



ACCU-DRIVE CAM GEAR DRIVE SYSTEM
 CATALOG #7896
 for Ford 351 Cleveland

PLEASE study these instructions carefully before installing your new gear drive. If you have any questions or problems, do not hesitate to contact our Technical Hotline at: 1-800-416-8628.

EMISSION CONTROL SYSTEMS: Check local laws for requirements. Not legal in California on pollution controlled motor vehicles.

POWER PACKAGE: Edelbrock Accu-Drive gear drives are part of a Total Power Package parts system that can be completed with the use of dyno-matched Performer, Performer RPM, or Torker II cams, intake manifolds, and carburetors. For competition applications, use Edelbrock Victor intake manifolds. Please refer to the Power Package Guide in the Edelbrock catalog to select all the components you need.

ACCU-DRIVE OPERATING PRINCIPAL

The Accu-Drive system utilizes a free floating idler gear that is self-aligning and connects the crankshaft and camshaft gears into proper mesh. The large floating idler gear is positioned on the right side of the engine (passenger side). During normal operation, the drive power is transmitted from the crankshaft through the large floating idler to the camshaft gear. During the running operation, there is no backlash between these gears.

The small idler gear (located opposite the large idler gear) is also free floating. This small gear does not carry any operating gear loading. The small idler must be allowed to float vertically as noted in Figure 1. The small idler prevents the large idler gear from being disengaged from mesh in the event the engine is rotated backwards.

GEAR ASSEMBLY CAUTION NOTES:

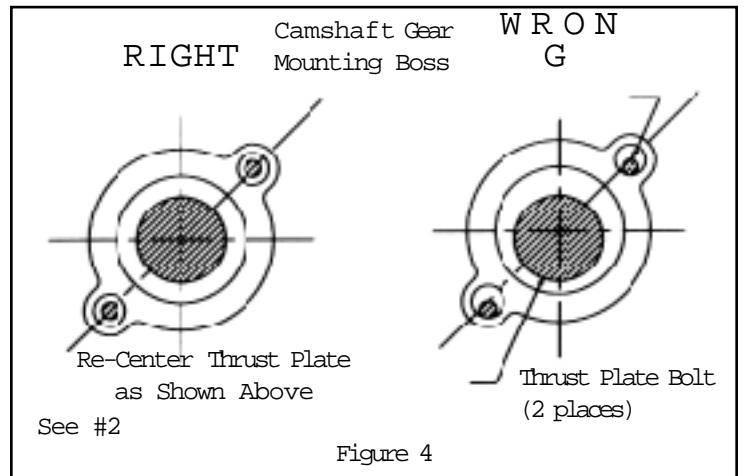
1. Never hammer directly on gears. You will damage the gear teeth and cause early failure.
2. Lubricate all gears and bearings with engine oil before installing front cover.
3. The small idler gear must be free to float vertically with the large idler gear in tight gear mesh with the crankshaft and camshaft gears. See Figure 1 for proper clearance. CAUTION: If gears do not have proper clearance the gear teeth will become overheated and discolored and will fail due to excessive friction between the mating gears.
4. Large idler gear shaft length may require material removal to obtain the correct clearance between the cylinder block and front cover. See Figure 2.
5. If a non-stock front cover is used be sure idler gear axles do not have more than .030" front end clearance. Install allen head capscrews inside cover (if necessary) to obtain proper clearance.
6. Do not use aluminum hub harmonic balancer with your Accu-Drive. Use only stock or aftermarket steel harmonic balancers.

INSTALLATION INSTRUCTIONS

NOTE: THE FOLLOWING STEPS ARE CRITICAL FOR THE PROPER OPERATION OF YOUR ACCU-DRIVE!

- A. Remove stock timing cover. Rotate engine to Top Dead Center of cylinder #1 so that the timing marks on the original crank and cam sprockets are directly lined up with each other, i.e., the mark on the crank sprocket will be straight up and the mark on the cam sprocket will be straight down. Using suitable gear puller, remove stock crank and camshaft sprockets and timing chain. Refer to repair manual if necessary for individual steps.
- B. Assemble Accu-Drive as shown in Figure 1.
1. Install crank gear with the large inside chamfer toward rear of engine and timing mark toward front of engine. Make certain crankshaft drive key is aligned with keyway of the crank gear before assembling.
2. See Figure 2 Camshaft gear assembly for correct assembly.
 - (a) Place well lubricated thrust washer on the rear (back) side of cam gear. Install cam gear on engine and check to see that cam gear seats properly on camshaft locating face. NOTE: The existing thrust plate may have to be loosened up and re-positioned (clearance in thrust plate bolt holes allows off center installation at factory) to allow cam gear to seat correctly on the camshaft. You must make sure the thrust plate is centered on the camshaft. Loosen the two bolts holding the thrust plate to the block. Using the centering ring supplied in the kit, install the ring on the end of camshaft through the thrust plate and retorqued bolts. Be sure to remove the centering ring after thrust plate has been torqued down. See Figure 4.
 - (b) You must use Ford thrust plate #C8SZ-6269-A (0.151" thick). Torque the thrust plate retaining bolts to 9-12 ft./lbs. NOTE: No thrust button is used on Ford engines. Install washer and cam bolt.
 - (c) Select desired dowel pin hole in cam gear 0 (standard), A (4 advanced at the crank, 2 at the cam), or R (4 retarded

