INSTALLATION INSTRUCTIONS

For 80031, 80032, 80033, 80034, 90031, 90032, 90033 and 90034

Harmonic Dampers - 80031/90031 fits LS3, 80032/90032 fits LS-1 and LS-6 Camaro, Firebird, the 80033/90033 fits LS1/LS6 Corvette and the 80034/90034 fits the L92 truck/SUVs. The 80034/90034 may also fit certain 4.8L, 5.3L, and 6.0L G.M. LS style engines.

The 80032 and 90032 models fit 1998 and later Camaro and Firebirds with LS1 or LS6 engines. The 80033 and 90033 fit the LS1 and LS6 engines used in the 1997 and later Corvette. The only difference between the 80032/90032 and the 80033/90033 is that the Corvette model is 0.852" shorter than the Camaro/Firebird model. Other than that, they are essentially the same. The 80034/90034 fits the L92 truck and SUV models and possibly other truck or SUVs. We cannot guarantee fitment on any of these other LS engine variants.

Kit Contents: Harmonic Damper

Items and Tools Required for Installation:

a. New G.M. crank bolt #12557840
b. Kent-Moore #J41816 Balancer Removal Tool
c. Kent-Moore #J41816-2 Crankshaft End Protector
d. Kent-Moore #J42386-A Flywheel Holding Tool
e. Kent-Moore #J41665 C'shaft Balancer & Sprocket Installer
f. Kent-Moore #J36660-A Torque Angle Meter

Where to buy Kent-Moore tools: http://www.spxkentmoore.com/
Note that these tools are fairly expensive. You can use substitute methods to remove and install the damper or you may elect to have it done professionally.

General Information: This damper arrangement is basically the same as the factory setup. This engine does not use a key to align the damper to the crank. Our damper has a keyway for those who wish to cut a keyway in their crank. If you machine a keyway in your crank, note that the TDC mark on the damper is 10 degrees to the left of the centerline of the keyway looking at the front of the damper. This is the same position used on 1969 to 1995 small block Chevy engines. Due to the design of the stock ignition, the stock damper does not have any timing marks on it. Our damper does include timing marks for those setups where timing marks are required.

Timing Marks on Powerforce and Powerforce+Plus Dampers: These dampers have an engraved mark for TDC. You can find it by feeling it with your fingernail. These dampers have large marks every 10° and smaller marks every 2°. Note that these dampers also have a keyway. The stock crank does not use a key but some race engine builders do add a keyway to the crank.

Removal of old damper: These instructions essentially mirror the G.M. Document ID#642784 which specifically covers the 2002 Camaro. All other applications are similar. Note that the G.M. instructions are the recommended method for replacing a damper. You may not have all of the recommended tools available and may not be able to completely follow these directions. If, after reading the instructions, you do not feel you have the equipment to perform this operation, we suggest you take your vehicle, or engine, to a G.M. dealer or professional mechanic to have the job done. A damper removal tool is required. The recommended damper removal tool #J41816 must be used for removing the stock G.M. damper. Note that once you have installed your Professional Products damper, the G.M. removal tool cannot be used to remove it. You must use one of the typical aftermarket three-legged damper pullers that bolts to the front face of the damper with three M8-1.25 bolts.

Remove the stock damper to crank bolt but do not discard it. You will need it later. **You will also need a new replacement bolt from your G.M. dealer, part #12557840.**

When using the puller you will need to have the engine locked in position. This can be accomplished by using a Flywheel Holding Tool (Kent Moore #J42386-A), or you can wedge a large screwdriver into the flywheel teeth. To access the flywheel may require the removal of the following, depending on your specific vehicle: A/C drive belt, starter motor, right transmission cover, transmission oil cooler lines, and power steering cooler. Place the Flywheel Holding Tool into position and make sure that the teeth of the Holding Tool mesh with the teeth of the flywheel. The bolts holding this tool to the block must be tightened to 37 lb. ft.

Place the #J41816-2 Crankshaft End Protector on the end of the crank snout. Position the #J41816 damper puller into position and hook ends over flange on face of damper. Tighten center bolt until damper pulls off crank. Remove the puller and end protector from damper.

Installation of new damper: Make sure the crank snout is free of any scratches or burrs. It may be polished with a fine emery paper or steel wool. We suggest that a new oil seal be installed in the front cover. Smear the crank and the damper bore with clean engine oil. Install a standard 3/16" damper key (if you are using the key) and carefully align keyway in hub with key in crank. Note that if you attempt to press the damper onto the crank without the key being properly aligned, you could severely damage the damper and possibly the crank. Install damper onto crank. This operation requires Crankshaft Balancer and Sprocket Installer #J41665. If you do not have this tool, the damper may be driven on with a large mallet using a block of aluminum or wood. Make sure that you only drive against the hub, not the ring. Driving against the ring will damage the damper. If you use the preferred Installer, please follow this procedure:

A. Assemble the threaded rod, nut, washer, and installer. Insert the smaller end of the installer into the front of the balancer.
B. Using a wrench, hold the hex end of the threaded rod.
C. Use a second wrench and rotate the installation tool nut clockwise until the balancer is started onto the crankshaft.
D. Remove the tool and reverse the installation tool. Position the larger end of the installer against the front of the balancer.
E. Using a wrench, hold the hex end of the threaded rod.
F. Use a second wrench and rotate the installation tool nut clockwise until the balancer is installed on the crankshaft.
G. Remove the balancer installation tool.

Installing the Crank Bolt: Install the used crankshaft balancer bolt. Tighten the USED crankshaft damper bolt to 240 lb. ft. Now remove the used crankshaft damper bolt. If the damper is fully seated, the end of the crank will be recessed back into the damper by 0.094" to 0.176". If it measures more than this, you must re-install the installation tool and try to pull the damper into position. Once you have the damper fully seated, discard the old bolt and install the new one.

Tighten the new damper bolt on the first pass to 37 lb. ft. If you use the J-36660-A tool, make a final pass on the damper bolt to 140 degrees. If you do not have this tool, tighten the new damper bolt to 74 lb. ft.

Remove the bolts securing the flywheel holding tool and remove the tool. Re-install all the parts that you removed to access the flywheel. Your installation is now complete.

NOTE: A new crank bolt is required because the stock bolt is designed to stretch when fully tightened and is not considered reusable by G.M.

Use the following dimensions to check to make sure your crank diameter and damper bore are the correct size. Some aftermarket cranks may not be the correct size.

Crank snout diameter - 1.480/1.481 inches
Damper bore diameter - 1.480/1.479 inches (37.587/37.567 MM)
Maximum installed keyway height - 1.654 inches

For tech help:
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web site: www.professional-products.com