



December 7, 2010

Applies To: **2005–07 Odyssey – ALL**
2008 Odyssey – ALL
2009 Odyssey – From VIN 5FNRL3...9B000001 thru 5FNRL3...9B050561
5FNRL3...9B000001 thru 5FNRL3...9B405673

Damaged Camshaft Position Sensor (CMP) Causes the MIL to Come On With DTC P0344

(Supersedes 09-042, dated June 26, 2009, to revise the information marked by the black bars)

REVISION SUMMARY

- Under Applies To, 2008 and 2009 models were added.
- Under PARTS INFORMATION, part numbers were added for the 2008 and 2009 models.
- Under REPAIR PROCEDURE, steps 25 through 28 were rearranged.

SYMPTOM

The MIL comes on with DTC P0344 (camshaft position [CMP] sensor intermittent interruption).

PROBABLE CAUSE

Excessive camshaft end play causes the camshaft gear to damage the camshaft position (CMP) sensor.

CORRECTIVE ACTION

Replace the front camshaft, the thrust cover, the cam gear, and the CMP sensor.

NOTE: The repair information in this service bulletin is intended for Honda technicians who, at a minimum, have completed the first six Honda engine technical training courses, including Timing Belt Replacement.

PARTS INFORMATION

- Coolant Type-2 (2 gallons required):
P/N 0L999-9011
- Front Cover Assembly:
P/N 12230-P8A-A00
- Front Camshaft (2005–07 LX, EX models only):
P/N 14100-RGL-A00
- Front Camshaft (2005–07 EX-L, Touring models only):
P/N 14100-RGM-A00
- Front Camshaft (2008 EX-L Touring models only):
P/N 14100-RGW-A02
- Front Camshaft (2009 EX-L, Touring models only):
P/N 14100-RGW-A10

- Intake Manifold Gasket:
P/N 17105-RCA-A01
- Timing Belt Idler Bolt (tensioner bolt):
P/N 14551-RCA-A01
- Upper Gasket (2005–09 EX-L Touring models only):
P/N 17146-R70-A01
- Upper Gasket (2005–09 LX, EX only):
P/N 17146-RCA-A01
- EGR Valve Gasket:
P/N 18715-PB2-000
- TDC Sensor Assembly
(2005–07, 2008–09, CMP sensor, LX, EX only):
P/N 37840-PGE-A11
- TDC Sensor Assembly (2008–09 EX-L, Touring only):
P/N 37840-R70-A01
- Oil Seal (camshaft seal):
P/N 91213-R70-A02
- Flange Bolt (side engine mount bracket bolts,
two required):
P/N 90164-SHJ-A00

WARRANTY CLAIM INFORMATION

The normal warranty applies.

- Operation Number: 1101Z8
- Flat Rate Time: 4.5 hours
- Failed Part: P/N 14100-RCA-A10
- Defect Code: 03214
- Symptom Code: 03203
- Skill Level: Repair Technician



CUSTOMER INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by "do-it-yourselfers," and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Honda automobile dealer.

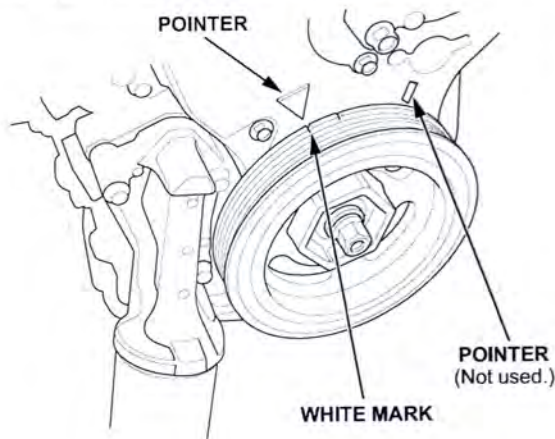
REPAIR PROCEDURE

NOTE: This procedure is in an outline form that you can also use as a checklist for the repair. If you need more details, confirm the proper service manual, or view them online:

- Camshaft Inspection
- Camshaft Replacement
- Timing Belt Removal
- Timing Belt Installation

