends of the oval spray pattern into the intake valve during valve overlap in the split pulse mode of a cold start. Once the split pulse injection start up process has completed it's duty cycle, the engine will operate normally until the next cold start event.

Service Information (SI) will be updated with greater detail on orientation of the fuel injectors and wiring harness in the future.

#### Recommendation/Instructions

Verify the orientation of the fuel injectors. Refer to Fuel Injector Fuel Rail Assembly Replacement in SI.



^ Bank 1 injector connectors aim toward the rear of the engine as shown.



^ Bank 2 injector connectors aim toward the front of the engine as shown.