



# Preliminary Information

## PIP5598B Diagnostic Tip: Possible Crank No Start Or Extended Crank No Codes

Proactive

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Buick	Encore	2016 - 2020	All	All	1.4 LE2	All
Chevrolet	Cruze	2016 - 2019	All	All	1.4 LE2	All
Chevrolet	Equinox	2018 - 2020	All	All	1.5 LYX	All
Chevrolet	Malibu	2016 - 2020	All	All	1.5 LFV	All
Chevrolet	Spark	2016 - 2020	All	All	1.4 LV7	All
Chevrolet	Trax	2019 - 2020	All	All	1.4 LE2	All
GMC	Terrain	2018 - 2020	All	All	1.5 LYX	All

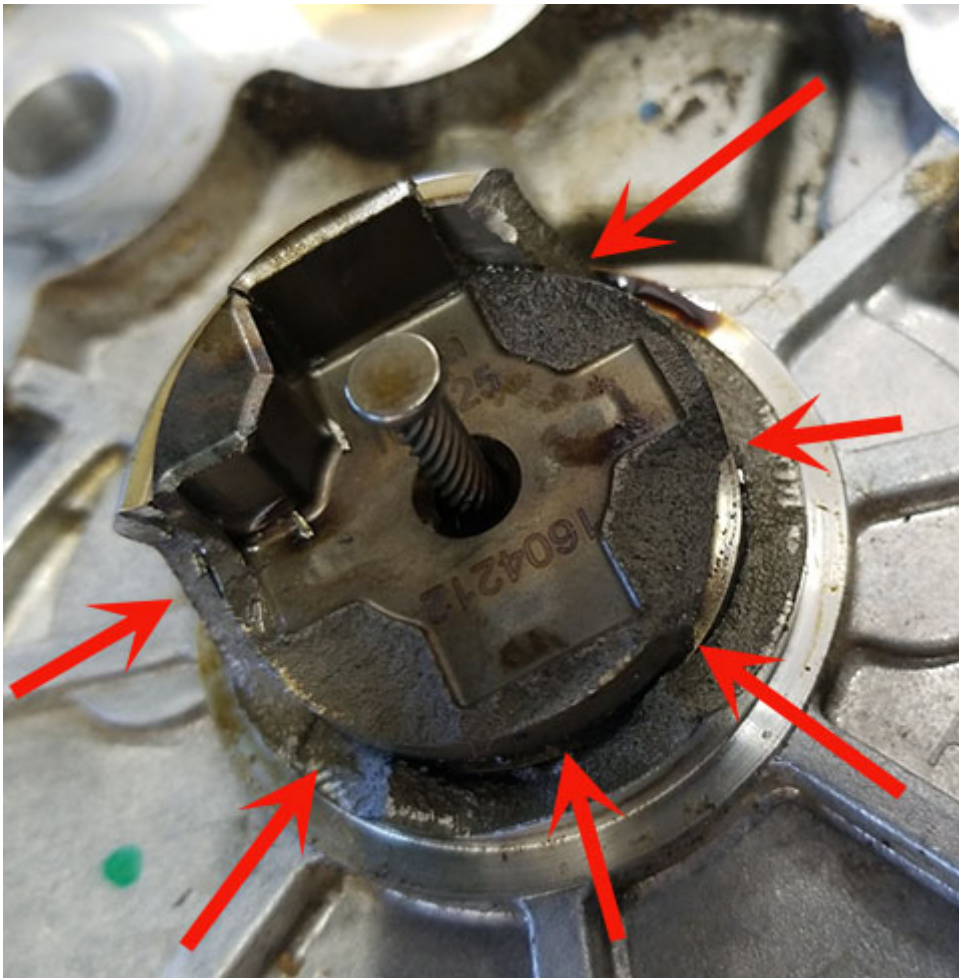
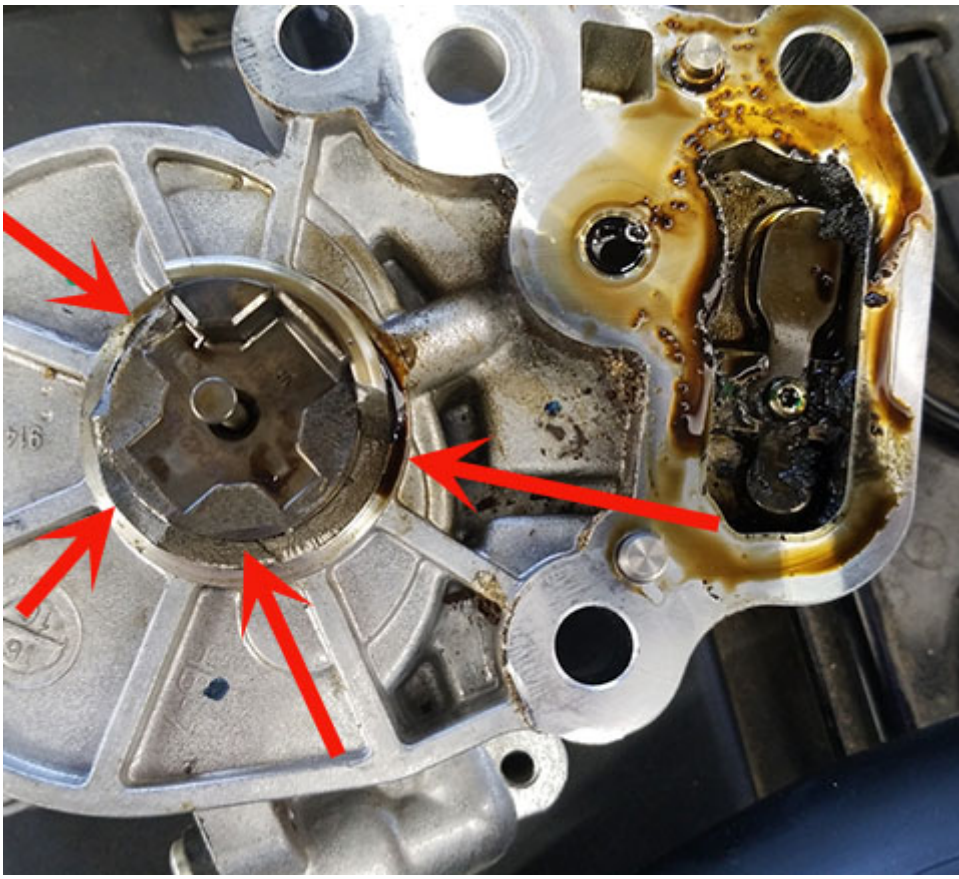
Involved Region or Country:	North America
Condition:	Possible Crank No start or Extended Crank No Codes
Cause:	Possible exhaust camshaft reluctor out of phase

