



XK8

DATE 2/97

303-05

SERVICE

# TECHNICAL BULLETIN

## Crankshaft Damper – Loose – Repair Procedure

MODEL 1997 MY-ON  
XK8 Range

VIN  
001001-006380

### Issue:

The crankshaft damper may shift position on the crankshaft on some 1997 MY XK8 vehicles within the above VIN range. This may result in a customer complaint of generator light illumination

### Action:

In the event the crankshaft damper is loose on the crankshaft on a 1997 MY XK8 vehicle within the above VIN range, repair according to the procedure below.

**NOTE:** In order to prevent the possibility of the crankshaft damper moving on the crankshaft the following procedures were adopted in production.  
From Engine No. \* \*961028 \* \* \* \*, Loctite was applied to the crankshaft and damper. No action necessary.  
From Engine No. \* \*961216\* \* \* \*, a split cone locking device was fitted between the crankshaft damper and the crankshaft. No action necessary.

### MODIFYING CRANKSHAFT DAMPER MOUNTING

1. Place fender protection covers on the front fenders and position the vehicle on a suitable hoist.
2. Disconnect the vehicle battery.
3. Open the hood to the service access position.
4. Check the belt wear indicator marks to confirm that the drive belt is within the limits.

**CAUTION:** When releasing the belt tension, never apply any torque in a clockwise direction to the pulley center bolt, (left hand thread), as it could subsequently loosen.

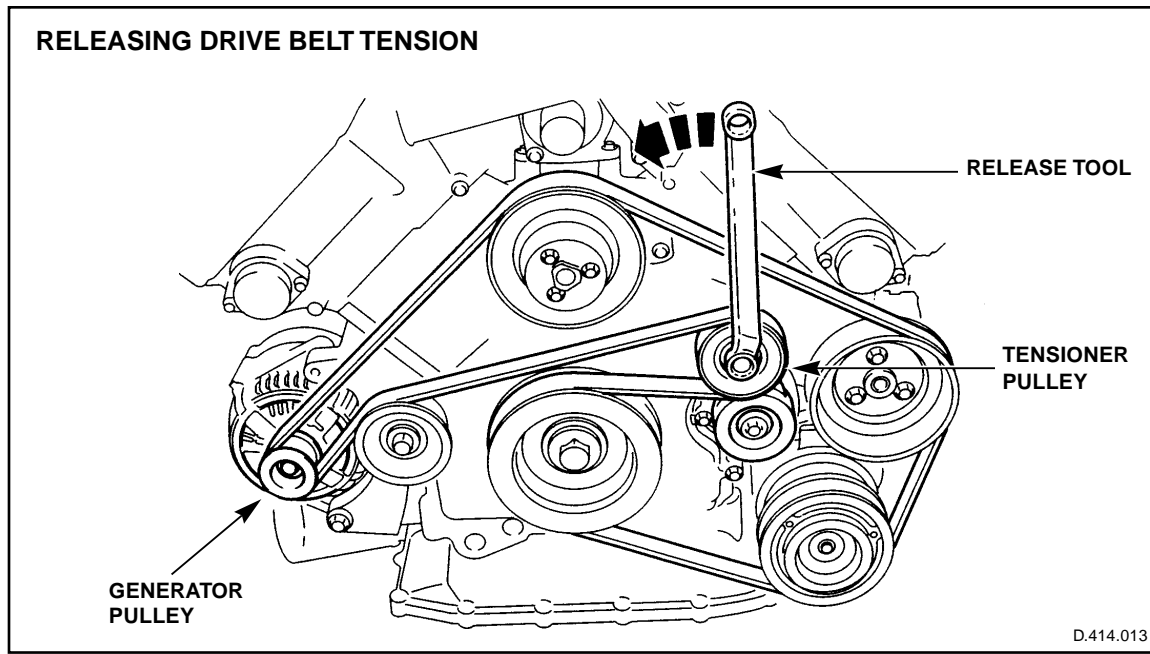


ILLUSTRATION 1

5. Place a wrench, (Snap-on XDHM 1415 or equivalent), on the center bolt of the belt tensioner idler pulley and turn the adjuster assembly toward the right side of the vehicle, against spring pressure.
6. While holding the tensioner against spring pressure, remove the drive belt from the generator pulley and then slowly release the spring pressure.
7. Remove the wrench.
8. Remove the drive belt from the accessory drive.
9. Remove the two nuts that secure the fan and motor assembly to the radiator.
10. Raise the vehicle.
11. Disconnect the fans from the vehicle harness.
12. Disengage the A/C pipe from the clip on the fan and motor assembly.
13. Lower the vehicle.
14. Lift the fan and motor assembly from the vehicle.
15. Mount 18G 1437-2, adapter on 18G 1437, crankshaft locking tool.

