

ATTENTION:
GENERAL MANAGER
PARTS MANAGER
CLAIMS PERSONNEL
SERVICE MANAGER

IMPORTANT - All
Service Personnel
Should Read and
Initial in the boxes
provided, right.



QUALITY DRIVEN® SERVICE

SERVICE PROGRAM BULLETIN

APPLICABILITY: 2006-10 MY Legacy, Outback,
Forester & Impreza with a
2.5 Liter N/A engine only
SUBJECT: Engine Control Module (ECM) Reprogramming

NUMBER: WVU-31R
DATE: March 2011
Revised: 02-06-17

INTRODUCTION

Subaru of America, Inc. has determined that vehicles affected by this Service Program require ECM reprogramming.

A modification to the Engine Control Module software logic has been developed to improve the performance of the emission control system. This software change will not adversely affect fuel economy or performance.

This software update is intended to improve vehicle emissions when the vehicle is operated in cold weather and the engine is turned off and restarted within short periods of time such as in several minute intervals. The A/F sensor contains a heating element, which is controlled by the ECM, and which assists the sensor in reaching an optimum temperature, resulting in better accuracy. When the vehicle is operated under the conditions described above, there could be a longer than desired delay in the ECM's turning on the A/F sensor heating element, resulting in higher than desired emissions. This software enhancement will correct that condition.

Please note the following special information concerning affected vehicles and the availability of ECM reprogramming PAK files.

- ECM reprogramming PAK files will not be available for all models at the time this Service Program is initially released. PAK files will be released in accordance with the schedule found on page 4 of this bulletin.
- Vehicle Coverage Inquiry, available at Subarunet, will be periodically updated to coincide with release of PAK files. WVU-31 coverage will only appear for those vehicle models that have corresponding PAK files available.
- Dealers are requested to check for "open" campaigns whenever a potentially affected vehicle is in for service. If a PAK file is available, this update should be performed in accordance with the service procedure found in this bulletin and the vehicle owner informed that the WVU-31 Service Program update has been completed. It is important that an RC claim be immediately submitted and approved in order to show the campaign "completed". Prior to mailing owner notification letters, the claims database will be checked and any completed vehicles will be removed from the list. These actions will reduce potential customer inconvenience.

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AFFECTED VEHICLES

- 2006-2010 MY Subaru Legacy, Outback, Impreza & Forester with 2.5 Liter normally aspirated engine only. Models with 6 cylinder or turbo charged engines are NOT affected.

Affected vehicles are identified in the VIN range chart below. Prior to performing repairs, confirm coverage by using the Vehicle Coverage Inquiry function at Subarunet.com.

Note: Vehicle Coverage Inquiry will be periodically updated to coincide with release of PAK files. WVU-31 coverage will only appear for those vehicle models that have corresponding PAK files available.

Model		From	To
2006MY	Legacy Sedan	6*200001	6*220857
	Legacy Wagon / Outback	6*300001	6*364201
	Impreza Sedan	6*500009	6*526779
	Impreza 5-Door	6*800007	6*822263
	Forester	6*700001	6*760060
2007MY	Legacy Sedan	7*200009	7*215146
	Legacy Wagon / Outback	7*300004	7*346352
	Impreza Sedan	7*500002	7*526052
	Impreza 5-Door	7*800001	7*819619
	Forester	7*700001	7*748362
2008MY	Legacy Sedan	8*200008	8*227207
	Legacy Wagon / Outback	8*300005	8*367431
	Impreza Sedan	8*500001	8*530288
	Impreza 5-Door	8*800001	8*838495
	Forester	8*700002	8*733308
2009MY	Legacy Sedan	9*210001	9*236941
	Legacy Wagon / Outback	9*310001	9*348625
	Impreza Sedan	9*500007	9*522884
	Impreza 5-Door	9*800003	9*828092
	Forester	9*700002	9*797855
2010MY	Legacy Sedan	A*210007	A*247983
	Outback	A*310003	A*386571
	Impreza Sedan	A*500001	A*517646
	Impreza 5-Door	A*800004	A*828797
	Forester	A*700001	A*799999
		A*800000	A*807110
		A*900001	A*918317

* Various characters may occupy this position of the VIN.

