# 2014 - 2015 Corvette: GM TechLink Article: Extended Cold Crank with Direct Injected Engines

**Source:** GM TechLink
**Date:** February 20, 2014

The 4.3L, 5.3L, and 6.2L (RPOs LV3, L83, L86 and LT1) direct injected (DI) engines (Fig. 14) available on some 2014-2015 Corvette, Silverado 1500, Suburban, Tahoe, Sierra 1500 and Yukon models may have an extended or long crank time during cold ambient air temperatures.

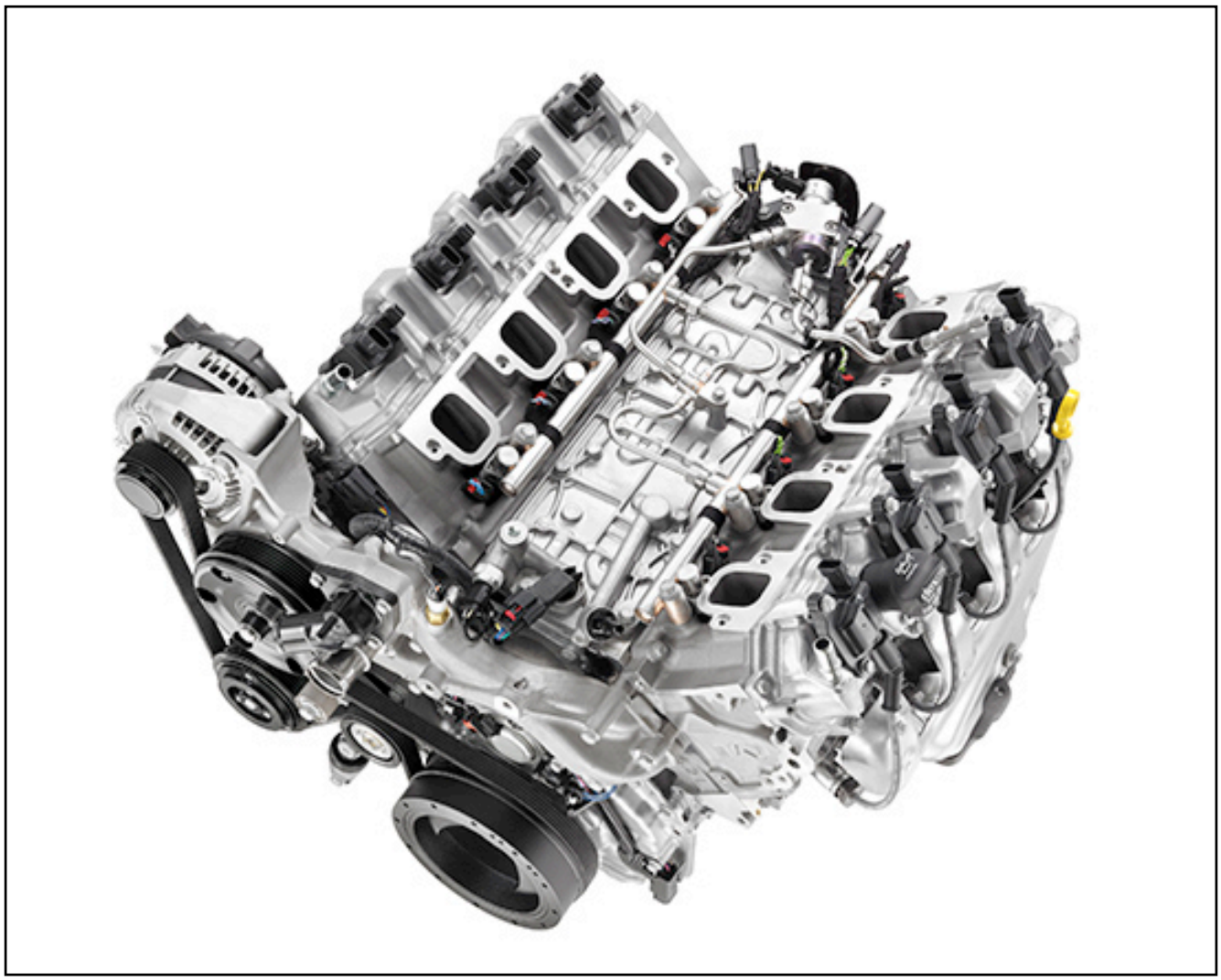

**Fig 14.**

Direct Injection engines may have slightly longer cold crank times than that of port fuel injected engines. Direct Injection systems run at higher pressures and the mechanical pump on the engine must build up the required pressure before the first injection event occurs.

Following are typical DI engine crank times using gasoline:

| Start up Coolant Temperature | Crank Time |
|---|---|
| Above 50°F (10° C) | up to 1.5 seconds |
| Between 50°F (10°C) and 14°F (-10°C) | up to 2.5 seconds |
| Between 14°F (-10°C) and -4°F (-20°C) | up to 3.5 seconds |
| Between -4°F (-20°C) and -13°F (-25°C) | up to 5 seconds |
| Between -13°F (-25°C) and -22°F (-30°C) | up to 7 seconds |

If the temperature is below -22°F (-30°C), the recommendation is to perform an assisted start (such as with the use of a block heater).

For ethanol fuel, see #PIP5174: Extended Engine Crank Times When Using E85

*- Thanks to Richard Renshaw*

Online URL:
https://www.corvetteactioncenter.com/tech/knowledgebase/article/2014-2015-corvette-gm-techlink-article-extended-cold-crank-with-direct-injected-engines-8.html