

Subject: VARIABLE VALVE TIMING (VVT) NOISE WHEN STARTING ENGINE	Bulletin No: 01-010/11
	Last Issued: 12/21/2011

BULLETIN NOTE

- This bulletin supersedes the previous bulletins 01-010/11 issued on 02/23/11, 01-043/07 issued on 11/29/07, 01-002/08 issued on 01/16/08 and 10/01/08, 01-026/09 issued on 06/30/09 and 08/28/09, and 01-028/10 issued on 05/14/10 and 08/20/10. The APPLICABLE MODEL(S)/VINS, REPAIR PROCEDURE, PARTS INFORMATION and WARRANTY INFORMATION have been revised.
- For vehicles with L3T (turbo) engines, refer to Service Bulletin 01-018/11.
- Changes are noted below in Red beside the change bar.

APPLICABLE MODEL(S)/VINS

2003-08 Mazda6 (2.3L) vehicles

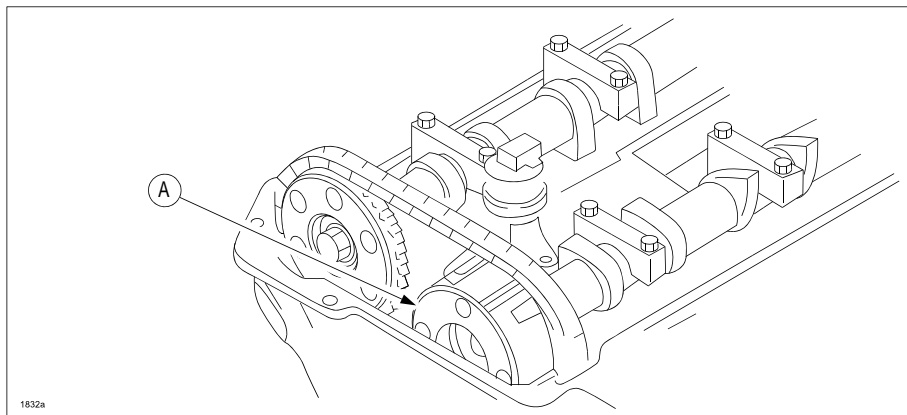
2004-08 Mazda3 vehicles with VINs lower than JM1BK*****864673 (produced before December 1, 2007)

2006-08 Mazda5 vehicles with VINs lower than JM1CR*****306808 (produced before December 1, 2007)

2006-08 MX-5 vehicles with VINs lower than JM1NC*****146287 (produced before December 1, 2007)

DESCRIPTION

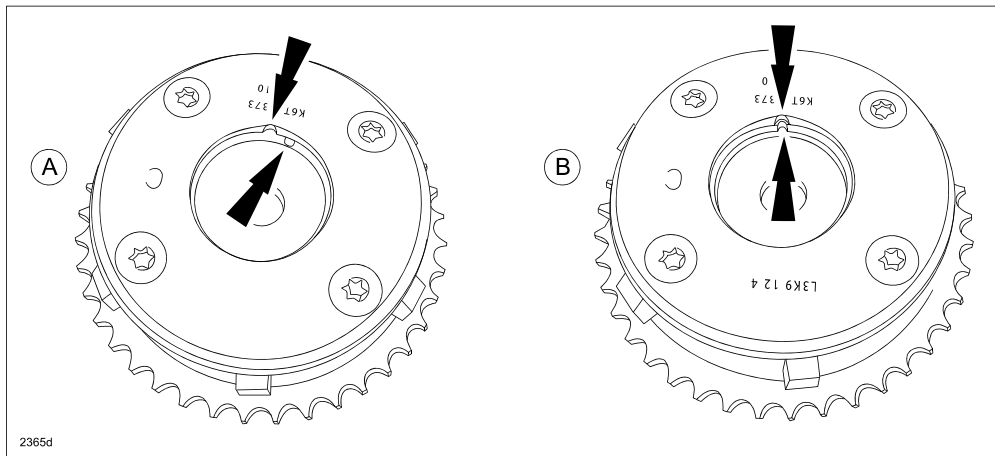
When the engine is first started, some vehicles may exhibit a loud ticking noise from the variable valve timing (VVT) actuator (A). This is caused by the lock pin of the variable valve timing actuator not fully engaging or from a worn lock pin hole. Heat treatment has now been added around the hole of the variable valve timing rotor lock pin to prevent this from happening.