- at the crank, 2 at the cam) and install on cam dowel and into cam gear. Use the 0 standard dowel pin hole as a baseline for camshaft timing.
- (d) Install the one-piece Ford fuel pump drive #C3AZ-6287-B and retaining capscrew. Finger tighten only at this time to hold parts in place.
3. Align the cam gear and crank gear timing marks as shown in Figure 1.
4. Install the idler gear sub-assembly as follows:
 - (a) The large idler gear must be installed on the passenger side (right side) of the engine.
 - (b) With large idler cranked tightly into mesh, make certain the small idler (left side of engine) has free vertical movement



(clearance) of no less than .005" or no more than .060". NOTE: The gears will be severely damaged from friction if they do not have the proper running clearance as noted.

5. With the idler sub-assembly fully installed in mesh with crank and cam gears and the large idler gear axle all the way back against the block, check the clearance between end of idler axles and front cover as follows:

(a) Place a small amount of clay on the front end of both axles as shown in Figure 3.

NOTE: It may be necessary to cut some material off rib inside front cover to hold idler gears in place.

(b) Install front cover with gasket in place.

(c) Remove cover and measure the thickness of the compressed clay. It should be .005"-.030".

(d) If axles are too long and are bottoming out between the block and the front cover, you will need to grind off material from axles or remove more material from rib inside front cover as noted in Figure 3.

