



Speed Gems
transmission adapters

Performance. Delivered.
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Phone: (763) 767-4480

Buick Straight-8, 320 w/ Original Manual Transmission to Chevy Automatic

Disclaimer - Please Read Carefully

WARNING: Due to the nature of engine and transmission swaps, we cannot guarantee fitment into your vehicle without having to make mild to extensive modifications. This should be considered when starting your project. It is highly recommended to take the time to research any potential issues you may face prior to starting your build. There are numerous forums and websites that can help and give insight into any potential issues involved in the project. This project is not for a novice mechanic. If an individual is not confident in performing such extensive vehicle modifications, Speed Gems recommends finding a capable shop for assistance.

Prior to and during installation of your new Speed Gems Transmission Adapter Kit, always ensure to:

- Clean everything, including all components and surfaces.
- Use proper torque and **Loctite all bolts.**
- Do not force anything and begin all bolts by hand before using any tools. This will prevent cross-threading.
- Check all bolt clearances.

We try to make everything as simple as possible to help you, but the ultimate responsibility as to the assembly of the kit is up to the installer.

If you have any additional questions, please contact us by phone (763) 767-4480 during business hours or email sales@transmissionadapters.com at any time.

COMPONENTS INCLUDED IN KIT

(1) Adapter Plate-Inner - Buick Straight-8 manual to Chevy Auto.
(1) Adapter Plate-Outer - Buick Straight-8 manual to Chevy
(1) Crank Adapter - Buick Straight-8, 320 w/ std. Transmission to Chevy Auto.
(1) 168-tooth Chevy Flexplate
(1) High Torque mini-Starter
(1) HCS 3/8-16 x 1-1/4
(2) HCS 3/8-16 x 3-3/4
(2) FHSCS 7/16-14 x 1-1/2
(3) HCS 7/16-14 x 1-1/2
(6) FHSCS 3/8-24 x 1
(5) HCS 3/8-16 x 2-1/2
(6) 7/16-20 x 3/4 Flexplate Bolts
(2) Dowel Pin .625 x 2-1/2
(1) HCS 7/16-14 x 1-1/4
(4) Lock Washer 7/16



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APPLICATION NOTES

This kit fits the 320 Straight-8 engines. The 233/248/263 motors are slightly different, with similar assembly.

Please NOTE, older engines may have had the crank flange & bolts modified to take other types of flywheels over the years. When ordering, you will be asked what bolt system your crank flange has.

INSTALLATION INSTRUCTIONS

1. Once the transmission is removed, clean the back surface of the block where the adapter will contact. Make sure both alignment dowels are in place.
2. Install the provided flexplate using the (6) 7/16-20 x 3/4" bolts included.
3. Install the provided crank adapter using the provided 3/8-24 x 1" bolts. Please NOTE, that there were several different styles of crankshafts used on the Buick Straight-8 engines.
 - a. If the engine originally had a Dynaflo transmission, the crank flange should be threaded with 7/16" bolts.
 - b. If a manual transmission, the crank flange could have either threaded inserts with 3/8" bolts, or studs with nuts. The crank bolt holes need to be tapped out to 7/16-20. Make sure the crank flange is clean and has no burrs before installation. Use Loctite and torque to specs evenly in a star pattern.
4. Bolt the provided adapter plate assembly to the block using the hardware provided.
5. Install the starter to make sure it aligns with the ring gear. Next, turn the engine over with the starter to make sure everything is going to work correctly. Check and confirm the depth of starter engagement, or distance of the drive to the ring gear. If the engine can be started and ran, you can also make sure there is no vibration present.
6. Everything should now be set to install the Chevy automatic transmission.

Speed Gems would like to THANK YOU for purchasing our products!

We would love to see pictures of our products installed on your Hotrod. Please tag us on our social media or send a picture to sales@transmissionadapters.com and we will get your project posted on our website.



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