

## INSTALLATION INSTRUCTIONS

1. Before installing a new harmonic balancer, look to see how the old one failed.
  - **If the old balancer failed because the timing cover seal has worn the sealing surface,** be sure to install a new seal prior to installing the new balancer.  
**If the old balancer failed because the outer ring slipped on the hub,** as is usually due to normal heat aging of the rubber, simply installing a new balancer should resolve the condition.
  - **If the old balancer failed because it cracked along the keyway,** verify ignition timing and ignition firing before installing a new balancer. Improper ignition timing or poor spark can cause a backfire during starting, which can crack the balancer along the keyway. New balancers that fail due to cracked keyways are **not covered by warranty**.  
**If the old balancer failed because it wobbled,** it may have worn both the balancer and the end of the crankshaft. Verify correct crankshaft diameter and keyway condition prior to installing a new balancer. Balancers that fail due to incorrect crankshaft seating are **not covered by warranty**.
2. To avoid damaging the end of the crankshaft or the mounting bolt threads, use the proper puller to remove the old balancer.
3. Before installing a new balancer, inspect and clean the crankshaft "snout." Remove any oil or rust residue buildup using solvent or very fine (800 or 1000 grit) emery cloth. Remove any burrs around the keyway. Thoroughly clean any remaining grit from the crank surface before installing the new balancer.
4. Thoroughly clean and lubricate the sealing surface of the new balancer with clean engine oil before installing it on the engine. This will allow the seal to properly break in.
5. Never use a hammer to force a balancer onto an engine. Hammering a balancer can distort the seating surface, and may damage internal engine components.
6. Do not use the mounting bolt to "pull" the balancer onto the crankshaft. This practice may cause misalignment of the balancer, may cause the balancer not to seat completely, or may result in damage to the bolt or crankshaft threads.
7. Install the new balancer by hand, using a balancer installation tool (long hardened threaded rod, with a thrust bearing and nut), or a graded bolt longer than the OE bolt to draw it in enough that the OE bolt will catch until it seats or shoulders on the crankshaft. Hand install the mounting bolt, following vehicle manufacturers recommendations for thread lubrication, use of thread locking compounds and torque recommendations.

### **NOTE: READ BEFORE INSTALLATION WORK BEGINS**

#### **FORD 2.3L BALANCER**

**Some Ford 2.3L balancers require bolt replacement. If a bolt is included in this box, it is because this particular balancer requires bolt replacement.**

- ✓ Bolt included in this box is a Torque to Yield (TTY) bolt.  
Torque to 133 +/- 10 Lb-ft (180 +/- 13.5 N.m).
- ✓ When a replacement bolt is supplied, do not reuse the original bolt.

#### **GM 3.8L BALANCER**

**Some GM 3.8L balancers require bolt replacement. If a bolt is included in this box, it is because of a recall that was done by the vehicle manufacturer for the original harmonic balancer.**

Use replacement bolt when supplied; otherwise, use original.

#### **GM 3.3L BALANCER**

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- ✓ Use replacement bolt when supplied; otherwise, use original.

**In order to maintain proper balance, you must preserve the orientation of the pulley to the balancer. Please read below to mark the two mating parts with a marker or paint marker for alignment.**

- ✓ Mark the original balancer/pulley assembly with a visible line across the balancer-pulley interface before removing the pulley from the balancer.
- ✓ Unbolt the pulley from the balancer.

Line up the replacement balancer in the same orientation as the old balancer by matching up the shapes side by side.

Bolt pulley to replacement balancer.

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