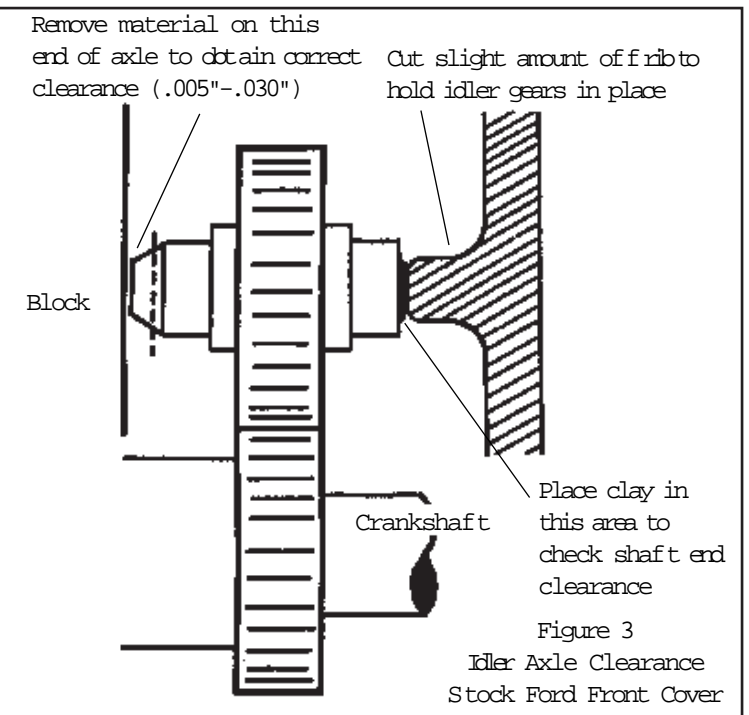
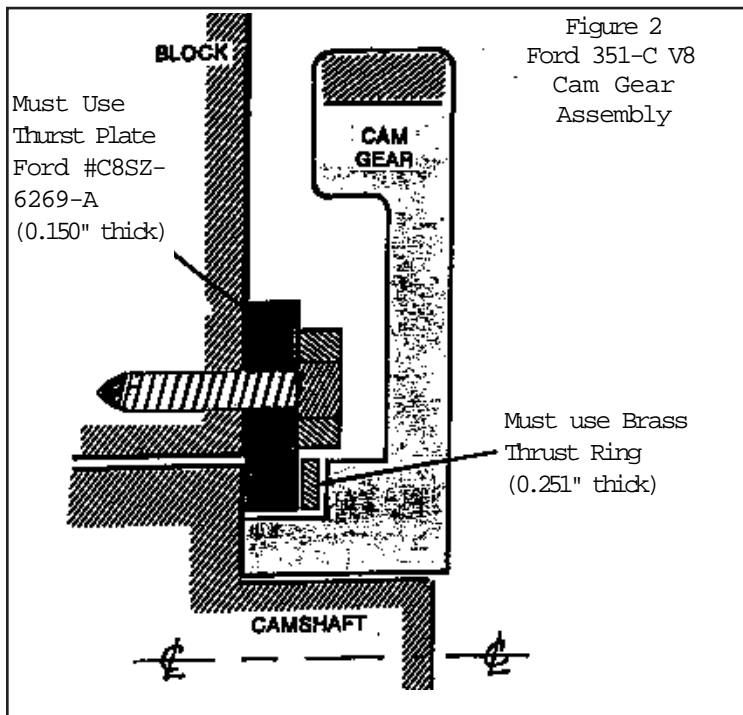
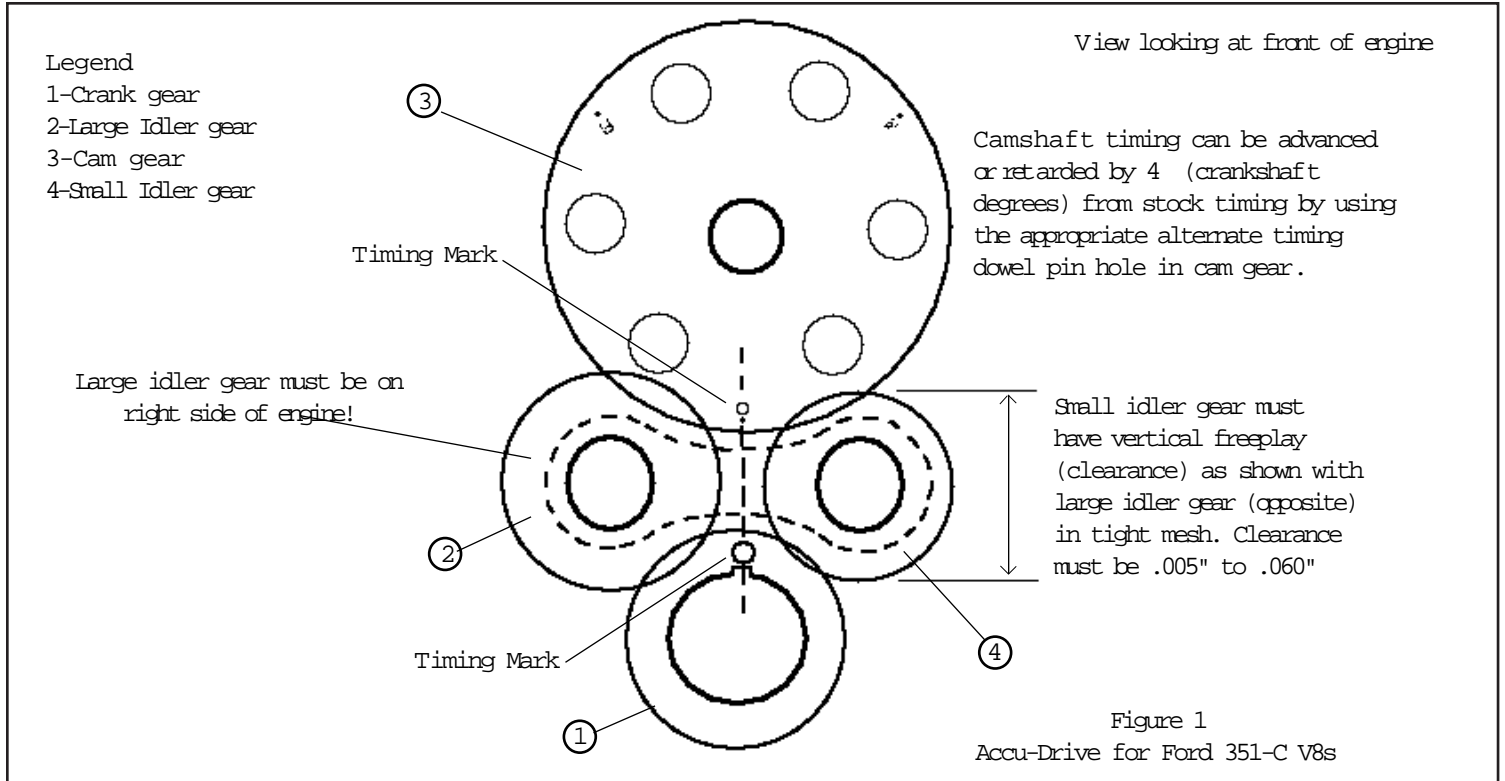
(e) Note: Non-stock timing covers may require special allen-type screws to be installed within the cover to obtain the correct clearance.

6. With all gears correctly in mesh and timed, tighten the camshaft capscrew to 35 ft./lbs. It would also be a good idea to use Loctite or equivalent on the bolt threads prior to final assembly.

7. Lubricate all gears and bearings with engine oil.

8. Re-install the front cover.

C. Re-install all components removed in preparation for step A.



PLEASE complete and mail your warranty card. Be sure to write the model number of this product in the Part #___ space.
 THANK YOU.