

IMPORTANT – Please Read

The following information will be important for you to understand before the installation of your 58x system.



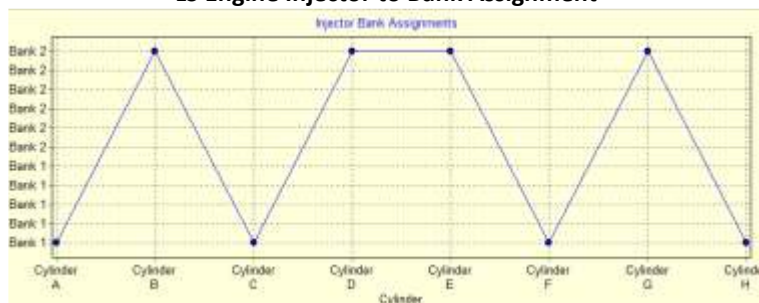
58x Small-Block Chevy Hardware Installation Guide

About the Firing Order

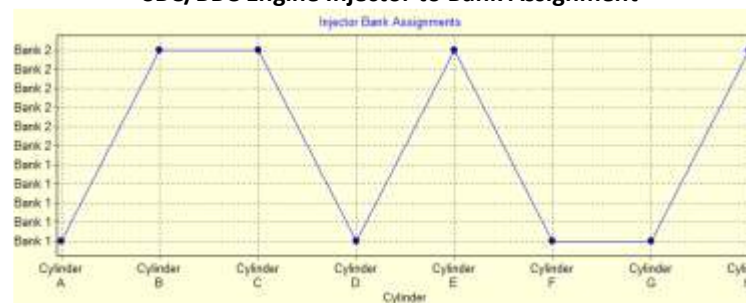
The LS series engines have a different firing order than the early small-block Chevy engines. Specifically, cylinders 2&3 and 7&4 have been swapped. If you are building your own engine harness, be sure that you swap injectors and coils 2&3 and 7&4 at the PCM. If you have ordered a new engine harness from EFI Connection, the harness has been built in this way.

For proper Closed Loop operation, bank-to-bank fueling can be corrected through the PCM calibration by assigning the appropriate injector to each bank. The images below represent the “Injector Bank Assignments” table in EFILive, calibration table B1519.

LS Engine Injector to Bank Assignment



SBC/BBC Engine Injector to Bank Assignment



Knock Sensor(s)

The Gen IV GM ECMs use two-wire “flat response” type knock sensors. The SBC/BBC block will not have provision for these sensors, so you will have to make provision for two of these knock sensors. The Gen IV flat response knock sensor is GM# 12570125.

Installing the 58x Crankshaft Reluctor

The crankshaft reluctor simply installs on the snout of the crankshaft and is indexed by the crank timing sprocket key. After final assembly, the reluctor is held firmly in place between the crank timing sprocket and harmonic balancer. The crankshaft reluctor adds about 2.5mm of thickness, causing misalignment of the accessory belt. Be sure to mill the thickness of the reluctor from your balancer before final installation for proper accessory belt alignment.

Installing the Vortec Timing Cover

When GM began using the plastic Vortec timing cover, the sealing face of the block was slightly changed. Be sure to test fit the Vortec timing cover to your engine to observe any areas where you will need to generously apply RTV silicone sealant. Engine blocks prior to 1996 WILL seal if sealant is applied correctly. Some have applied JB Weld to the face of the block for an additional sealing surface. JB Weld is not required. **The best solution for engine blocks older than 1996 is EFI Connection # 120-00013, SBC Billet Aluminum Timing Cover.**

Installing the Distributor (Camshaft Signal Adjustment)

If your distributor contains a hold down, it must be removed and replaced with a standard distributor hold down if you are not using a production GM Vortec intake manifold.

The Gen IV LS engines have a fixed cam signal with no adjustments, but the EFI Connection 4x distributor assembly allows 360 degrees of adjustment. We have found that the best orientation is as shown while number 1 piston is up.

The engine will start and run with improper cam signal alignment in relation to crank signal. When the signal is in the incorrect position, several things may occur...

- The ECM sets a P0016 DTC that indicates the improper crank/cam correlation.
- Extended cranking until the engine starts (ECM assumes improper stroke).
- Backfire during cranking (ECM assumes improper stroke).

Because GM provides no information regarding proper alignment, our recommendation is to roughly set the cam signal as mentioned above and then monitor for P0016 and poor starts. Adjust the cam signal until P0016 does not set and the engine starts without backfire or extended cranking.



Questions?

Please contact us at troubleshooting@eficonnection.com with any questions.