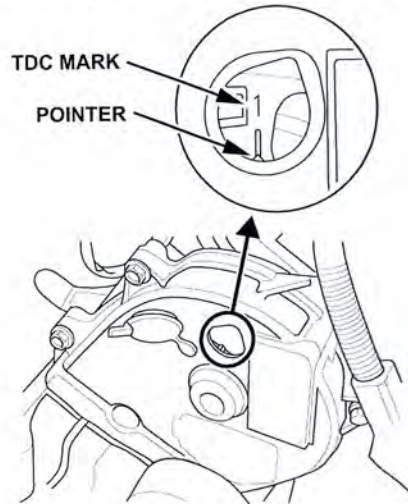
1. Remove the battery.
2. Drain the engine coolant.
3. Disconnect the upper radiator hose from the engine side.
4. Remove the exhaust gas recirculation (EGR) valve.
5. Remove the EGR valve studs.
6. Remove the air cleaner.
7. Remove the battery base.
8. Remove the intake air resonator.
9. Raise the vehicle on a lift. Remove the right front wheel and the right front inner fender.
10. Turn the crankshaft pulley clockwise so its white mark lines up with the pointer on the front upper cover.

NOTE: The other pointer is not used.



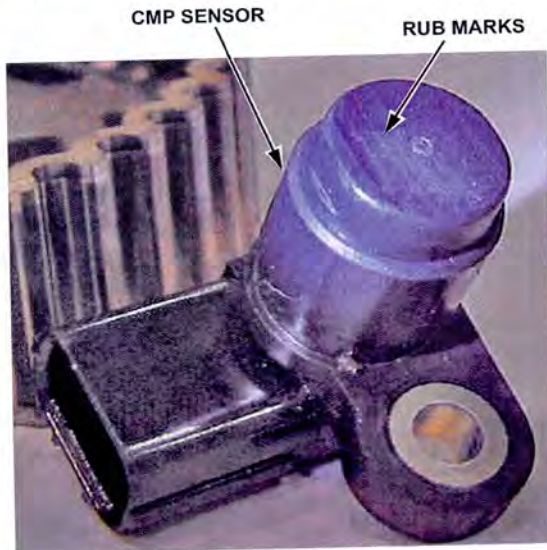
11. Check that the No. 1 piston top dead center (TDC) mark on the front camshaft pulley and the pointer on the front upper cover are aligned.

NOTE: If the marks are not aligned, rotate the crankshaft clockwise 360°, and recheck the marks.



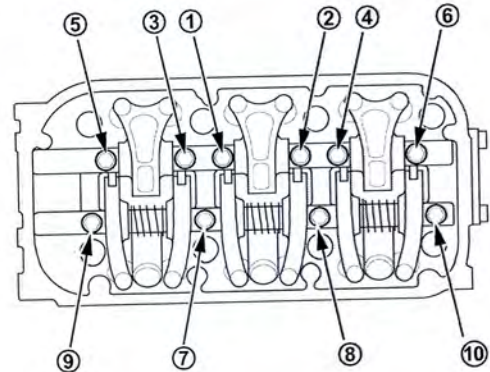
12. Remove the drive belt and the drive belt auto-tensioner.
13. Remove the crankshaft pulley.
14. Remove the front upper cover and the rear upper cover from the engine.
15. Remove the lower cover from the engine.
16. Remove one of the battery clamp bolts from the battery tray, and round the end of it with a file or grinder.
17. Thread the battery clamp bolt in to hold the timing belt adjuster in its current position. Tighten it by hand; do not use a wrench.
18. Remove the intake manifold.
19. Remove the three front ignition coils.
20. Remove the front bank cylinder head cover.
21. Remove the front rocker arm with spool valve assembly.
NOTE: Leave the bolts in place on the rocker shaft to hold the springs and washers on the shaft.
22. Remove the front camshaft pulley, and the back cover.
23. Remove the CMP sensor from the back cover.

24. Inspect the CMP sensor and the inside of the camshaft gear for signs of contact.
- If no contact is noted, check the camshaft endplay.
 - If the camshaft endplay is out of specification, proceed with step 25. If it is in specification, then this service bulletin does not apply. Proceed with normal troubleshooting.