**Correction:**

Complete latest diagnostics in service information for "Engine Cranks But Does Not Run".

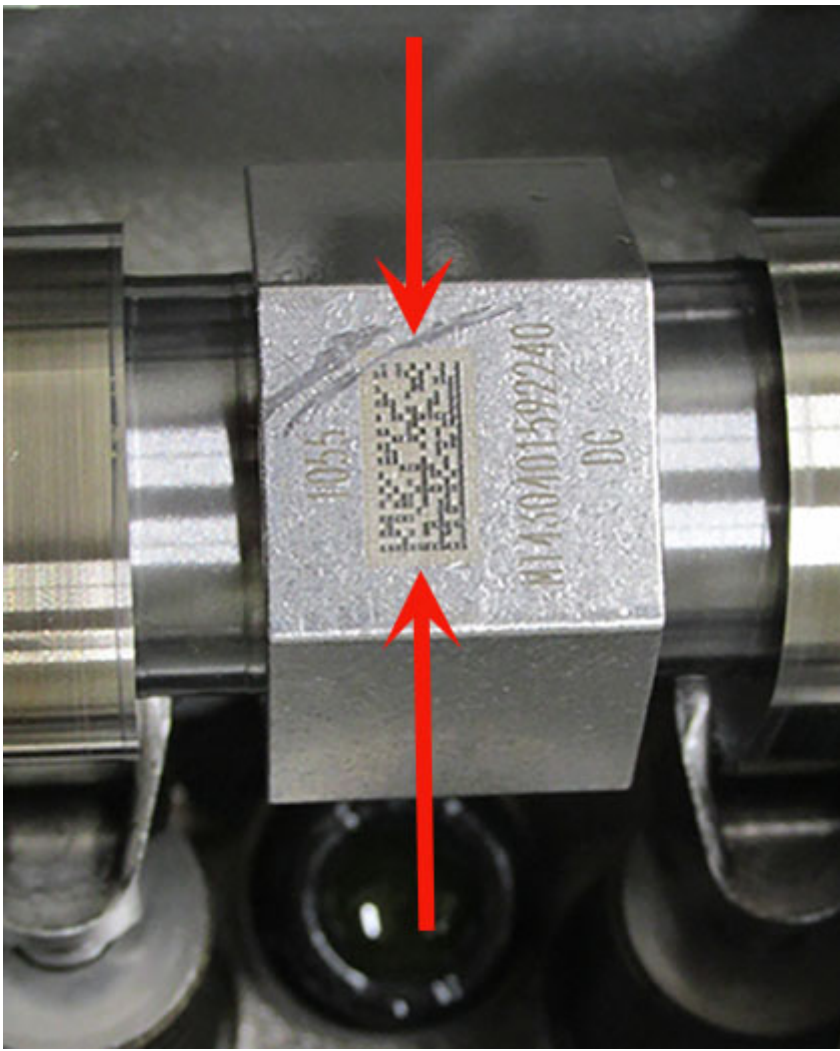
If unable to determine root cause of no start condition using published SI diagnostics proceed with the following.

