



**Technical Service
BULLETIN**

January 23, 2008

Title:

**M.I.L. "ON" VVTi DTCs — OIL CONTROL
VALVE (OCV)**

Models:

'06 – '08 RAV4 (2GR-FE)

**ENGINE
EG004-08**

Introduction Some 2006 – 2008 model year RAV4 vehicles may exhibit a M.I.L. "ON" condition with one or more VVTi related Diagnostic Trouble Codes (DTCs) stored in the Engine Control Module or ECM (SAE term: Powertrain Control Module/PCM). Please use the repair procedure below to address customer concerns.

Applicable Vehicles

- **2006 – 2008** model year **RAV4** vehicles equipped with the **2GR-FE engine** and produced **BEFORE** the Production Change Effective VINs shown below.

**Production
Change
Information**

MODEL	PLANT	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN
RAV4	Tahara	2WD	JTMZK3#V*85016524
		4WD	JTMBK3#V*85042631
	Shokki	2WD	JTMZK3#V*86010385
		4WD	JTMBK3#V*86029375

**Parts
Information**

PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
15330-31020	15330-0P020	Cam Timing Oil Control Valve (LH-IN)	1
		Cam Timing Oil Control Valve (RH-EX)	1
15330-31030	15330-0P030	Cam Timing Oil Control Valve (RH-IN)	1
15340-31020	15340-0P020	Cam Timing Oil Control Valve (LH-EX)	1

NOTE:
Replace the affected OCV ONLY.

**Warranty
Information**


OP CODE	DESCRIPTION	TIME	OFF	T1	T2
EG7039	R & R Camshaft Timing Oil Control Valve Assembly	0.5	15330-310## 15340-31020 15330-31020	8A	54

Applicable Warranty*:
This repair is covered under the Toyota Powertrain Warranty. This warranty is in effect for 60 months or 60,000 miles, whichever occurs first, from the vehicle's in-service date.

* Warranty application is limited to correction of a problem based upon a customer's specific complaint.



**Required
Tools &
Equipment**

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
TIS techstream* NOTE: Software version 2.20.015 or later is required. 	ADE	TSPKG1	1

* Essential SST.

NOTE:

Additional TIS techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

**Inspection
Procedure**

One or more of the following DTCs may be stored:

- P0011 Camshaft Position "A" — Timing Over-Advanced or System Performance (Bank 1)
- P0012 Camshaft Position "A" — Timing Over-Retarded or System Performance (Bank 1)
- P0014 Camshaft Position "B" — Timing Over-Advanced or System Performance (Bank 1)
- P0015 Camshaft Position "B" — Timing Over-Retarded or System Performance (Bank 1)
- P0016 Crankshaft Position — Camshaft Position Correlation (Bank 1 Sensor A)
- P0017 Crankshaft Position — Camshaft Position Correlation (Bank 1 Sensor B)
- P0018 Crankshaft Position — Camshaft Position Correlation (Bank 2 Sensor A)
- P0019 Crankshaft Position — Camshaft Position Correlation (Bank 2 Sensor B)
- P0021 Camshaft Position "A" — Timing Over-Advanced or System Performance (Bank 2)
- P0022 Camshaft Position "A" — Timing Over-Retarded or System Performance (Bank 2)
- P0024 Camshaft Position "B" — Timing Over-Advanced or System Performance (Bank 2)
- P0025 Camshaft Position "B" — Timing Over-Retarded or System Performance (Bank 2)
- P0300 — Random Multiple Cylinder Misfire Detected
- P030# — Cylinder (1 – 6) Misfire Detected

Inspection Procedure
(Continued)

Refer to the chart below for OCV inspection:

STORED DTCs	RELATED OCV	PART NUMBER	REPAIR MANUAL REFERENCE ON TIS (Refer to the Technical Information System, 2006 – 2008 model year RAV4 Repair Manual)
P0011, P0012 and/or P0016	Intake OCV (Bank 1)	15330-0P030	<i>Engine/Hybrid System – Engine Control – “2GR-FE Engine Control System: SFI System: P0011: Camshaft Position “A” – Timing Over-Advanced or System Performance (Bank 1)”</i>
P0021, P0022, and/or P0018	Intake OCV (Bank 2)	15330-0P020	
P0014, P0015, and/or P0017	Exhaust OCV (Bank 1)	15340-0P020	<i>Engine/Hybrid System – Engine Control – “2GR-FE Engine Control System: SFI System: P0014: Camshaft Position “B” – Timing Over-Advanced or System Performance (Bank 1)”</i>
P0024, P0025, and/or P0019	Exhaust OCV (Bank 2)		

If the M.I.L. "ON" condition is diagnosed as an OCV, proceed to the Repair Procedure.

NOTE:
Misfire DTCs (P030#) may be present on the related bank.

Repair Procedure

1. Remove the affected OCV.
2. Apply a light coat of engine oil to the O-ring on the NEW oil control valve.
3. Install the OCV and tighten the bolt.
Torque: 9.0 N•m (92 kgf•cm, 80 in.•lbf)
4. Confirm the repair.