Dealer Affected VIN lists: Dealers will be sent an affected VIN list for each model year

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around the time owner notification letters are mailed.

Affected VIN lists are created and “dealerized” as follows:

- Original vehicle owners are assigned to the original selling dealer when their current address is within a 100 mile radius of that dealer.
- If the original selling dealer code was found to be inactive, the VIN has been assigned to the nearest active dealer.
- For any new owners or when original owners live more than 100 miles from the original selling dealer, the VIN has been assigned to the nearest active dealer.

Important: Dealer affected VIN lists include owner name and address information for vehicles affected by this Service Program. This information will enable dealers to follow-up with owners of potentially affected vehicles. The lists contain owners’ names and addresses obtained from State Motor Vehicle Registration Records. The use of such motor vehicle registration data for any other purpose is unlawful. Accordingly, dealers are urged to limit the use of these lists for the purpose of completion of this Service Program.

OWNER NOTIFICATION

Because this program affects a high volume of vehicles, SOA will prepare and mail Owner Notification Letters to owners of affected vehicles according to the following schedule:

2006MY	Beginning on or about 03/28/11
2007MY	Beginning on or about 04/25/11
2008MY	Beginning on or about 06/07/11
2009MY	Beginning on or about 06/27/11
2010MY	Beginning on or about 07/25/11

Note: For dealers with more than 600 customers affected by this program for any given model year, initially the first 600 letters will be mailed according to the schedule. Any additional letters will be mailed during the following week.

A copy of the Owner Notification Letter is included at the end of this bulletin.

DEALER PROGRAM RESPONSIBILITY

Dealers are to promptly perform the applicable service procedures defined in this bulletin to correct all affected vehicles in their inventory (new, used, demo). Additionally, whenever a vehicle subject to this Service Program is taken into dealer new or used inventory, or is in the dealership for service, necessary steps should be taken to ensure the Service Program correction has been made before selling or releasing the vehicle.

New or used vehicles listed in a Service Program that are in dealer stock must be:

- Immediately identified.
- Tagged or otherwise marked to prevent their delivery or use prior to repair.
- Repaired in accordance with the repair procedures outlined in this Service Program Bulletin.

PARTS INFORMATION

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No repair parts are needed to perform this procedure.

SPECIAL TOOLS

Vehicle ECM reprogramming will require the following:

Subaru Diagnostic System (SDS)

- SDS Toughbook
- Subaru Select Monitor III (SSMIII Application Software)
- Subaru Diagnostic Interface Box (SDI)
- USB Data Link Cable and Reprogramming Cable.

Note: If you require assistance with using the Subaru Diagnostic System (SDS), use the “Help” function icon, which will allow you to access the tutorial information.

SERVICE PROCEDURE

This service procedure will involve reprogramming the ECM with an updated PAK file.

The following chart indicates the date applicable PAK files will be available:

MODEL YEAR	MODEL	MARCH (03/28/11)	APRIL	MAY (05/04/11)	JUNE (06/03/11)
2006MY	All Models	X			
2007MY	All Models	X			
2008MY	Legacy/Outback				X
	Impreza			X	
	Forester				X
2009MY	Legacy/Outback				X
	Impreza			X	
	Forester			X	
2010MY	Legacy/Outback			X	
	Impreza			X	
	Forester			X	

Prior to beginning the reprogramming process, please observe the following:

