PRO RACE®
PERFORMANCE PRODUCTS

INSTALLATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS FOR THE FOLLOWING:

#64269...FORD 260, 289, 302, 351, 400 V8

Suits Externally Balanced Engines through 1980.
Suits Internally Balanced Engines upon removal of the bolt-in counterweight, see note below.

NOTE: The PRO/RACE "All Steel" Crankshaft Vibration Damper has a precision machined inner bore which requires special attention prior to fitting. It is also important to note that your PRO/RACE Damper is supplied "IN BALANCE" condition, therefore, if any balancing operations are carried out on the engine, weight must be added or removed from the crankshaft only.

Important: **DO NOT** drill any holes in your PRO/RACE Damper.
For special purpose race engines with an **internally balanced crankshaft**, simply unscrew the two $^{3}/_{8}$" socket head cap screws and remove the counterweight.

1. Engine must be completely cold.

2. Remove water pump.

3. Remove original Damper carefully, using Damper Puller or removal tool.

4. Ford has used two different TDC locations, therefore it is necessary to check to ensure that the zero degree or TDC timing mark of your PRO/RACE Damper is in the same location when compared with your original Damper. When carrying out this check, ensure that both dampers are viewed from the front or pulley face. Rotate until the keyway is in the "12 O'CLOCK" position. If the TDC timing mark on the engine is in the "10 O'CLOCK" position, the "A" set of timing graduations on the PRO/RACE Damper should be used.

   Alternatively, if the engine timing mark is in the "2 O'CLOCK" position, the "B" set of timing graduations on the "PRO/RACE" Damper should be used.

5. Inspect crankshaft snout and ensure there are no burrs or rust. If required polish with very fine emery paper or steel wool, wash clean.

6. Examine key, should the key be damaged or loose in the keyway groove of the crankshaft, install a new key.

7. Replace the front timing cover oil seal.

8. The PRO/RACE Damper can be installed just like any other Damper using a Damper installation tool. However, you can make installation much easier by immersing the Damper in boiling water for 15 minutes, or placing in a pre-heated oven at the lowest temperature (max. 250°F or 120°C) for 15 minutes. This process will expand the hub of the Damper.

9. If you are NOT using a professional installation tool, it is **ESSENTIAL** that the Damper be pre-heated as outlined in step 8. above, to expand the hub. All subsequent steps will need to be followed carefully.

10. Smear crank snout and the timing case oil seal with clean oil.

11. If you are not using a Damper installation tool, remove Damper from boiling water (or oven), using insulated, heat proof gloves. Smear bore of Damper with oil.

12. Immediately locate Damper on to the crankshaft and rotate until the hub locates in the key-way.

IMPORTANT - DO NOT ALLOW DAMPER TO COOL

13. If using a professional Damper installation tool, install the Damper following the instructions supplied with your installation tool and ignore step 14.

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14. If you are not using an installation tool, quickly, utilizing a block of aluminum to protect the machined face, drive the Damper on the crankshaft.

15. Promptly reinstall the Damper retaining bolt and washer and tension to 90 lb/ft torque.

16. Ford has used many different styles of Dampers with various pulley spacings, bolt hole and spigot combinations, therefore it is necessary to identify the Damper originally fitted to your engine by measuring with a steel rule through the bore of the Damper to establish the overall length, then refer to the respective instructions shown in the table below:

For dimension	3" refer (A)	3 3/16" refer (B)
	3 3/8" refer (C)	4" refer (D)

(A) This Damper utilises an internal hollow boss to locate the crank pulley, no sleeve, circlip or spacers are required. Install pulley using the original bolts.

(B) This Damper utilises an external raised boss to locate the crank pulley. Only the tubular sleeve is used with the circlip fitted in the circlip groove located at the stepped shoulder. Fit the sleeve into the centre hub of the Damper and, with the circlip located between the Damper face and the crank pulley, fasten using the original bolts.

(C) This Damper utilises a tubular sleeve with a circlip at the Center position circlip groove, together with 4 short spacers located between the Damper face and the crank pulley. Fasten with 4 new 1" long x 3/8" U.N.C. Hi-Tensile bolts (Min. grade 6) and tension to 32 lb/ft torque.

(D) This Damper utilises a tubular sleeve as in (C) together with both 4 short and 4 long spacers located between the Damper face and the crank pulley. Fasten with 4 new 1 1/2" long x 3/8" U.N.C. Hi-Tensile bolts (Min. grade 6) and tension to 32 lb/ft torque.

NOTE: Use LOCTITE to secure the crankshaft and pulley bolts and spigot sleeve in Damper.:

17. Before reinstalling water pump, ensure there is a minimum of 1/8" clearance between Damper ring and the water pump housing, check that the pulley alignment is correct. **WARNING**: Some cast iron water pumps have a casting lug which must be ground off to clear Damper ring.

18. Re-check for adequate clearance of all components before re-starting engine.

Should you have any difficulty fitting your PRO/RACE "All Steel" Crankshaft Vibration Damper, please contact:

PRO/RACE Performance Products
Email: tech@pro-race.com
Website: www.pro-race.com

OR alternatively please contact your place of purchase or closest Distributor.