

How to add Lane Keep system without Copilot 360 package. This has been tested on a 2.0L XL w/o copilot and 4k tow package. Hybrids will have different forscan settings for certain registers, key valid for both unless specified otherwise. 6 inch cluster screens may also need different forscan hex keys for the same applicable settings in the IPC 720-xx-xx registers.

All trims already come with a front facing camera and image processing module so all that is needed is the correct turn signal stalk which costs about \$35. All you need to do is swap the turn signal stalks and activate with forscan. It is valid for all trim levels without Copilot 360.

After swapping the stalks (quick write up to follow) to turn on the lane keep system which includes Lane keep alert, lane keep aid and driver alert system these are the following forscan codes. Should work on all builds except where noted.

Vehicle tested on 2022 XL w/o copilot 2.0L ecoboost and 4k tow package

To get the button for lane keep working first you need to set the following codes.

IPMA

706-01-01

044D 59C9 B537 - 2.0L ecoboost engines

0B4D 59C9 B53E - 2.5L hybrid engines

This activates the functionality in the image processing module

PSCM

730-02-02

FFFF 0000 0039

This activates the power steering functionality for wheel vibration and correction.

SCCM

The middle part of the code specifies you have the lane keep left turn stalk installed the other lines refer to the steering wheel buttons.

724-02-01

1228 A820 3060

Steering wheel buttons w/o cruise control, switch combo SW8588 / SW8589

1258 6820 3050

steering wheel buttons w/ cruise control, switch combo SW8576 / SW8579

If any one of these 3 is incorrect the button won't work and you'll either get no lane keep icon in the cluster screen or it will be there but you won't be able to toggle it on and off.

Next are the codes for the instrument cluster. These should also be valid for the 6 inch cluster screen. If you have issues get some as built data for a Lariat with the lux package and change whatever values differ for the same register addresses.

IPC codes

720-01-02

0227 4093

This activates the driver alert system option in the options

720-02-01

09E4 2D34 1E96 - 2.0L ecoboost engines

09E4 2D35 9E17 - 2.5L hybrids engines

This activates the lane keep menu, alert and aid settings.

xxxx xxxx Xxxx is for how mpg is calculated and shown in the trip screen

xxxx xxxx 1xxx = gas

xxxx xxxx 9xxx = hybrid

720-09-01

2042 1440 1900

This enables the lane keep steering wheel vibration and correction intensity settings.

This next section of codes enables the Driver Alert System. If any of them are not set it will not enable when you have Lane Keep on and the driver alert option setting in the vehicle settings

BCM codes

726-15-04

0147 - 2.0L ecoboost engines

Leave setting stock for hybrids as of now. Needs testing to determine if the code is 1 needed to be changed and 2 specific to the vehicle regardless of trim when a hybrid engine is installed.

IPC codes

720-05-02

0840 0379 - 2.0L ecoboost engines

0800 0339 - 2.5L hybrid engines

720-10-01

1800 0001 0253

720-10-02

0100 407A

The whole system to this point will work almost 100% correctly. The only issue is when you enable mykey it is supposed to according to the manual, keep the user using a programmed mykey from shutting off lane keep. So far I haven't been able to do that with a programmed mykey.

edit

A sideways workaround to the mykey issue is to disable mykey functionality outright. If you don't use mykey you'd probably do this anyways.

For register 720-01-01

Leave everything else alone and change the following to 9

xxxx x9xx xxxx

example

09E4 2D34 1E96

becomes

09E4 2934 1Exx

You'll get a checksum error message, go ahead anyways and hit okay and forscan will correct the last 2 digits to the correct checksum for the new setting before writing. The Lane Keep settings will still function normally and if you have a programmed mykey it will function like an unprogrammed key. Turn the setting back on, the programmed key will then function as it should.

Other than that it doesn't throw any error codes and the features work as they should.

Before anyone asks I am not going to do a write up on how to install BLIS afterwards. It can be done but the cost of the parts alone costs more than just having Copilot 360 installed as a factory option.

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