



**Speed Gems**  
transmission adapters

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## Buick 364 Nailhead Heavy Duty Cast-Aluminum Stick Kit

### **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](mailto:sales@transmissionadapters.com) at any time.

### COMPONENTS INCLUDED IN KIT

(1) Bellhousing-1957-63 Buick Nailhead 364/401/425 to Chevy Manual
(1) Flywheel - 1957-63 Buick Nailhead 364 to Chevy Manual
(1) Pilot Bushing Adapter
(6) SHCS 7/16-14 x 1-3/4
(4) SHCS 1/2-13 x 1-1/4
(6) SHCS 7/16-20 x 1
(1) Clutch Fork
(1) Clutch Fork Retainer
(1) Pivot Ball
(6) Pressure Plate Bolts
(1) Long throw-out Bearing
(1) Pilot Bushing
(1) 166W Tooth Ring Gear
(1) Clutch Disc – Matched to Transmission
(1) Pressure Plate – Transmission Specific



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## APPLICATION NOTES

This kit fits Buick 364 Nailhead engines.

It is important to note that 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.

This Bellhousing will adapt a Muncie 4-speed/Borg-Warner T10/Saginaw-3 & 4-speed, or any other manual transmission that uses the common GM bolt pattern, to your Buick Nailhead engine.

The pilot bushing adapter OD and flywheel locating flange OD is different for each type of crankshaft.

### Pilot Busing Adapter OD

1957-63 = 2.03"

1964-66 = 1.70"

### Flywheel Locating Flange OD

1957-63 = 2.90"

1964-66 = 2.48"

While driving in the pilot bushing adapters, note that there is a different depth depending on what transmission you are using. For example, if using a 1982-92 S10 5-speed, drive the adapter in until it bottoms out. The reason for this being that the 1982-92 S10 5-speed has an input shaft that is slightly longer than the standard GM transmission.

For all other transmissions, drive it in until it is flush with the *rear of the flywheel-locating flange*.

## INSTALLATION INSTRUCTIONS

1. Once the transmission is removed, clean the back surface of the block where the Bellhousing will contact. Make sure both alignment dowels are in place.
2. Install the provided Pilot Bushing and adapter (*\*See Application Notes, above.*)
3. Install the provided Flywheel using the 7/16-20 x 1" bolts included. Torque to factory specifications.  
**NOTE:** *Make sure the flywheel is indexed correctly. It is externally balanced for the 364, 401 & 425 engines. There is an alignment hole in the crankshaft on all year engines. Make sure you can see this alignment hole thru the flywheel alignment hole when installing the new flywheel.*
4. Install the provided Clutch Disc and components. Torque to factory specifications.
5. Install the provided Throw-out Bearing.
6. Install the provided Bellhousing using the 7/16-14 x 1-3/4" SHCS cap screws included. (4) 1/2-13 x 1-1/4" SHCS cap screws are included for the transmission bolt-up.

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](mailto:sales@transmissionadapters.com) and we will get your project posted on our website.



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