25. Remove the camshaft thrust cover, then carefully remove the camshaft. Place a rag below the thrust cover opening, and along the top of the transmission, to catch any residual oil that flows from the opening, and off of the camshaft.
26. Install a new camshaft seal.
27. Install a new front camshaft with a new thrust cover and O-ring.
28. Install a new CMP sensor.

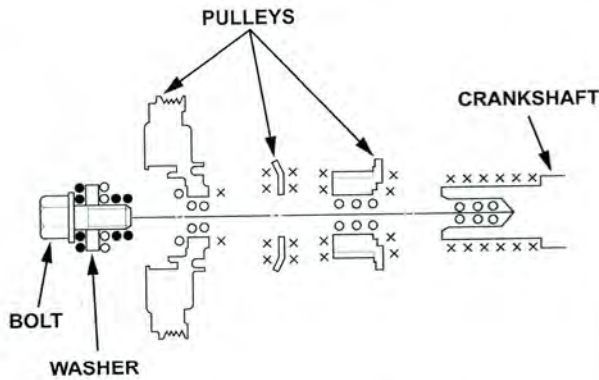
29. Apply engine oil to the threads of the camshaft pulley mounting bolt, then install the front camshaft pulley. Torque the pulley mounting bolt to **90 N·m (67 lb-ft)**.
30. Set the front camshaft pulley to TDC by aligning the TDC marks on the camshaft pulleys with the pointers on the back covers.
31. Install the front rocker arm assembly, then tighten the mounting bolts two turns at a time, in the sequence shown, until they are all torqued to **24 N·m (17 lb-ft)**.



32. Remove and clean the timing belt pulleys, the timing belt guide plate, and the upper and lower covers.
33. Make sure the timing belt drive pulley and the camshaft pulleys are still at TDC by aligning them as shown in steps 10 and 11.
34. Loosely install the idler pulley with a new idler pulley bolt so the pulley can move but does not come off.
35. Install the timing belt in a counterclockwise sequence, starting with the drive pulley. Take care not to damage the timing belt during installation.
36. Tighten the idler pulley bolt to **44 N·m (33 lb-ft)**.
37. Remove the battery clamp bolt from the back cover.
38. Install the lower cover. Tighten the bolts to **12 N·m (8.7 lb-ft)**.
39. Reinstall the front upper cover and the rear upper cover. Tighten the bolts to **12 N·m (8.7 lb-ft)**.

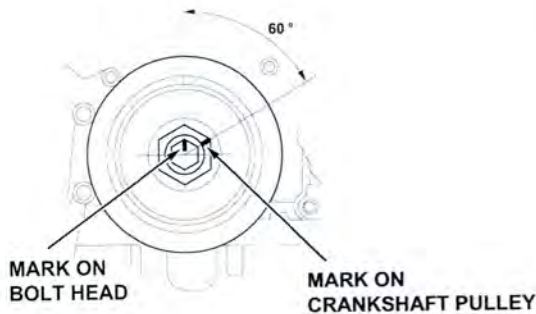
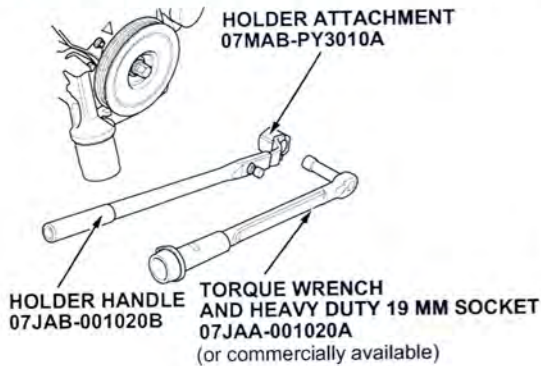
40. Remove any oil, and clean the pulleys, the crankshaft, the bolt, and the washer. Lubricate with new engine oil as shown.

- ×: Remove any oil
- : Clean
- : Lubricate with new engine oil



41. Reinstall the crankshaft pulley, then tighten the bolt:

- Hold the pulley with the holder handle and the holder attachment. Tighten the bolt to **64 N·m (47 lb-ft)**.
- Mark the bolt head and the pulley as shown, then tighten the bolt an additional 60°.