Remove cam cover assembly and perform steps below to confirm exhaust camshaft reluctor orientation. During disassembly the vacuum pump drive lugs should also be inspected for damage. (Photo below show damaged vacuum pump drive lugs)



Rotate the exhaust camshaft to position the 2D matrix marking on the camshaft hex in the 12"o'clock position.  
(Reference photo below for 2D marking.)





Once the exhaust camshaft 2D matrix has been positioned at 12"O'clock. Verify the small tang located on the camshaft reluctor ring (Arrows below showing tang on reluctor) is inline with the 2D matrix marking. Also shown are additional reference points used to verify exhaust cam reluctor orientation to camshaft.

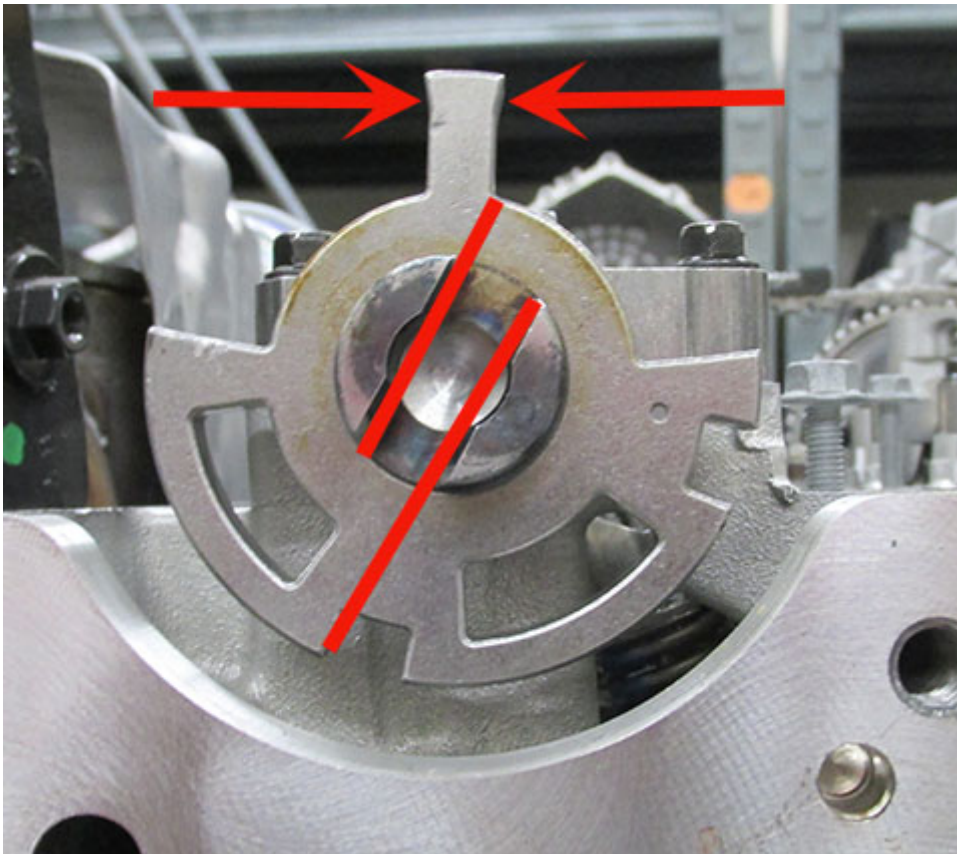
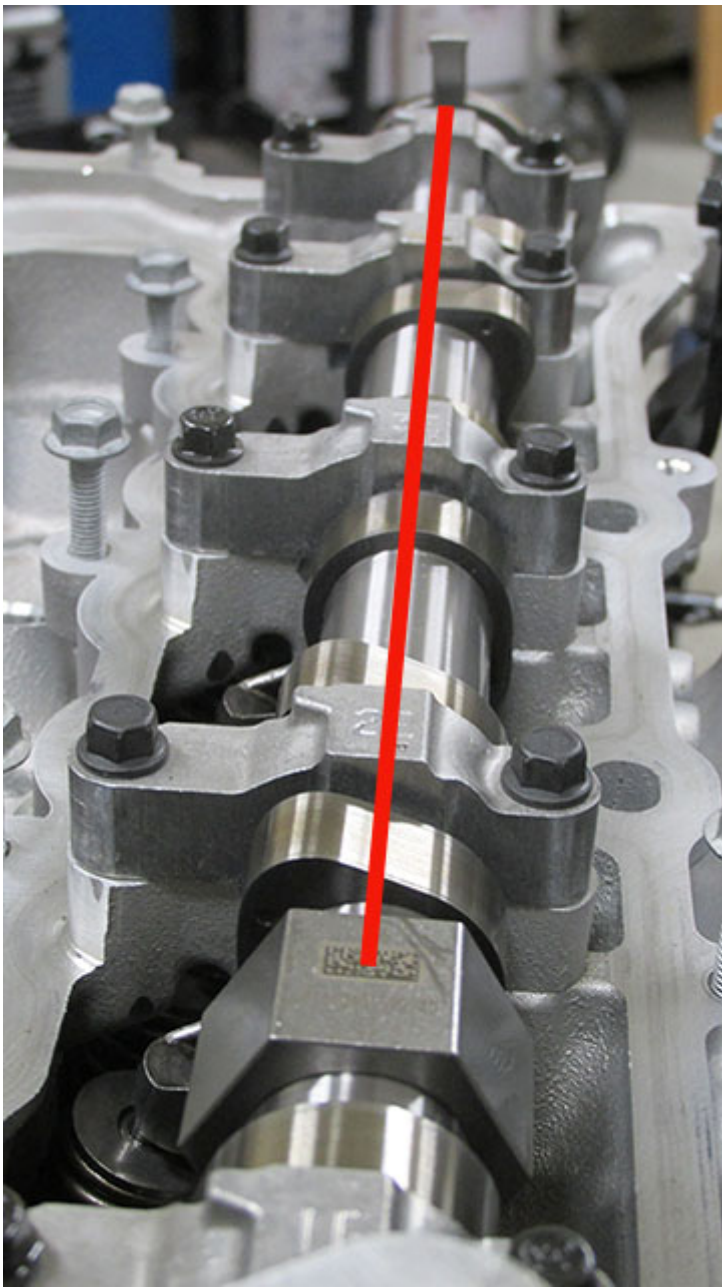


Photo below is showing the proper relationship between the 2D matrix marking and the small tang on exhaust cam reluctor wheel.



If you find the vacuum pump drive lugs are broke and/or the exhaust camshaft retractor is out of position then replacement of the exhaust camshaft and vacuum pump will be required.

**Note:** If needed, It will also be necessary to locate and remove the broken vacuum pump drive lugs and other metal debris during repairs.

**NOTE:** This is a preliminary temporary diagnostic and repair. As more investigation and information becomes available this PI will be updated or advanced to a bulletin.

### Version History

Version3	3
Modified	10/08/2018 - Created on 12/11/18 - Updated to include Chevrolet Spark 05/20/2020 Updated to include 2020MY and Chevrolet Trax



GENERAL MOTORS