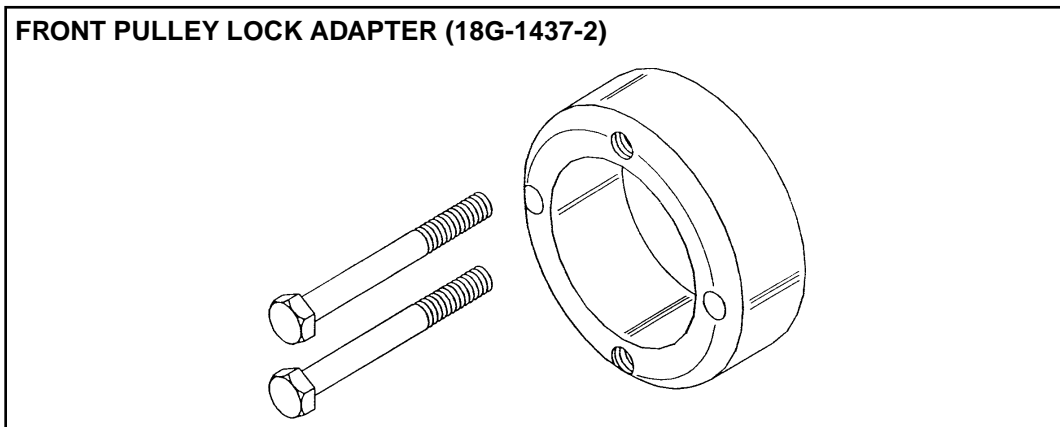


ILLUSTRATION 2

16. Mount the crankshaft locking tool assembly to the crankshaft damper using the bolts provided with the tool.

**CAUTION: Under no circumstances should JD 216, crankshaft locking peg, be used to lock the crankshaft during any operation to tighten or loosen the crankshaft center bolt.**

17. Using a 24 mm socket and lever, apply a torque, (counter-clockwise), against the crankshaft locking tool to loosen the center bolt.

**NOTE:** If the crankshaft locking tool cannot hold the crankshaft, remove the stone guard from the torque converter housing ventilation slot and insert a lever against the torque converter boss.

**NOTE:** Continue to hold the torque converter with the lever to counteract the drag caused by the residual locking agent on the center bolt when withdrawing the bolt from the crankshaft.

18. Remove and discard the center bolt.
19. Remove the adapter and locking tool from the damper.
20. Remove the damper from the crankshaft and discard it.

**NOTE:** When replacing a crankshaft damper always renew the front crankshaft oil seal.

21. Place JD 234, front crankshaft oil seal removal tool, on the crankshaft nose.
22. Place the tool against the seal and rotate the tool by hand so that the tapered, threaded end engages with the seal.
23. Engage the tool firmly in the seal and then turn the center bolt to extract both the tool and seal from the front housing.
24. Remove the seal from the tool and discard the seal.

25. Clean all traces of locking compound from the internal thread of the crankshaft by using a suitable tap, (M 16 X 2 - 6H Plug Tap).

**NOTE:** Retain the crankshaft in position by holding the torque converter with the lever as step 17.

26. Wrap paper or cloth around the front seal area and use compressed air to remove the locking compound residue from the bore of the crankshaft nose.
27. Inspect the crankshaft for signs of wear; light marking can be smoothed with emery cloth.
28. Clean the area thoroughly with a suitable solvent.
29. Remove the paper or cloth from around the front seal area.
30. Measure the diameter of the crankshaft in the area where the damper should fit.

**NOTE:** Measure at three positions i.e. front, center and rear of the damper location and also two diameters, at 90°, per position. The measurements should not be less than 36.98 mm. If the measurements do not meet the minimum specification, contact your DSM to authorise engine replacement.

31. Remove the transit ring from the new oil seal and place the seal in position in the front cover.
32. Place the body of JD 235, oil seal installer, (Illustration 3) over the crankshaft nose and insert the center bolt fully into the crankshaft internal thread.

**CRANKSHAFT SEAL INSTALLER (JD 235)**

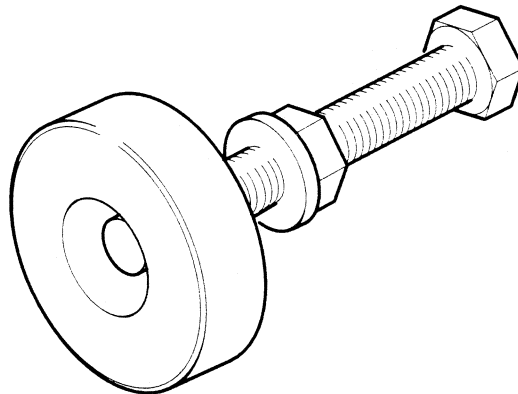


ILLUSTRATION 3

33. Turn the nut and washer until they contact the tool body.
34. Ensure that the seal is positioned squarely on the recess.
35. Turn the nut to compress the seal fully into position in the recess: do not overtighten.

