



Bendtsen's Speed Gems Transmission Adapters

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BU1000602 1960-1963 Buick 401& 425 Nailhead to Chev Automatic Transmission with 2.90" Crank Flange

The kit shown fits the 401 & 425 Buick nailhead engines.

Make sure you clean all surfaces when mating these parts together. Always check 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. Check and recheck as you go. We can't foresee every change or modification that could possibly occur in the building of a custom vehicle. Especially when we are dealing with 50-year-old motors.

Materials Included

- (1)** Adapter plate - Buick Nailhead to Chev
- (1)** Crank Adapter – Inner
- (1)** Crank Adapter - Outer
- (1)** Torque converter drive plate

- (1) Flexplate - small center balanced flexplate
- (1) Balance weight for Buick 364 to Chev auto balanced flexplate
- (6) SHCS7/16-20X3 SHCS 7/16-20 X 3
- (4) SHCS 7/16-14 X 1 3/4
- (2) SHCS 7/16-14 X 1 1/4
- (6) 7/16-20 x3/4 flexplate bolts
- (2) Dowel pins .621 x 1
- (5) HCS 3/8 X 16 - 1 1/4 YZ8

While performing this installation, please remember a few simple rules.

1. Install all bolts before tightening in a particular sequence
2. Use Loctite and torque bolts where applicable. Never force anything
3. Lubricate both threads
4. Trial fit everything to make sure it will fit. See rule #2.

Installation Instructions

1. With the transmission removed, clean the back of the block where the adapter plate will contact it. Make sure the original dowel pins are in place. Install the block adapter using the six 7/16 X 14 socket head capscrews. Two of the capscrews are 1 ¼ long and four of them are 1 3/4 long. The two shorter bolts go through the adapter plate at nearly the same location as the .621 Chev dowel pins. Once all six bolts are in place drive in the Chev dowel pins supplied. They have threads in them so you can pull them out if you ever need to remove the adapter plate.
2. Clean the crankshaft surface. Identify and mark the hole in the crank that is not tapped or drilled all the way through the crankshaft. This is the seventh hole. The first 6 are tapped to 7/16 X 20 and retain the flywheel / flexplate. The seventh hole is there as a reference hole only. It is there to identify orientation on the balanced flexplate. Buick never put dowel pins in the crank for orientation like everybody else. It is a sight hole. You must mark the outside of the crank flange so you will be able to see it after you position the inner crank adapter. The new flexplate is balanced correctly for your 401 & 425. This is a different balance than the 364. There is an unused balance ID hole in the new flexplate as well. Make sure the hole in the flexplate is aligned with the ID hole in the crank flange. If you don't do this, you will have a vibration. The weight on the new flexplate goes towards the engine. Once this is done, install the outer crank adapter using the six 7/16 X 20 X 3 inch capscrews. There is no specific orientation to the crank adapter. Torque the capscrews to 50 ft lbs. Use Loctite.
3. Now bolt on the starter. Your stock Buick starter will work. After this is done. Turn the engine over with the starter and make sure it all works OK.
4. If everything is OK then bolt on the rectangular torque converter drive plate using the six 7/16 X 20 X ¾ bolts. Torque them to 45 ft lbs.
5. This completes the kit installation. When bolting up the Chev transmission and torque converter, check the distance between the bolt pads on the Chev torque converter and the supplied torque converter drive plate you just installed. You should have a clearance of approximately 1/8 of an inch to 3/16 of an

inch. Any more than that and you need to add a washer to take up the space so the clearance is less than 3/16. Checking this dimension is good practice on all transmission jobs.



You just need to see this extra hole through the flexplate. It does not have to be perfectly lined up. It is only there for reference.

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