

Issue:

A split cone locking device secures the crankshaft damper to the crankshaft, beginning with engine no. **961216**** (VIN 008243-on). Removing the damper requires more force than with the previous configuration.

As a result, a new service tool, 303-588, remover-crankshaft damper, is now available.

DESCRIPTION



ILLUSTRATION 1

The service tool, 303-588, remover-crankshaft damper (Illustration 1), consists of a main body, a button, and 2 bolts, which are used in with Adapter, 18G 1437-2.



ILLUSTRATION 2

The revised damper (Illustration 2) has a tapered center bore with the larger diameter at the front. The rear part of the bore is parallel.

The split tapered collar (Illustration 2) fits between the crankshaft and the damper and extends past the end of the crankshaft so that the face of the securing bolt, (Illustration 2), presses on the collar to wedge it into the damper.



ILLUSTRATION 3

The rear part of the damper bore has a groove machined to accept an O-ring seal, (arrow in Illustration 3) which prevents oil escaping from the timing case through the split in the cone.

Action:

Use the tool as follows:

- 1. Remove the crankshaft damper securing bolt as described in the vehicle workshop manual.
- 2. Place the button (Illustration 1) in position in the crankshaft bore the button will be held in position by the O-ring that is located in the groove around the shank of the button.
- 3. Pull out the center bolt and secure the main body (Illustration 1) to the adapter by running the bolts through the two plain holes in the adapter.
- 4. Place the tool and adapter against the damper and thread the bolts into the tapped holes in the damper.

Note: Ensure that the tool, adapter, and damper make full contact and that the bolts are completely engaged in the damper threads.

- 5. Hold the crankshaft by holding the torque converter with a lever, as described in the manual, turn the bolt using a 24 mm socket and bar, to move the damper and collar 1 to 2 mm forward on the crankshaft.
- 6. Remove the tool from the damper and then pull the damper forward and off the crankshaft: if necessary, lightly strike the damper to loosen it.

Note: Always replace the timing case oil seal, the damper O-ring, and the damper retaining bolt with new items any time the damper is removed.

7. To secure the damper, position the 24 mm socket, torque wrench and a suitable torque angle gauge on the center bolt.

Note: A suitable torque angle gauge is the Snap-on TA360.

Caution: Do not use JD 216, crankshaft setting peg, to hold the crankshaft when tightening or loosening the center bolt of the crankshaft.

8. Tighten the center bolt to 80 Nm (59 lb ft), zero the torque angle gauge and then turn an additional 80° to increase the torque applied. This action will result in an estimated torque application of 320 to 400 Nm (236-295 lb ft.)

Parts Information:

DESCRIPTION

Crankshaft damper (tapered bore) from VIN 008243

PART NUMBER NCA 1411AE <u>QTY</u>