



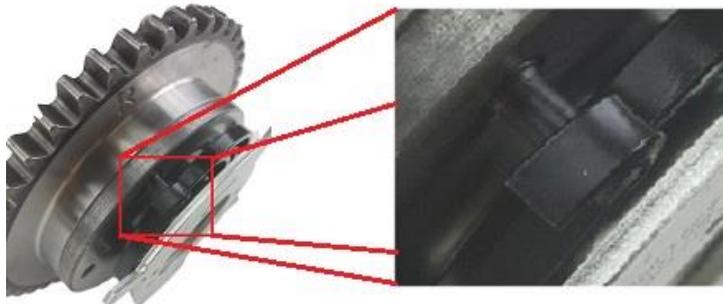
## Cam Phaser Lock Out Installation Instructions

Our lockouts are a one-piece billet aluminum block designed to lock the cam phaser into the fully advanced position. Once installed, the lockouts lock the internals of the cam phaser to create a fixed gear with no moving parts and no internal mechanisms to make noise or fail.

The following instructions will help to guide you through the installation. These instructions are based on having the camshaft phaser previously removed from the engine. Please follow the factory Ford manual for removing the phasers from the engine.

### Required Tools:

- 3/8 in. Ratchet
  - 3/8 in. T30 Torx
  - Torque Wrench
  - Vice
  - Blue Thread Locker
  - Light Colored Paint Marker
1. There are 5 bolts holding the cover plate on the face of the phaser. One of these bolts is longer than the rest and keeps tension on the spring that is located on the backside of the phaser. After the longer bolt has been located, mark it with a paint marker so it can be easily identified later.



2. To make installation easy, place the phaser in a vice. The jaws of the vice should be around the gear, with the bolts facing up.
3. Completely remove the 4 shorter bolts



4. Loosen the longer bolt (See Step 1) enough so the cover plate can be rotated out of the way. **Do not remove the bolt. Removing this bolt will cause the spring tension to be released. This can injure the installer and re-tensioning the spring will cause a longer reassembly process.**
5. Rotate the plate out of the way so the internals of the phaser can be accessed. Do this slowly because there is small spring that will force a small check valve out. Place check valve assembly to the side.



6. Once the internals are accessible, you will see 5 inner vanes that are positioned against the outer portion of the gear. This is where the lockout will be installed.
7. Our lockouts are precision machined to fit one section. Install the lockout in the void that has the tightest fit.



8. Reinstall the check valve assembly and rotate the cover plate back into place.
9. Apply blue thread locker on the 4 smaller bolts and reinstall. All 5 bolts should be torqued to 145 in. lbs.

Once the lockouts are installed and the phaser has been reassembled, you can install them on the engine and continue engine reassembly.

If your lock outs do not fit, you may have received a set that was designed for a phaser made by a different manufacture. In some cases, a file can be used to trim the lockout down to the correct size.

If you believe you may have the wrong lockouts or if you have any questions, feel free to contact us via email or calling us at **850-250-2132** We will be happy to assist you.

Ford Lockouts	Dorman Lockouts
	
	
	