- 1) Vehicles affected by this program may have also been included in previous campaigns that involved ECM reprogramming or other emission related concerns. Therefore, confirm the vehicle has no other “open” campaigns by checking Vehicle Coverage Inquiry at Subarunet. If any of the following campaigns are found to have a status of “open”, please proceed as follows:
 - a) WVL-22 One-way Fuel Valve. Impreza 2006-2007MY: Perform the repair procedure outlined in the WVL-22 Service Program bulletin. Reprogram the ECM using the WVU-31 PAK file.
 - b) WVM-23 ECM Reprogramming. Legacy/Outback 2006-2009MY, Forester mid-2008 through early 2010MY. Perform the service procedure outlined in the

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WVM-23 Service Program bulletin. The WVU-31 PAK file includes the updates contained in the WVM-23 PAK file. Therefore, only reprogram the ECM using the WVU-31 PAK file. **Note:** When WVM-23 is performed in conjunction with WVU-31, labor time will be reduced by 0.4 hours on the WVM-23 claim, to adjust for overlapping reprogramming labor.

- c) WVN-24 One-way Fuel Valve & ECM Reprogramming. Forester 2007 through mid-2008MY. Perform the repair procedure outlined in the WVN-24 Service Program bulletin including removal of the one-way fuel valve. The WVU-31 PAK file includes the updates contained in the WVN-24 PAK file. Therefore, only reprogram the ECM using the WVU-31 PAK file. **NOTE:** If WVM-23 was previously performed or performed in conjunction with WVU-31, labor time will be reduced by 0.4 hours on the WVM-23 claim, to adjust for overlapping reprogramming labor.
- 2) Verify the status of the “CHECK ENGINE” malfunction indicator light (MIL) located on the vehicle’s instrument cluster.
 - a) If no malfunction is indicated, reprogram the ECM.
 - b) If a malfunction is indicated by the MIL remaining continually “on” or “flashing”, diagnose the cause and perform any necessary repairs. Once repairs have been completed, clear all codes and reprogram the ECM.

Note: In the event the cause of the check engine light illumination is not covered by applicable warranties, the cost of repairs is the vehicle owner’s responsibility. Under no circumstances should the ECM be reprogrammed until corrections have been made.

ECM REPROGRAMMING INSTRUCTIONS

Confirm your SSM III contains the Flashwrite File reprogramming files listed below. (Please see page 1 of this bulletin for additional information concerning the availability of PAK files for this service program.)

Please Note: At times, you may encounter a rough idle condition following WVU-31 reprogramming. During the reprogramming process, learned memory is erased. As such, re-initialization of idle compensation will need to take place. Allowing the vehicle to idle for 5-10 minutes (depending upon ambient temperature and conditions) with air conditioner OFF will return idle stability to a satisfactory level. No other intervention is recommended.

Version Numbers

- Software: 1.26.40.18 or higher
- Interface Box: 1.7.2 or higher
- Interface Box CF Card: 1.2.75 or higher

Use the appropriate PAK file to reprogram the ECM:

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MODEL YEAR	MODEL	ENGINE	TRANSMISSION, ETC.	NEW ECM / PACK FILE PART NUMBER
2006	Legacy & Outback	2.5 Liter non-turbocharged engine	MT CAL Spec. PZEV	22611AK43G.pak
		2.5 Liter non-turbocharged engine	MT FED Spec.	22611AK41D.pak
		2.5 Liter non-turbocharged engine	AT CAL Spec. PZEV	22611AK44E.pak
		2.5 Liter non-turbocharged engine	AT FED Spec.	22611AK42D.pak
	Impreza	2.5 Liter non-turbocharged engine	MT FED & CAL	22611AM442.pak
		2.5 Liter non-turbocharged engine	AT FED & CAL	22611AL213.pak
	Forester	2.5 Liter non-turbocharged engine	MT FED & CAL	22611AK734.pak
		2.5 Liter non-turbocharged engine	AT FED & CAL	22611AK743.pak
2007	Legacy & Outback	2.5 Liter non-turbocharged engine	MT CAL Spec. PZEV	22611AM38C.pak
		2.5 Liter non-turbocharged engine	MT FED Spec.	22611AM36B.pak
		2.5 Liter non-turbocharged engine	AT CAL Spec. PZEV	22611AM39C.pak
		2.5 Liter non-turbocharged engine	AT FED Spec.	22611AM37B.pak
	Impreza	2.5 Liter non-turbocharged engine	MT	22611AM442.pak
		2.5 Liter non-turbocharged engine	AT	22611AM451.pak
	Forester	2.5 Liter non-turbocharged engine	MT CAL Spec. PZEV	22611AM314.pak
		2.5 Liter non-turbocharged engine	MT FED Spec.	22611AP181.pak
		2.5 Liter non-turbocharged engine	AT CAL Spec. PZEV	22611AM324.pak
		2.5 Liter non-turbocharged engine	AT FED Spec.	22611AM302.pak

