155- 712105
430
615

Fluidampr®
performance harmonic dampers

VIBRATECH, INC. A Unit Of IDEX Corp.
537 East Delavan Avenue • Buffalo, NY 14211

INSTALLATION INSTRUCTIONS

STEP 1—TOOLS & PROCEDURES

- EQUIPMENT: Damper Installation Tool • Anti-seize Compound • The Proper Key
- DO NOT use a hammer during installation
- Honing or machining the Fluidampr bore is not recommended. A diametral press fit of .0005" to .0015" is required for proper damper function. If a micrometer is available, you may want to measure the crank snout and the inner bore of the Fluidampr to assure proper fit.
- Fluidamprs are coated with oil to prevent rust. The oil is not silicone fluid leaking from the damper. Oil your Fluidampr occasionally to give it the best appearance.
- SFI card is enclosed. It must be presented at tech inspections if SFI acceptance is required by your sanction body.
- Your Fluidampr customer registration card is enclosed. Please return it immediately.

STEP 2—BALANCING

2A. INTERNAL BALANCED ENGINES

Applicable for part numbers:

712100* 712420* 712425* 712430* 712435
712510 712615 712845 713282 715004
715171*

- Each Fluidampr component is precision balanced during manufacturing, so no balancing is required.
- **Do not attempt to balance the crankshaft with the Fluidampr installed**— normal rotation of the inertia ring inside the housing may give false balance readings.
- **Do not drill in the Fluidampr**— the inertia ring and silicone fluid are in a hermetically sealed housing.

NOTE: It is not necessary to remove the bolts or disassemble the Fluidampr during installation of the above noted part numbers. These bolts are properly torqued from the factory. You may want to check the bolt torques prior to installation. See chart below:

P/N	#Bolts	Torque
712100	6 flat head	34 ft. lbs.
712420	6 flat head	21 ft. lbs.
712425	6 flat head	21 ft. lbs.
712430	6 flat head	21 ft. lbs.
715171	8 soc. head	28 ft. lbs.

WARNING (If you disassemble Fluidampr):
Failure to correctly reassemble the Fluidampr using all the bolts torqued properly will void warranty, and could result in damper separation during engine operation.

Go to Step 3 below.

2B. EXTERNAL BALANCED ENGINES

Applicable for part numbers:

712105 712465 713260 715221 715168

1. Replacing Damper— The Fluidampr counterweights have been designed to OEM specs. So, if the damper being replaced has never been altered, Fluidampr can be installed with no additional balancing.
2. Balancing or Match Balancing— Fluidamprs designed for externally balanced engines include the damper ring (A) bolted to a counterweighted hub(B). See photo below:

Damper Ring (A)

Counterweighted Hub (B)

- During the balancing or match balancing procedure, it is necessary to separate the hub (B) from the damper ring (A) by removing the 6 or 8 bolts.
- **Do not attempt to balance the crankshaft with the Fluidampr ring (A) installed**— normal movement of the inertia ring inside the housing may give false balance readings.
- **Do not drill in the damper ring (A).**
- Balance the Fluidampr counterweighted hub (B only) with the crankshaft or match balance it to the original damper.
- After balancing is complete, the damper ring can be reinstalled on the hub (B) using the bolts provided. For part numbers 712105 and 712465, torque the (6) flat head bolts to 34 ft. lbs. For other part numbers, torque the (8) socket head bolts to 28 ft. lbs. Be sure to tighten all bolts to the recommended torque values.

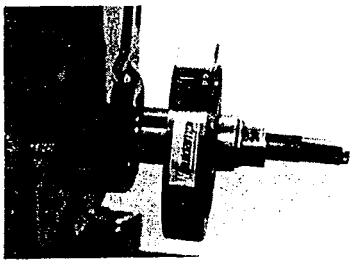
WARNING: Failure to correctly reassemble the Fluidampr using all the bolts torqued properly will void warranty, and could result in damper separation during engine operation.

STEP 3—PREPARATION OF THE CRANK SNOUT

- Carefully remove burrs, scratches, or nicks on the crank snout by filing and polishing the snout so that it's smooth and free of surface irregularities
- Remove any sharp keyway corners.
- The key should fit snugly in the keyway
  - -A heavy press fit creates high stress on the slot and should be avoided.
  - -If you have to use a hammer for anything other than a light tap, the key is too wide.
  - -If the key fits loosely, it may allow the damper to move during operation.
  - -Replace any key if it doesn't fit properly, or if its condition is questionable.

