

B-H-J DYNAMICS

HARMONIC DAMPERS

INSTALLATION INSTRUCTIONS (Steel Hub Models)

DO NOT ATTEMPT TO INSTALL THIS UNIT UNTIL YOU HAVE READ THESE INSTRUCTIONS.

B-H-J Dampers are machined to match all-important OEM dimensions. As such, all accessory drives should line up without difficulty.

ANY MODIFICATIONS TO THIS DAMPER, OTHER THAN HONING THE BORE TO FIT THE CRANKSHAFT AND DRILLING OF BALANCING HOLES AS SPECIFIED BELOW, WILL VOID ALL WARRANTIES.

1. CRANKSHAFT FIT

Internal diameter has been honed to minimum OEM tolerance. In many instances, this will create an excessively tight press fit. Carefully measure your crankshaft snout diameter and hone the bore of the damper to give a .001/.0015 press fit. This operation must be performed with the utmost care as too loose a fit will cause the damper to move and damage the keyway and too tight a fit may cause the damper to gall and weld itself to your crank. We highly recommend the use of an anti-seize compound since a steel hub is not as forgiving as a stock cast iron hub.

2. INSTALLATION

DO NOT INSTALL THIS DAMPER WITH A HAMMER!

All dampers should be installed with a proper installation tool. They are available from a number of manufacturers, including B-H-J. (Order B-H-J Part No. HB-1)

3. BALANCE (Internally Balanced Engines)

All neutral balance dampers have been factory balanced. However, we highly recommend that you have your balance shop check the B-H-J Damper against your existing damper; since some balance shops have been known to utilize an out of balance damper as part of a balanced assembly. If any additional balance holes are required, they should be drilled as follows:

Maximum Drill Diameter ---- 3/8"

Maximum Hole Depth ---- 1/4"

4. BALANCE (Externally Balanced Engines)

We have attempted to duplicate the OEM imbalance as closely as possible, but due to the fact that the stock damper is a casting, it is virtually impossible to duplicate the size of the weight.

THEREFORE ***** THIS DAMPER MUST BE MATCH BALANCED TO THE ENGINE ASSEMBLY. ****

All balance holes should be drilled in the hub only, the balance weight can be lightened or Mallory metal can be added to increase the weight.

5. CLEANING

Do not soak this damper in any type of solvent. Cleaning should be done only with a cloth moistened with cleaning solvent.

SPECIAL NOTE

ALL HARMONIC DAMPERS, OF ANY TYPE OR MANUFACTURE ARE SENSITIVE TO TEMPERATURE EXTREMES. IF EXTENSIVE DYNAMOMETER TESTING IS TO BE PERFORMED IT IS ADVISABLE TO ASSURE THAT THERE IS COOL AIR CIRCULATING TO PREVENT THE DAMPER FROM OVERHEATING DUE TO INTERNAL HEAT GENERATION.

Additional Instructions from Dr. Fred!

Here is your BHJ – “X” custom Damper. Please note that they are differentiated from early (89-93) to late (94,95) styles by the suffixes E or L, respectively. The BHJ part number is FO-IB3.8V6/SCE-7 or FO-IB3.8V6/SCL-7, respectively.

These balancers are zero balanced as you receive them. That means they bolt onto a fully balanced crank / flywheel assembly with no further modifications required. They are appropriate for ASP underdrive pulleys, which also come to you neutrally balanced. Sadly, the Ford pulley will have to be checked at the machine shop. Enclosed is the BHJ literature for the piece. I added my own 2 cents worth, below.

Remove your old balancer, and carefully clean the crank snout of any metal or debris. You can stuff a clean washcloth in the seal to help prevent crap from getting in the engine. If you can, it would help to get a micrometer to measure the snout diameter. Then, use a small cylinder hone or go to a machine shop to open the Balancer sleeve dimension to about 1 thousandth of an inch shy of your measurement. The balancer is intended to be an interference fit!

You will need to retain your original flat washer (unless you purchased a new set) and your Hall Effect Ring. Use a little Loctite and preferably, new screws to attach the Hall Effect Ring to the Balancer.

Put a thin film of anti-seize compound on the crank snout and damper sleeve. Pull the damper on with a long 14 mm x 1.5 bolt with a nut / flat washer combo on it to use as a jack. DO NOT EVER use a hammer. The base of the damper sleeve will bottom out where the crank snout joins the first journal. There is to be a small space between the end of the crank and the top of the Balancer sleeve. That is normal. Helms gives a torque spec of 103 to 132 lb-ft on the damper to crankshaft bolt, and 20 to 28 lb-ft on the pulley to damper bolts.

BHJ has an installer tool (I have one you can borrow, if you pay the shipping). It costs \$ 96.19, part number HB-1. If you purchased a new crank bolt, it is the '98 Mustang 3.8L item, Ford part number F58Z-6A340-A. Washer is Ford Part number E2DZ-6378-A.

Special thanks to Fred Holzhauser (with his Honorary Doctorate of SCology) for providing this information on the original group purchase in 2001.

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