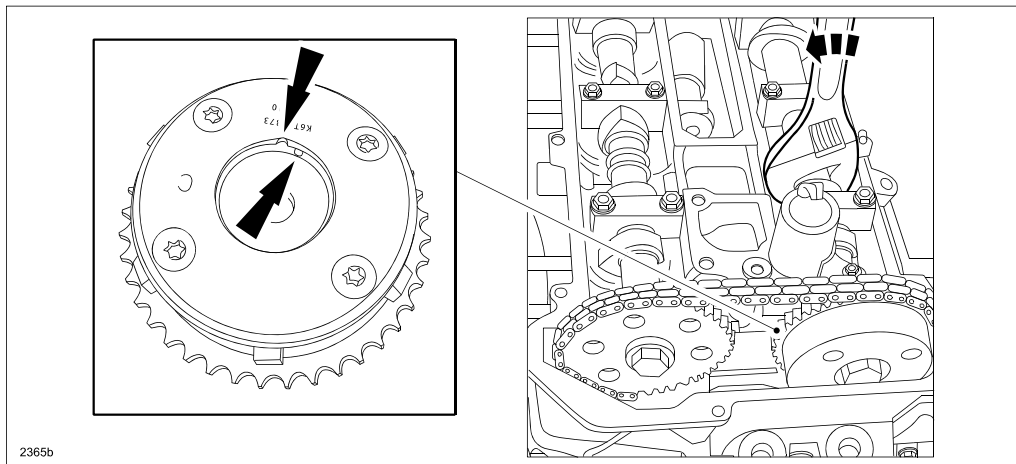
Customers having this concern should have their vehicle repaired using the following repair procedure.

REPAIR PROCEDURE

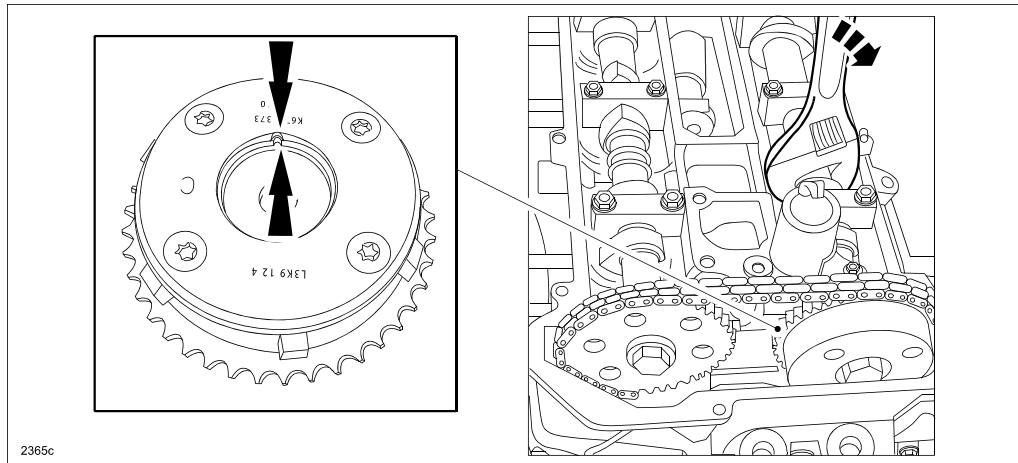
1. Verify customer concern.
2. Write down the customer's radio station presets.
3. After the engine cools down, disconnect the negative battery cable (to prevent DTCs from being stored).
4. Remove the cylinder head cover. See TIMING CHAIN REMOVAL/INSTALLATION [LF/L3] on MS3.
5. Turn the crankshaft clockwise so that the notches on the VVT actuator can be checked.
 - A. If the notches are NOT aligned, go to the next step.
 - B. If the notches are aligned, there is no problem with the VVT actuator and this information is not applicable. Refer to MS3 for troubleshooting.



