ALLDATA Diagnostic Bulletin

RELATED VEHICLES: 2005–2009 CR-V 2.4L L4

SUMMARY: DTC P1009: VTC Advance Malfunction
The variable valve timing control (VTC) system controls the phase of the intake camshaft. It uses oil pressure to operate the VTC actuator so the valve timing is optimized depending on driving conditions. The engine control module (ECM/PCM) monitors the phase control command and the actual timing of the camshaft by using camshaft position (CMP) sensor A. If an over-advanced camshaft phase (compared to the directed value) continues or when the camshaft phase is otherwise abnormal, a malfunction is detected and DTC P1009 is stored.

Note: DTCs P0010, P0011, have similar causes and symptoms (basically an oil pressure/blockage or VTC actuator problem)

RELATED TSBs:

- TSB 08-089
  MIL Comes On With DTC P1009
  (Supersedes 08-089, dated July 15, 2011)
- SYMPTOM
  The MIL comes on with DTC P1009 (variable valve timing control [VTC] advance malfunction).
- PROBABLE CAUSE
  The PCM misinterprets inputs as a fault in the VTC
system.

- **VEHICLES AFFECTED**
  2005–08 CR-V: ALL
  2009 CR-V 2WD/4WD: Check VIN range.

- **CORRECTIVE ACTION**
  Update the PGM-FI software.

- **P0011: OEM Service News:**
- Related data, for 2004 CR-V. (wrong dtc, earlier year range, right idea)
  ServiceNews Article June 2008
  Helping you fix it right the first time - every time
  Got a vehicle with the MIL on and DTC P0011 (VTC system malfunction)? Is
  the engine also idling roughly or misfiring? The VTC oil control solenoid
  valve may just be the culprit. This DTC usually sets when there’s debris
  clogging the valve. Once the debris clears, the valve works fine and no
  longer sets this DTC. Before you start any troubleshooting, first make sure
  of these things:
  • The engine oil level reads full.
  • There’s a Honda Genuine oil filter installed.
  • The low oil pressure indicator is working right.
  Then use the HDS to clear DTC P0011, and retest. If the DTC doesn’t come
  back, debris was probably clogging the valve and now it’s cleared; the
  vehicle is OK at this time and you’re good to go. But if you wind up again
  with this DTC . . . then do the troubleshooting procedure on pages 11-127
  and 11-128 of the
  ’02–04 CR-V S/M. (Online, enter keyword P0011 and select DTC P0011: VTC
  System Malfunction from the list.)
  NOTE: Warranty Parts Inspection (WPI) has gotten a number of failed
  valves that wound up testing No Trouble Found (NTF). So don’t replace the
  valve unless the DTC comes back.

- **PROBABLE CAUSES:**
  - Oil Level and Quality, Plugged VTC Strainer / VTEC Solenoid Valve Filter
  - VTEC Solenoid Valve, Inoperative or Sticking
  - VTC Oil Solenoid Valve, Inoperative or Sticking
  - Timing Chain, Worn / Cams and Crank Out of Phase
  - Oil Pressure, Engine Worn, Insufficient Oil Pressure

- **RELATED COMMUNITY CASES:**
  - Cranks, won't start: DTC Codes, P0303 and P1009
    (http://community.alldata.com/questions/20022/)
  - Cranks, no start: DTC Code, P1009
    (http://community.alldata.com/questions/21278/)

- **DIAGNOSIS:**

https://my.alldata.com/repair/#/community/detail/42984/54642
Hint: This VTC code/symptom seems to have two extremes. One, lower mileage and simple fixes like rectifying oil/oil pressure problems. The other, higher mileage mechanical fixes to correct cam/crank phase or insufficient oil pressure problems.

Note: If DTC P0341 is stored at the same time as DTC P1009, troubleshoot DTC P1009 first, then recheck for DTC P0341.

1. Check engine oil level and quality.
   - Top off or change oil if necessary.
     (Specified viscosity = 5W-20)
   - Recheck VTC operation and symptoms.
     Good, done.
     No good, next step.

2. Inspect and clean the VTC Strainer and the VTEC Solenoid Valve Filter.
   - Take note of the amount of sediment and blockage, if thick this may fix the problem/s.
   - Check operation of VTEC Solenoid Valve while it's out.

     Either with DVOM for Ohms.

     Or, apply voltage and ground, observe operation and flow.

     Reassemble or replace as necessary.

     Recheck VTC operation and symptoms.
     Good, done.
     No good, next step.
3. Inspect VTC Oil Solenoid Valve.
   - Remove the valve.

   ![Image of VTC Oil Solenoid Valve]

   - Check strainer for clogging, if strainer is clogged, replace the valve.
   - Observe valve open and closed positions: de-energized it should be closed, energized it will be open, observe this through the drain port.

   ![Images showing valve in open and closed positions]

   - Reassemble or replace as necessary.
   - Recheck VTC operation and symptoms.
     - Good, done.
     - No good, next steps.

4. Check Timing Chain for wear and Cam/Crank phase.

5. Check Engine oil pressure, and overall wear.
   - [YouTube P2646 Honda Accord, VTC strainer, Cleaning The Screens](https://www.youtube.com/watch?v=PknGSpDsmiI)
### Mileage
None Indicated

### Symptoms
- MIL Warning Indicator Lamp On
- Hesitation
- Stumble
- Bogs
- Misfire
- Cuts
- Out
- Chuggles

### Systems
Computers and Control Systems

### DTC Codes
- P1009
- P0010
- P0011

### Keywords
None Indicated

### 6 Repair(s) Available

**Verified Repairs (2)**

Art Erickson-
03/09/2015 | 08:44:38

CORRECTION: Oil Pressure, engine worn, insufficient oil pressure

If this repair worked for you, please "Verify" it.
If this repair did not work for you please add your repair.
Your participation helps everyone in the ALLDATA Community.

Comment (2)
2006 CR-V 4WD, 2.4L engine. DTCs P1009 and P0341 set. Tech found both the VTC and VTEC screens were clogged, cleaned both, but the codes returned. Upon further inspection, found the engine block cracked at the oil pressure switch.

Replaced engine, fixed!

We had one of these CR-Vs with the same P1009 DTC. Using the information above, found the engine was indeed worn out. Replacing the engine as an assembly was the best option to fix our problem.

CORRECTION: Changed oil, cleaned plugged VTC Strainer and VTEC Solenoid Valve Filter.

SKILL LEVEL: B

LABOR TIME:
- Oil and Filter 0.5
- VTEC Solenoid Valve Filter and Test Valve 0.7
- VTC Strainer 0.5

OEM PART NUMBER: Oil Filter, 15400PLMA01

If this repair worked for you, please "Verify" it.
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2007 CR-V 4WD, 2.4L brought in with MIL on, codes P1009 and P0011 set. Inspected, found the VTEC solenoid screens clogged.

Replaced/cleaned out the screens, cleared codes and road tested to verify. Fixed.

CORRECTION: VTEC Solenoid Valve (Rocker Arm Oil Control Valve)

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CORRECTION: VTC Oil Solenoid Valve

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CORRECTION: Timing Chain, worn / cam and crank shafts out of phase

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CORRECTION: Repair or replace Open or Shorted Circuits and Connectors.

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Comment(0)

2006 Honda Truck CR-V 4WD L4-2.4L
Vehicle > Engine, Cooling and Exhaust > Engine > Timing Components
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