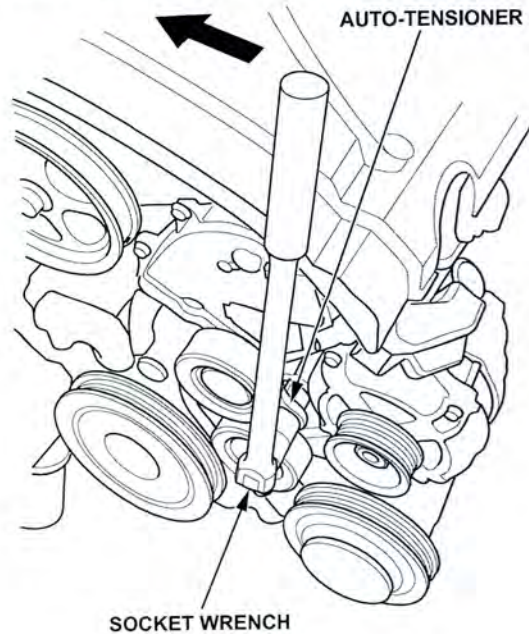
42. Rotate the crankshaft pulley six turns clockwise so the timing belt positions itself on the pulleys.

43. Turn the crankshaft pulley so its white mark lines up with the pointer as shown in step 10.

44. Check the camshaft pulley marks as shown in step 11.

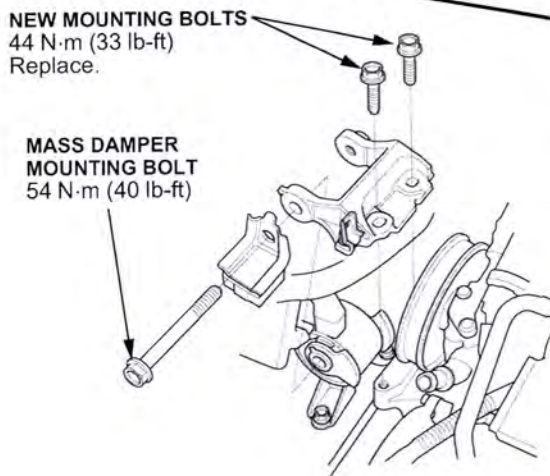
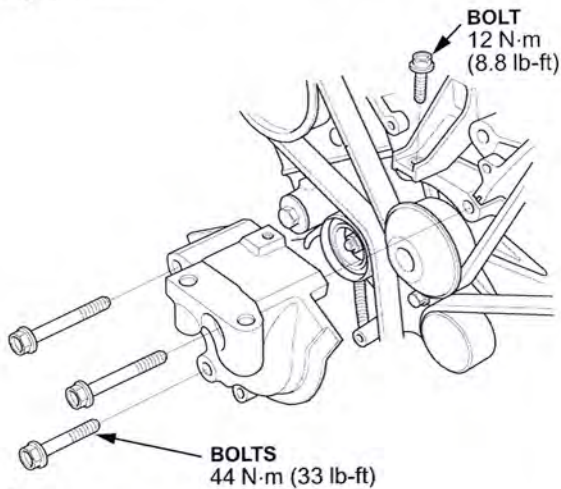
NOTE: If the marks are not aligned, rotate the crankshaft clockwise 360°, and recheck.