6. Turn the camshaft counterclockwise to align the notches on the VVT actuator.

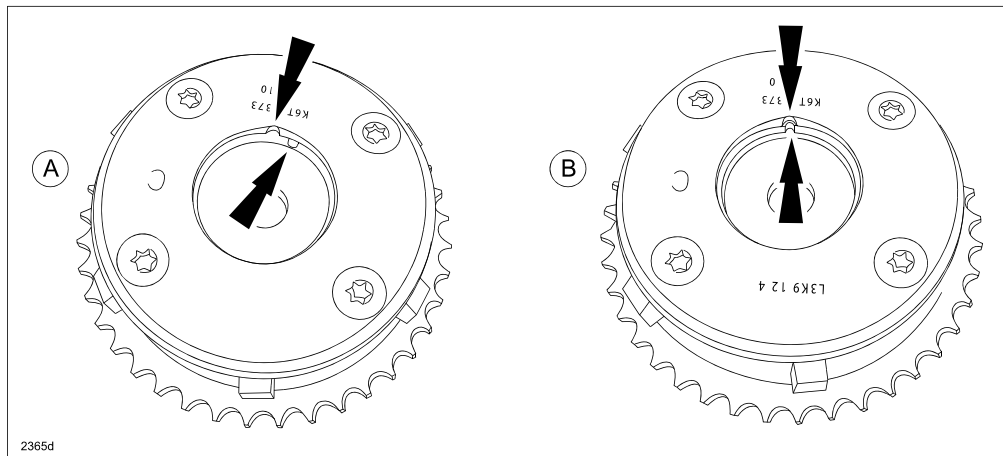


7. With the notches aligned, turn the camshaft clockwise 90 degrees.



8. Check the notches again.

- A. If the notches are NOT aligned, go to the next step.
- B. If the notches are aligned, there is no problem with the VVT actuator and this information is not applicable. Refer to MS3 for troubleshooting.



9. Replace the VVT actuator.

10. Set the customer's radio station presets.

11. Start the engine and make sure there is no fuel leakage around the high pressure fuel pump.

12. After the engine cools down, change the engine oil.

13. Verify repair.

PART(S) INFORMATION

Part Number	Description	Qty.	Notes
LF94-12-4X0C	Variable Valve Timing Actuator	1	All 2.0L (LF) 2007 Mazda3 2.3L (L3) with VINs 060902- 2008 Mazda5
			2006 Mazda6 2.3L (L3) M/T produced from 1/2/06-2/1/06 2007 Mazda6 2.3L (L3) M/T produced from 9/1/06-12/3/07 2007 Mazda6 2.3L (L3) A/T produced from 9/4/06-12/3/07 NOTE: For 2006-2007 Mazda6, use EPC VIN search function to CONFIRM correct VVT part number.
L372-12-4X0C	Variable Valve Timing Actuator	1	2004-2006 Mazda3 2.3L (L3) 2007 Mazda3 2.3L (L3) with VINs 100001-060901 2006-2007 Mazda5
			2003-2006 Mazda6 2.3L (L3) M/T produced to 1/2/06 2003-2006 Mazda6 2.3L (L3) A/T produced to 9/4/06 2006 Mazda6 2.3L (L3) M/T produced from 2/1/06-9/1/06 NOTE: For 2006-2007 Mazda6, use EPC VIN search function to CONFIRM correct VVT part number.
L3K9-12-429	Washer	2	All engines
0000-77-5W20-QT	Engine Oil (5W-20)	6 (Quarts)	LF/L3 engine
LF01-11-406	Bolt, Lock - Shaft Pulley	1	All engines
9XG0-99-667L	Plug, Blind	1	All engines

WARRANTY INFORMATION

NOTE:

- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair.
- This repair will be covered under Mazda's New Vehicle Limited Warranty and under Powertrain or PZEV Partial Zero Emission Warranty where applicable.
- Additional diagnostic time cannot be claimed for this repair.

Warranty Type	A
Symptom Code	82
Damage Code	9C
Part Number Main Cause	LF94-12-4X0B, L372-12-4X0C, or L3K9-12-4X0B
Quantity	1
Operation Number/ Labor Hours:	XXF31XRX / 2.0 Hrs. (Mazda3) XXF31XRX / 2.5 Hrs. (Mazda5 M/T, Mazda6) XXF31XRX / 2.7 Hrs. (Mazda5 A/T) XXF31XRX / 2.4 Hrs. (MX-5)