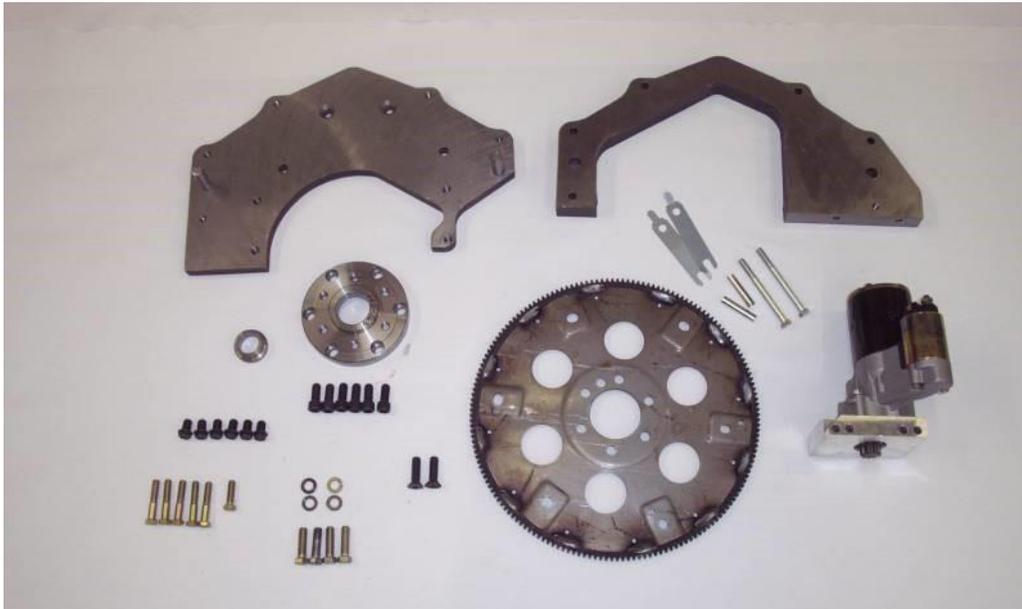




## Bendtsen's Speed Gems Transmission Adapters

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### ***BU1000301 Buick Straight 8, 320 with Original Manual Transmission to Chev Automatic***

The kit shown fits 233/248/263 Straight 8 motors. 320 motors are slightly different, but the assembly is similar. All parts (even the flame cut plates) are CNC machined and ground. They are all steel and they always will be. I like the rigidity of steel. The weight is negligible.

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) AP10018 Adapter plate - inner - Buick straight 8 manual to Chev auto
- (1) AP10017 Adapter plate - outer - Buick straight 8 manual to Chev
- (1) Crank Adapter - Buick Straight 8, 320 with standard transmission to Chev automatic
- (1) 168 tooth Chev flexplate FRA100

- (1) High torque mini starter 3510
- (1) HCS 3/8-16 X 1 1/4 YZ 8
- (2) HCS 3/8-16 X 3 3/4 YZ 8
- (2) FHSCS 7/16-14 X 1-1/2
- (3) HCS 7/16-14 X 1 1/2 YZ 8
- (6) FHSCS 3/8-24 X 1
- (5) HCS 3/8-16 X 2 1/2 YZ 8
- (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 YZ 8
- (4) Lock Washer 7/16 YZ 8

**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 your transmission removed, clean the back of the block where the adapter will contact it. Make sure both alignment dowels are in place.
2. Bolt the inner adapter plate to the block with the 2 tapered-head cap screws and the 4-2 inch x 7/16 bolts provided. The 4-2inch bolts go through the block, into the adapter plate. On some blocks, one of the bolts needs to be ground shorter. Watch and make sure the bolts don't stick out through the adapter plate. If it does, it will interfere with the second plate.
3. After this is done, install the crank adapter using the provided bolts. There are several different styles of crankshafts used on the Buick straight 8 engines over the years. We have crank adapters and bolts available for all of them.
  - a. If your engine originally had a Dynaflo transmission, your crank flange should be threaded with 7/16 bolts.
  - b. If you had a manual transmission, your crank flange could have either threaded inserts with 3/8 bolts or studs with nuts and you will need to tap the crank boltholes to 7/16 x 20. Make sure the crank flange is clean and no burrs before installing. Use loctite and torque to specs evenly.
4. Now install the spacer plate. It will slide onto the extended dowel pins, pressed into the adapter plate. It should be a tight fit. Tap it on without damaging it.
5. Next the flywheel. You should now be ready to install any Chev V8 style automatic transmission.
  - a. If you want to install a manual transmission, you simply bolt on a 1985 or older Chev stick flywheel and clutch assembly, along with the Chev bellhousing.

- b. If using a manual transmission, drive the pilot bearing adapter into the crank spacer AFTER the crank spacer has been installed. Part of the pilot bearing adapter drives into the original crank shaft, so make sure that it has been bottomed out fully. Then use a stock Chevrolet pilot bearing or bushing.

**Caution!** We have found several motors that 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.

Bendtsen's Speed Gems Transmission Adapters.  
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