45. Reinstall the drive belt auto-tensioner and do the bleed procedure (2007 J35A7 engine shown).

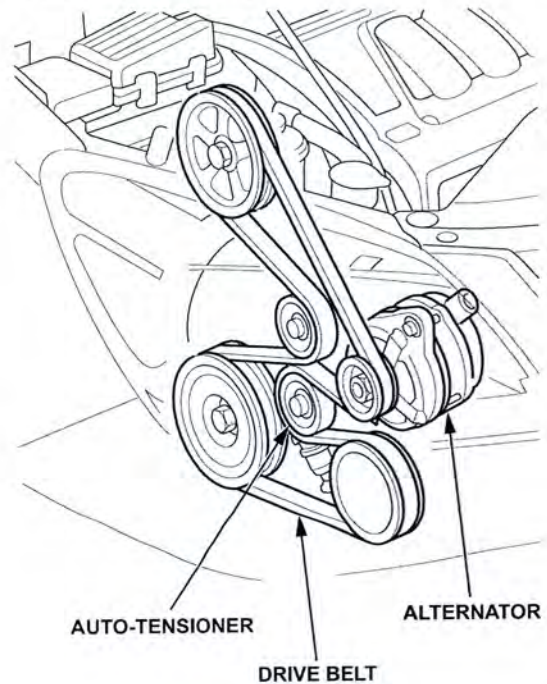


- Attach a socket wrench to the drive belt auto-tensioner from above the engine.
- Slowly (for at least 3 seconds) compress the auto-tensioner, in the direction shown, until it bottoms out.
- Release the auto-tensioner, then compress and release it three more times.

46. Reinstall the lower half of the side engine mount bracket. Then reinstall the upper half of the side engine mount.



47. Reinstall the drive belt, routing it as shown (2007 J35A7 engine shown).

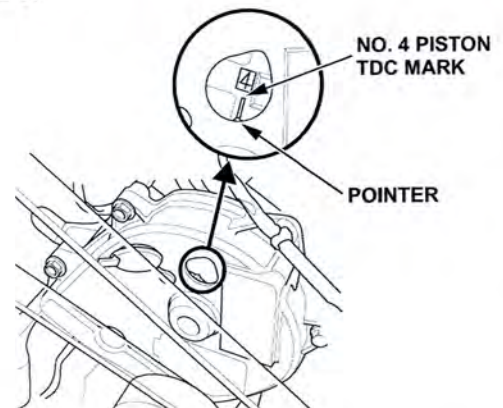


48. Check and, if needed, adjust the valve clearance on cylinder's number 4, 5, and 6.

Valve clearance (cold)	intake	0.008–0.009 in
	exhaust	0.011–0.013 in

NOTE: An example is given with No. 4 cylinder at TDC. Rotate the crankshaft clockwise. Align the pointer on the front upper cover with the No. 4 piston TDC mark on the front camshaft pulley.

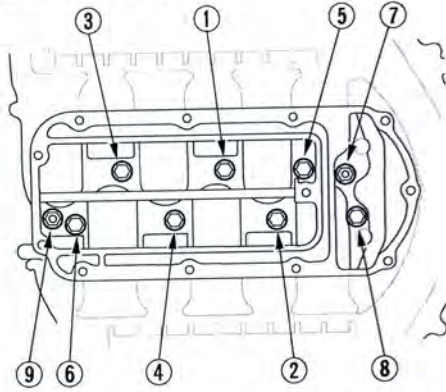
Check and, if needed, adjust the valve clearance on the No. 4 cylinder. Repeat steps on cylinders 5 and 6.



49. Reinstall the front bank cylinder head cover.
50. Reinstall the three front ignition coils. Tighten the bolts to 12 N·m (8.7 lb-ft).

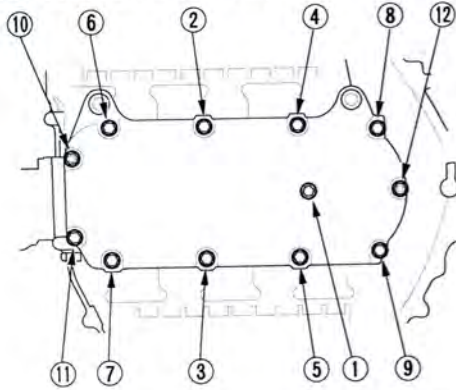
51. Reinstall the intake manifold with a new gasket. Tighten the bolts and nuts sequentially in three steps.

