

ATTENTION:

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 PARTS MANAGER
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IMPORTANT - All
 Service Personnel
 Should Read and
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QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2012 – 13MY Impreza and XV Crosstrek™
 NA Models (FB Engine)
 2013MY BRZ (FA Engine)
 2013MY Legacy and Outback Models (FB Engine)
 2011– 13MY Forester NA Models (FB Engine)

NUMBER: 02-132-12R

DATE: 08/21/12

REVISED: 01/19/15

SUBJECT: Diagnosis and Repair for AVCS-Related DTCs
 P000A, P000B, P000C, P000D, P0011, P0014,
 P0021 and P0024

INTRODUCTION

This Bulletin provides a procedure for diagnosis and determination of necessary part replacement in the event any of the “AVCS Slow Response” or “AVCS System Failure” DTCs listed above are found to be stored in the ECM memory. A possible cause of these conditions is contamination within the camshaft sprocket and / or oil control solenoid valve (OCV) mechanism.

COUNTERMEASURE IN PRODUCTION

Countermeasures were incorporated into production during July, 2012 starting with the following VINs:

MODEL	VEHICLE TYPE	STARTING VIN FOR CAMSHAFT SPROCKET COUNTERMEASURE	STARTING VIN FOR OIL CONTROL SOLENOID VALVE COUNTERMEASURE
BRZ	-	D*603215	D*603362
Impreza and XV Crosstrek (Exc. WRX & STI)	4-Door	D*004206	D*004655
	5-Door	D*204371	D*205723
Legacy	-	D*006591	D*006243
Outback	-	D*213584	D*212977
Forester	-	D*417742	D*419507

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CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

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SERVICE PROCEDURE / INFORMATION

NOTES: Only the Intake-related DTCs are applicable to Legacy, Outback and Forester models.

- Using the SSMIII, determine which DTC is stored.
- Determine the location of the suspect component using the **DTC List** on page 3.
- Swap the Oil Control Solenoid Valves side-to-side (intake to intake or exhaust to exhaust, not between intake and exhaust on same side) following the procedure in the applicable Service Manual.

NOTE: The o-ring and nylon backer ring on the OCV must be replaced prior to reinstallation as they both are one-time use items.

- Clear the ECM memory.
- Perform the model-specific Drive Cycle or Inspection Mode procedure for the corresponding DTC as shown in the chart on the next page.
- Follow the applicable procedure below for locating either Inspection Mode or Drive Cycle instructions to coincide with the reference chart found on page 3.
 1. For BRZ: Using the Service Diagnostics tab on the STIS home page, enter your vehicle search parameters (example: 2013 > BRZ). Next, using the DTC tab, enter P0021 for INTAKE-related DTCs or P0024 for EXHAUST-related DTCs. Select the applicable link from your search result (example: P0021: Camshaft Position “A” - Timing Over-Advanced or System Performance (Bank 2)). Follow the diagnostic outline down to TEST DRIVE (for Drive Cycle) information.
 2. For All Other Models: Using the Service Diagnostics tab on the STIS home page, enter your vehicle search parameters (example: 2013 > Outback). Next, enter specific DTC into the search term box. Select the applicable link from your search result (examples: ENGINE (DIAGNOSTICS) (H4DO) > Drive Cycle > PROCEDURE or ENGINE (DIAGNOSTICS) (H4DO) > Inspection Mode > PROCEDURE).

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DTC LIST

DTC	DESCRIPTION	RH / LH	INTAKE / EXHAUST	VEHICLE MODEL AND ENGINE TYPE (FA, FB)			
				BRZ (FA)	"2012 - 13MY Impreza, XV (FB)"	"2011-13MY Forester (FB)"	"2013MY LEG & Outback (FB)"
P000A	A Camshaft Position Slow Response (Bank 1)	RH	Intake	BRZ Drive Cycle (Refer to Service Manual)	"Drive Cycle ""C"" (Refer to Service Manual)"	Not Applicable	"Drive Cycle ""C"" (Refer to Service Manual)"
P000B	B Camshaft Position Slow Response (Bank 1)	RH	Exhaust	BRZ Drive Cycle (Refer to Service Manual)	"Drive Cycle ""C"" (Refer to Service Manual)"	Not Applicable	Not Applicable
P000C	A Camshaft Position Slow Response (Bank 2)	LH	Intake	BRZ Drive Cycle (Refer to Service Manual)	"Drive Cycle ""C"" (Refer to Service Manual)"	Not Applicable	"Drive Cycle ""C"" (Refer to Service Manual)"
P000D	B Camshaft Position Slow Response (Bank 2)	LH	Exhaust	BRZ Drive Cycle (Refer to Service Manual)	"Drive Cycle ""C"" (Refer to Service Manual)"	Not Applicable	Not Applicable
P0011	Intake Camshaft Position - Timing Over-Advanced or System Performance (Bank 1)	RH	Intake	BRZ Drive Cycle (Refer to Service Manual)	"Inspection Mode (Refer to Service Manual)"	"Inspection Mode (Refer to Service Manual)"	"Drive Cycle ""C"" (Refer to Service Manual)"
P0014	Exhaust AVCS System 1 (Range / Performance)	RH	Exhaust	BRZ Drive Cycle (Refer to Service Manual)	"Inspection Mode (Refer to Service Manual)"	Not Applicable	Not Applicable
P0021	Intake Camshaft Position - Timing Over-Advanced or System Performance (Bank 2)	LH	Intake	BRZ Drive Cycle (Refer to Service Manual)	"Inspection Mode (Refer to Service Manual)"	"Inspection Mode (Refer to Service Manual)"	"Drive Cycle ""C"" (Refer to Service Manual)"
P0024	Exhaust AVCS System 2 (Range / Performance)	LH	Exhaust	BRZ Drive Cycle (Refer to Service Manual)	"Inspection Mode (Refer to Service Manual)"	Not Applicable	Not Applicable

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- Does the suspect component / problem location change to the opposite bank of the engine by resetting the applicable DTC?
 - **YES-** Replace the suspect OCV with a new part (including a new o-ring and backer ring).
 - **NO-** Replace the suspect camshaft sprocket with a new part. (It is not necessary to return OCVs to their original positions.)

IMPORTANT: After any component replacement, perform the applicable Drive Cycle or Inspection Mode procedure again to confirm the repair.

WARRANTY / CLAIM INFORMATION

For vehicles within the Basic New Car Limited and/or Powertrain Warranty period, this repair may be claimed using the following information:

LABOR DESCRIPTION	LABOR OPERATION #	FAIL CODE	VEHICLE MODEL			
			BRZ	IMPREZA / XV	FORESTER	LEGACY / OUTBACK
Swap OCVs, Drive Cycle or Inspection Mode and Replace OCV	A244-501	BAD-42	1.1	1.1	0.9	1.1
Swap OCVs, Drive Cycle or Inspection Mode and Replace Cam Sprocket	A244-511		4.5	4.9	4.7	4.9

NOTE: These labor times include all the Drive Cycle or Inspection Mode procedures as needed and all SSMIII use.