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Preliminary Information

PIP5528E Information Assistance for HFV6 Re-Manufactured Engine Drivability Diagnosis Immediately Following Installation

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Buick	Allure (Canada Only)	2007 - 2016	ALL	ALL	3.0 LF1, 3.6 LY7, 3.6 LLT	ALL
Buick	Enclave	2007 - 2020	ALL	ALL	3.6 LY7, 3.6 LLT, 3.6 LFY	ALL
Buick	LaCrosse	2007 - 2016	ALL	ALL	3.0 LF1, 3.6 LY7, 3.6 LLT	ALL
Cadillac	ATS	2013 - 2015	ALL	ALL	3.6 LFX	ALL
Cadillac	CTS	2007 - 2016	ALL	ALL	2.8 LP1 3.0 LF1, 3.0 LFW, 3.6 LY7, 3.6 LLT, 3.6 LFX	ALL
Cadillac	SRX	2007 - 2016	ALL	ALL	2.8 LP1, 2.8 LAU, 3.0 LF1, 3.6 LY7, 3.6 LLT, 3.6 LFX	ALL
Cadillac	STS	2007 - 2011	ALL	ALL	3.6 LY7, 3.6 LLT	ALL
Cadillac	XTS	2013 - 2019	ALL	ALL	3.6 LFX, 3.6 LF3	ALL
Chevrolet	Camaro	2010 - 2015	All	All	3.6 LLT, 3.6 LFX	All
Chevrolet	Colorado	2015 - 2016	All	All	3.6 LFX	All
Chevrolet	Equinox	2007 - 2017	All	All	3.0 LF1, 3.0 LFW, 3.6 LFX	All
Chevrolet	Impala	2012 - 2020	All	All	3.6 LFX	All
Chevrolet	Malibu	2007 - 2012	All	All	3.6 LY7	All
Chevrolet	Traverse	2009 - 2020	All	All	3.6 LLT, 3.6 LFY	All
GMC	Acadia	2007 - 2017	All	All	3.6 LLT, 3.6 LY7	All
GMC	Canyon	2015 - 2016	All	All	3.6 LFX	All
GMC	Terrain	2010 - 2017	All	All	3.0 LF1, 3.0 LFW, 3.6 LFX	All
Pontiac	G6	2007 - 2009	All	All	3.6 LY7	All

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Pontiac	G8	2008 - 2009	All	All	3.6 LY7	All
Pontiac	Torrent	2008 - 2009	All	All	3.6 LY7	All
Saturn	Aura	2007 - 2010	All	All	3.6 LY7	All
Saturn	Outlook	2007 - 2010	All	All	3.6 LY7, 3.6 LLT	All
Saturn	Vue	2008 - 2010	All	All	3.6 LY7	All

Involved Region or Country	North America
Condition	Some dealers may experience misfires, CEL / MIL, or other drivability concerns immediately after installing a GM re-manufactured HFV6 engine.
Cause	This condition may be caused by a component transferred over from the original engine that was not supplied with the replacement engine. Some of the things we have seen have been camshaft actuator solenoids (OCV's), fuel injectors and fuel, intake manifolds, and catalytic converters. Additionally this could be caused by a mistimed engine or an incorrect camshaft or actuator being installed in the incorrect location.

Correction:

If a misfire or DTC concern is found immediately after engine installation, perform normal diagnostics.

NOTE: Make sure the misfire or DTC is not cause by ignition, fuel, or electrical components that were not part of the replacement engine assembly. See below

Comparison of good vs bad Camshaft Actuator Solenoids.

The stuck solenoid pintle is shown in each photo with the open hole visible in the body of the solenoid.



Also check to make sure the camshafts and actuators are correct and in the correct place. See Below Camshaft Identification on HFV6.

Note last 5 characters. Of these 5 characters, the first 3 designates the RPO of the engine, (L or R) designates the bank, and (I or E) designates intake or exhaust.



If normal diagnostics along with these enhanced diagnostics do not lead to the cause, prior to removing the timing cover or cylinder heads, call TAC and start a case for next step recommendation.

Additional SI Keywords

P0300, P0301, P0302, P0303, P0304, P0305, P0306,

Version History

Version	6
Modified	10/05/2017 - Created on 02/19/2019 - Updated Correction Section 04/08/2019 - Updated Correction Section 06/24/2019 - Updated Correction Section 09/06/2019 - Updated Cause and Correction Sections. 06/09/2020 - Updated cause, correction and MY



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