(OVER)

STEP 4—FLUIDAMPR INSTALLATION



- Coat the crankshaft snout and damper inside diameter with an anti-seize compound or moly grease to prevent galling during installation.
- Place the damper on the crank snout, thread the installation tool into place. (it will take a little effort to tighten the installation tool nut)
- As you tighten the nut on the installation tool, you should meet smooth, steady resistance until the damper is fully seated against the timing gear or spacer.
- If resistance increases dramatically, (aside from when the damper seats fully) something is wrong. Find out what it is before proceeding.
- BE SURE THE FLUIDAMPR IS ALL THE WAY ON!
- When the damper is fully seated, remove the installation tool and install a Grade 8 crankshaft bolt and washer. Tighten the bolt to the engine manufacturer's recommended torque specification:
  Chevy Small Block - 70 ft. lbs. • Chevy Big Block 110 ft. lbs. • Ford - 110 ft. lbs. • Pontiac - 160 ft. lbs.
  Chrysler - 150 ft. lbs. ("A" motor crank bolt is required for "B" motors) • Buick - 130 ft. lbs. • Olds -160 ft. lbs.
  WARNING: Failure to use a properly torqued crank bolt will void warranty and could result in damper inner bore, key, or crank snout damage.

STEP 5—TIMING CHECK

- Check the ignition timing marks
  -Some engines have been equipped with different timing tabs over the years
  -The engine's tab may not be positioned the same as the one for which the Fluidampr is designed
- Use the positive stop method to locate true Top Dead Center (TDC)
  -Remark or relocate the timing tab as required
- Finding TDC
  Top Dead Center may be found by installing a positive stop on top of the block (if the heads haven't been installed) or by threading a positive stop into the number one spark plug hole. Adjust the stop so that it contacts the piston at 15 to 30 degrees before TDC. Mount a degree wheel to the damper and install a pointer on the block. Carefully rotate the crankshaft by hand clockwise until the piston contacts the stop. Be careful as the position approaches TDC—what you want is positive stop, not a hole in the piston. Note the reading on the degree wheel. Then rotate the crankshaft counterclockwise until the piston once again contacts the stop and note the reading again. TDC is located exactly halfway between the two readings (within the area the engine did not rotate). Adjust the point as required. As an example, if the piston stops at 22 degrees before TDC when the crank is rotated one way, and 18 degrees after TI when rotated in the opposite direction, the pointer is 2 degrees off. Move the pointer 2 degrees (so it indicates 20 degrees) and when you check it again, the piston should stop with the pointer indicating 20 degrees in both directions. Once this is accomplished, remove the piston stop and rotate the crankshaft until the pointer indicates TDC on the degree wheel. Check the timing tab and if it isn't pointing to "O" on the damper, adjust or remark the tab so that it is. If you don't have a degree wheel, mark the damper next to the timing pointer "O" mark at each positive stop. Then divide the distance in half. That is TDC.

STEP 6—PULLEY INSTALLATION

- Accessory drive pulleys should be piloted on the damper or pulley mandrel. Otherwise, they will run out of round, causing side loads on the crankshaft.
- The pulley bolt pattern on the Pontiac and some Ford Fluidamprs do not match your previous setup.
  - Rotate the Pontiac pulley 45 degrees and redrill the Pontiac pulley bolt holes to fit the Fluidampr.
  - Ford -Contact Total Performance (313-468-3673) for Ford pulleys and spacers for the Fluidampr
- Chrysler B Motor - The accessories being driven may need to be spaced out. One hole in the pulley may need to be slotted.

STEP 7—DAMPER REMOVAL

- Whenever it's necessary to remove a vibration damper, only a proper puller tool should be used.

STEP 8—QUESTIONS

- 716/895-5404 OR 716/895-8000, EXT 514— 8AM to 5PM Eastern time.

LIMITED WARRANTY: All Fluidamprs are warranted to be free from defects in workmanship and materials for a period of ninety (90) days from the DATE OF PURCHASE. We recommend that you keep a copy of your sales invoice or receipt showing DATE OF PURCHASE during this warranty period. In the unlikely event you need to make a claim, for warranty consideration, you must contact Vibratech for a returned goods authorization number. During the warranty period Vibratech will repair or replace, at our discretion, any part or parts that are determined by Vibratech to be defective due to workmanship or materials. Transportation charges for return of defective parts must be PREPAID by the purchaser.

THIS WARRANTY DOES NOT INCLUDE AND IS NOT LIMITED TO THE FOLLOWING: • Failure due to improper installation or maintenance. • Loss or injury incurred from use or operation of Vibratech products. • Misuse, abuse, or unauthorized repairs. • Removal or replacement cost. • Cost incurred due to downtime of vehicle. • Damage to other engine or vehicle components. • Normal wear and tear.

Fluidampr performance harmonic dampers
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P/N H000107, Revised 7/92