SPECIFIED TORQUE
6 x 1.0 mm: 12 N·m (16 lb·ft)



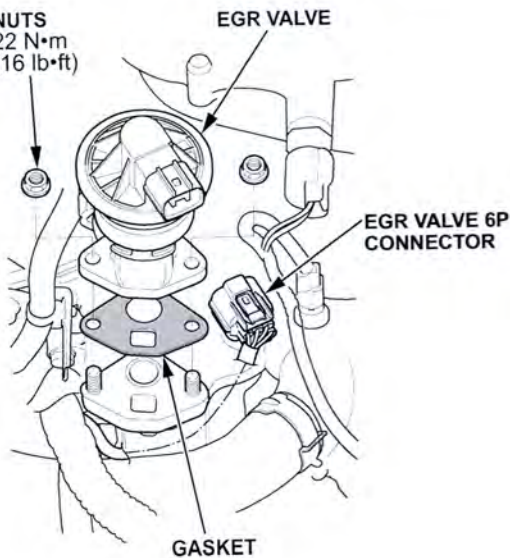
52. Install the upper cover with a new gasket. Tighten the bolts and nuts sequentially in three steps.

SPECIFIED TORQUE
8 x 1.25 mm: 22 N·m (8.7 lb·ft)



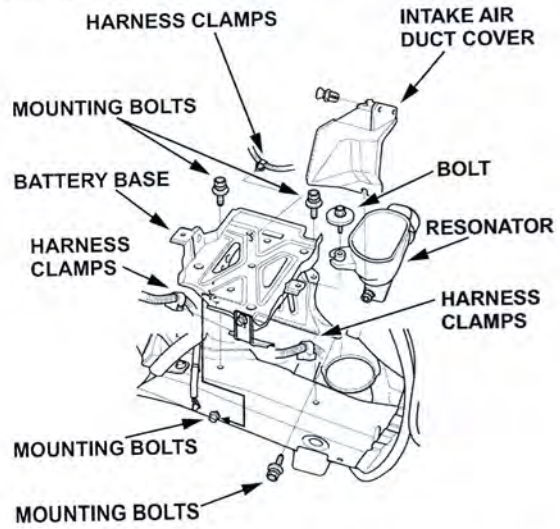
53. Reinstall the EGR valve studs and the EGR valve with a new gasket (2007 J35A6 and J35A7 engines shown).

NUTS
22 N·m
(16 lb·ft)

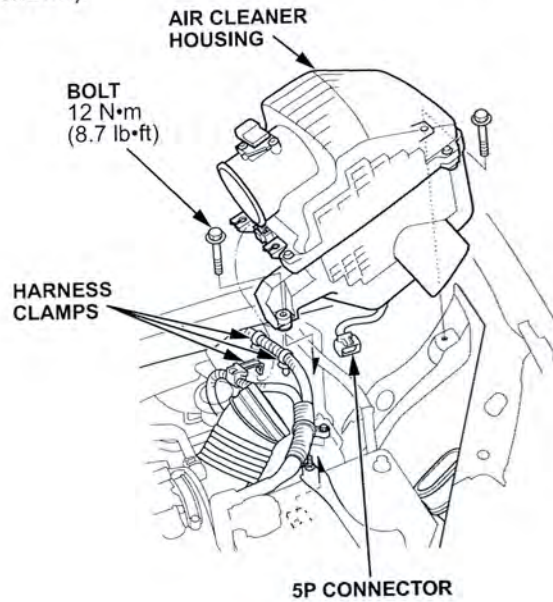


54. Reconnect the upper radiator hose.

55. Reinstall the intake air resonator and the battery base (2007 model shown).



56. Reinstall the air cleaner housing (J35A7 engine shown).



57. Reinstall and reconnect the battery.

58. Reinstall the inner fender and the front wheel. Torque the wheel nuts to **127 N·m (94 lb·ft)**.

59. Fill the radiator with coolant, and bleed the air from the cooling system with the heater valve open.

60. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure:

- Connect the HDS to the data link connector (DLC) located under the driver's side of the dashboard.
- Turn the ignition switch to ON (II).
- Make sure the HDS communicates with the PCM and other vehicle systems. If it doesn't, troubleshoot the DLC circuit.
- Select **CRANK PATTERN** in the **ADJUSTMENT MENU** with the HDS, and clear the CKP pattern.
- Select **CRANK PATTERN LEARNING** with the HDS, and follow the screen prompts.