**NOTE:** The seal must be held in this position for at least 5 seconds to allow the seal material to conform to this position.

36. Remove the tool.
37. Apply a light coating of Loctite 270 (green high-strength compound) to the new crankshaft damper center bore. The Loctite must not drip. Do not apply Loctite to the end faces.

38. Install the damper on the crankshaft and then rotate the damper 360° to spread the Loctite around the crankshaft.

**NOTE:** Tighten the damper locking bolt to the final torque specification within 7 minutes of applying the Loctite.

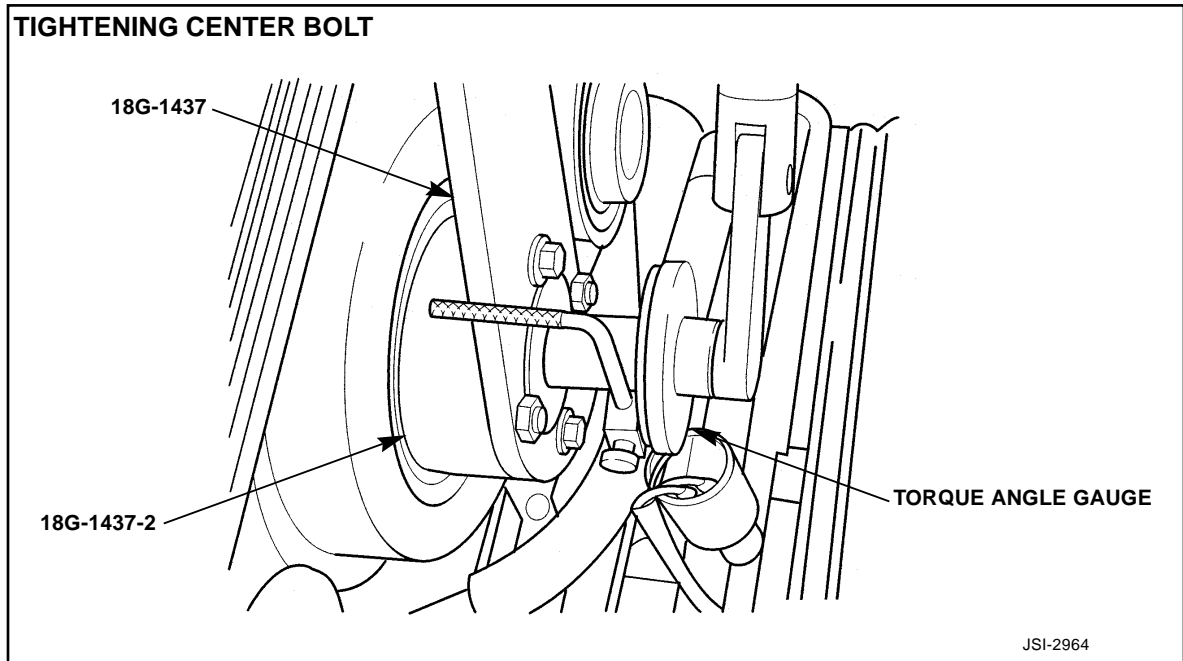


ILLUSTRATION 4

39. Install 18G-1437, crankshaft Locking Tool and 18G-1437-2 Adapter, on the damper.
40. Tighten the new damper locking bolt until it is firmly in contact with the damper.
41. 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:** Under no circumstances should JD 216, crankshaft locking peg, be used to lock the crankshaft during any operation to tighten or loosen the crankshaft center bolt.

42. 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.)

**NOTE:** Complete the torque application within 7 minutes of applying the Loctite.

43. Reinstall the drive belt and the fan and motor assembly.
44. Reconnect the vehicle battery and reset the clock.

### Parts Information:

<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QTY</u>
Crankshaft damper	NCA 1411AB	1
Front oil seal	EAZ 2060	1
Bolt	NCA 1451AA	1
Loctite 270	Obtain locally	

### Warranty Information:

<u>FAULT</u> <u>CODE</u>	<u>R.O.</u> <u>NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME</u> <u>ALLOWANCE</u>
AL BP RC	12.91.23	Crankshaft damper modification	0.95 hrs.
	10.10.10	Drive in/drive out	0.15 hrs.