

***INSTRUCTIONS FOR INSTALLATION OF  
THE CENTURY DRIVE GEAR BOX***

*The “**EXCALIBUR**” edition*

***TO AN ENGINE***

**WARNING**

- ! Never reach hands or other body parts in or near moving parts!**
- ! Maintain a safe distance from any fixed or moving propeller!**
- ! Prior to beginning any work on your project, turn off the main battery switch and/or remove the battery terminals and ignition keys!**
- ! Parts are heavy. The unit components weigh approx... 70#. Take necessary precautions to avoid injury during installation of the drive unit.**

**Always have a co-worker or assistant available to help.**

**If you have any questions or need technical assistance,  
contact Customer Service or Technical Representative at  
814-677-7100.**

**Century Drive Systems Inc.  
687 Bucktail Road  
Franklin, Pa 16323**

2018 Century Drive Systems, Inc.

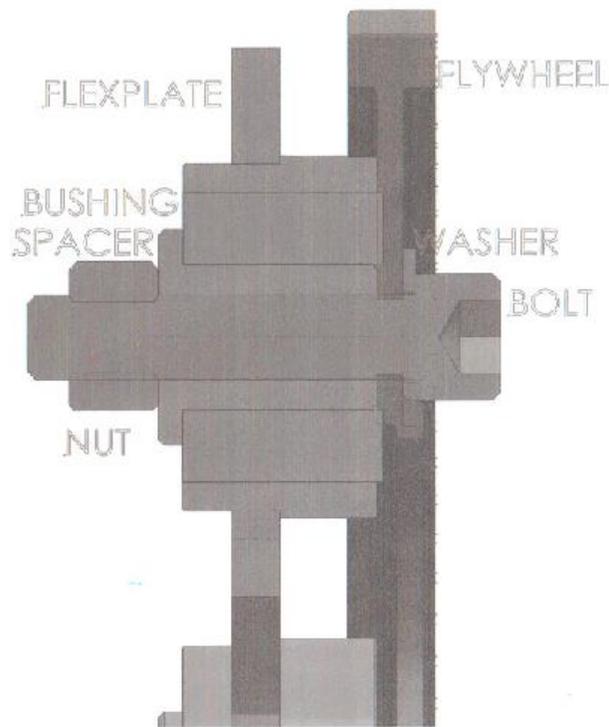
# INSTRUCTION FOR INSTALLATION OF THE CENTURY DRIVE GEAR BOX TO AN ENGINE

**\*\*\* THERE IS NO OIL IN YOUR GEAR DRIVE \*\*\***

1. Be sure you have ordered and received all proper hardware.
  - 6 – 3/8-16 X 1-1/4” SS Socket Head Cap Screws
  - OR 10mm X 35 mm SS Socket Head Cap Screws
  - 6 – 3/8 SS lock washers for bellhousing mount.
  - 6 – Pre-Assembled soft drive assemblies in flex plate.
  - 2 – Quarts Redline Gear Oil
  - Warranty Card.
2. Be sure the back of the engine block is flat, clean, and free of any protrusions. We recommend scraping the surface with a flat razor blade or something of the sort.

**\*\*\*Some engines have plates or mounting brackets that protrude past the mounting plane of the block. The brackets MUST BE removed, modified or replaced with one that is sub-surface. NOTHING must touch the unit when mounting to the bellhousing.\*\*\***
3. Be sure that pilot hole recess in the end of your crankshaft is clean, free of dirt and burrs. Also be sure all bushings have been removed. Hole should measure 1.706” diameter and at least 5/8” deep.
4. Some engines have a dowel in the crankshaft to align the flywheel. This pin **MUST NOT** extend through the flywheel, or it will interfere with the bolts in the soft drive mounting bolts. You can either drive the pin in further (cautiously not to hit the engine block) or grind it flush to the flywheel.

5. After engine, bellhousing area and crank have been inspected, put a small amount of grease into the pilot area of the crankshaft.
6. Both the engine flywheel and soft drive flex plate have (6) offset holes in them. Rotate both so that an outer most hole is at the bottom of the bellhousing area.
7. Place complete gear drive over the (2) 5/8" dowels located on the back of the engine. Loosely start (2) 3/8-16 X 1-1/4" socket head cap screws with lock washers into the upper most holes to stabilize unit.
8. Start the remaining (4) 3/8-16 X 1-1/4" socket head cap screws with lock washers into the lower (4) holes around the dowel pins.
9. Snug bolts from side to side. DO NOT use bolts to pull unit in to place. If bolts get too tight, use a rubber or leather mallet to tap unit onto engine dowels. Be sure lower gear shaft is sliding into end of crankshaft. Torque all bellhousing bolts in a crisscross pattern to 30 FT./LBS. Inspect that rear of unit is COMPLETELY FLUSH to engine mounting surface.
10. Mount unit to engine stand. There are many different configurations of rubber/neoprene mounts that may be used, but mounts must be used on top and bottom of the engine stand to allow for movement up and down. Lock nuts are required on the engine stand mount bolts for the drive. Do not over tighten bolts and compress rubber or put undue stress in the unit mounts.
11. Use the (6) 7/16" bolts nuts and washers provided to mount the soft drive to the flywheel as shown below. Installation configuration MUST be as shown.



Only snug bolts/nuts at this time. Once all are snug, rotate engine through 3-4 times to allow soft drive to find its own center. Tighten down the (6) bolts/nuts to 45 FT/LBS. If plates are bowed, your flywheel will need to be checked for flatness with a dial indicator. If it is not flat, use a flat pry bar to flex until flat. Reassemble and rotate engine to be sure flywheel and flex plates are flat and parallel. Then re-tighten bolts to recommended spec.

12. Fill gear drive with (2) quarts of Redline oil provided. It is recommended to change oil after first 20 hours of run time. Scheduled maintenance should be to change oil every 80-100 hours or once per year after that. It is recommended to use Redline Shockproof oil. Any other oil or additive could void your warranty.

13. Your gear drive is shipped with engine mounting hardware and (2) AL. bushing adapters. The open bushing is for standard GM engines and the semi-solid adapter is to be used for GM LS engine models. To install: heat bushing to approx.. 250 degrees F and slide onto end of pinion shaft. Be sure it is seated against the shaft shoulder.

Any questions, please feel free to visit our website or contact us directly at 814-677-7100.

**Century Drive Systems Inc.**  
**687 Bucktail Road**  
**Franklin, Pa 16323**