

Torque Converter Upgrade By Scott Mueller.

Factory high stall converter:

I have a killer recommendation for a factory replacement torque converter for the Impala. GM offers torque converters of several different stall speeds for the 4L60E, 4L60, and 700-R4 transmissions.

The stock Impala converter is rated to stall at ONLY 1397 rpm! (actual stall will be anywhere from 1400 to 1600 depending on engine torque output), while the highest stall converter GM offers is rated to stall at 2025 rpm (actual stall will be around 2000 to 2200 rpm, depending on engine torque output). The higher stall speed also means greater torque multiplication which improves acceleration off the line. This also virtually eliminates the annoying creep while idling in drive as well as the clunk you sometimes get when shifting from park into either drive or reverse.

You can tell which converter you have by a 4-digit alpha code found on a sticker attached to the converter. Here are the codes on three converters I have seen:

DGHG = stock '94+ Impala converter
DBCF = '86 'vette converter
DBLF = '95+ L35 S10 truck converter

The code is interpreted as follows:

1st Digit = Transmission application

D = 1984-1/2 and up 700-R4, 4L60, 4L60E
C = 1984 and earlier 700-R4, 200-4R, 200C, 325-4L
B = 250C, 350C

2nd Digit = K-factor (stall speed)

K = K-85, 1211 rpm
G = K-100, 1397 rpm
F = K-110, 1611 rpm
E = K-115, 1654 rpm
B = K-140, 2025 rpm

3rd Digit = Clutch and Damper assembly

C = ? (stock '86 'vette)
H = ? (stock '94+ Impala)
L = ? (stock '95+ L35 Vortec S10 truck)

4th Digit = Rear cover

C = 3 lug round
D = 3 lug round
E = 6 lug
F = 3 lug square
G = 3 lug square

Now I know why going to the S10 converter felt SOOO good! The stock Impala converter stalls at under 1400 rpm!! Going to the S10 converter increases stall speed by 628 rpm, which feels very good indeed. Aftermarket converters are available in even higher stall speeds, but the factory 2025 rpm converter is an excellent, low cost upgrade that offers a very noticeable effect on performance without being too radical. After having one of these in my car for some time now, I'm not sure I would want anything that stalls any higher.

One area that some of the better (and more expensive) high stall aftermarket converters will excel in is durability in high HP applications. While the stock converter can live behind 300 to 350 HP with few problems, going to 400 HP or more can be pushing it. Actually in my experiences the trans will go before the converter, unfortunately when the trans goes the debris usually takes the converter with it (of course the opposite is also true).

Originally I had been recommending the '85-'86 Corvette torque converter as an Impala upgrade. As you can see

from the 2nd digit code this is a K-140 converter, which is the highest stall factory converter available for the 700-R4, 4L60, and 4L60E transmissions. The original part number for the '85-'86 'vette converter was #8650919, which was later changed to #24201203. What I have found is that GM only sells torque converters as what are called remanufactured units, but depending on the converter application you order, you may actually get a new converter instead of a rebuilt unit. Unfortunately since the '85-'86 'vette is an older application, you will almost certainly get a rebuilt converter if you order under that part number. Not only will the converter be used (rebuilt), but since then some of the internal components have been upgraded.

To get the high stall converter in an updated form with the latest design, I recommend instead a similar K-140 high stall converter from a 1995+ 4.3L (RPO L35) S10 Truck V6 application (p/n 24202310). This new converter uses the same basic internal components (stators, etc.) as the 'vette converter, and as such has the same high stall speed rating (2nd digit code "B").

GM ranks converters by what they call a "K-factor", which indicates torque capacity and the resultant stall speed. Mark McPhail of GM Motorsports says both the '95 L35 Truck and the '85 Corvette converter described here have the same K-140 internals, resulting in the same stall speed given the same engine torque output. Since stall speed varies with engine torque, GM gives a rating of 2025 rpm, however it feels to me like this converter stalls at around 2200 rpm in a stock Impala.

I asked him why he would recommend this converter over the 'vette unit, and he gave two reasons. One is that since the L35 Truck converter is listed under a new part number for 1995 and newer applications, you are much more likely to get a brand new one when you order it instead of a remanufactured unit. Indeed everybody I know who has ordered the Corvette converter has received a remanufactured unit (including myself). I subsequently ordered the L35 S10 truck converter and indeed I received a BRAND NEW one!

The second thing is that the L35 truck converter has damping springs added to the TCC (Torque Converter Clutch) assembly. That may explain the code difference in the third digit. This does not affect performance per se, but apparently reduces noise and possible shudder or vibration when the TCC engages. Note that although the 4th digit code is different in the S10 and 'vette converters from the stock Impala converter (code "F" vs. "G"), the lug shape and mounting pattern is identical, I know because I installed them myself.

Finally, this new converter costs exactly the same as the 'vette converter. Both list for about \$209.66, and sell for \$157.25 trade price. I will say again that for just over \$150 this has to be one of the best bang for the buck performance upgrades you can make for your Impala. The stall speed is 628 rpm higher than stock but is not in anyway too high for even a completely stock Impala. Remember this is a factory 298mm (11.73") torque converter with a TCC (Torque Converter Clutch) and is a direct replacement for the factory unit. Note there is an additional \$35 core charge which you will get back when you return your stock converter to the dealer.

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