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2008	Legacy & Outback	2.5 Liter non-turbo-charged engine	MT CAL Spec. PZEV	22611AN01E.pak	
		2.5 Liter non-turbo-charged engine	MT FED Spec.	22611AM99D.pak	
		2.5 Liter non-turbo-charged engine	AT CAL Spec. PZEV	22611AN02F.pak	
		2.5 Liter non-turbo-charged engine	AT FED Spec.	22611AN00E.pak	
	Impreza	2.5 Liter non-turbo-charged engine	MT	22611AM692.pak	
		2.5 Liter non-turbo-charged engine	AT	22611AM702.pak	
	Forester	2.5 Liter non-turbo-charged engine	MT CAL Spec. PZEV	22611AN074.pak	
		2.5 Liter non-turbo-charged engine	MT FED Spec.	22611AP181.pak	
		2.5 Liter non-turbo-charged engine	AT CAL Spec. PZEV	22611AN085.pak	
		2.5 Liter non-turbo-charged engine	AT FED Spec.	22611AM302.pak	
	2009	Legacy & Outback	2.5 Liter non-turbo-charged engine	MT CAL Spec. PZEV	22611AN01E.pak
			2.5 Liter non-turbo-charged engine	MT FED Spec.	22611AM99D.pak
2.5 Liter non-turbo-charged engine			AT CAL Spec. PZEV	22611AN02F.pak	
2.5 Liter non-turbo-charged engine			AT FED Spec.	22611AN00E.pak	
Impreza		2.5 Liter non-turbo-charged engine	MT	22611AM692.pak	
		2.5 Liter non-turbo-charged engine	AT	22611AM702.pak	
Forester		2.5 Liter non-turbo-charged engine	MT CAL Spec. PZEV	22611AN443.pak	
		2.5 Liter non-turbo-charged engine	MT FED Spec.	22611AN422.pak	
		2.5 Liter non-turbo-charged engine	AT CAL Spec. PZEV	22611AN453.pak	
		2.5 Liter non-turbo-charged engine	AT FED Spec.	22611AN432.pak	

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2010	Legacy & Outback	2.5 Liter non-turbo-charged engine	MT CAL Spec. PZEV	22765AB06B.pak
		2.5 Liter non-turbo-charged engine	MT FED Spec.	22765AB08B.pak
		2.5 Liter non-turbo-charged engine	AT CAL Spec. PZEV	22765AB07C.pak
		2.5 Liter non-turbo-charged engine	AT FED Spec.	22765AB09C.pak
	Impreza	2.5 Liter non-turbo-charged engine	MT	22765AA782.pak
		2.5 Liter non-turbo-charged engine	AT	22765AA792.pak
	Forester	2.5 Liter non-turbo-charged engine	MT CAL Spec. PZEV	22765AA352.pak
		2.5 Liter non-turbo-charged engine	MT FED Spec.	22765AA332.pak
		2.5 Liter non-turbo-charged engine	AT CAL Spec. PZEV	22765AA362.pak
		2.5 Liter non-turbo-charged engine	AT FED Spec.	22765AA342.pak

STATE EMISSION TESTING ADVISORY

After ECM reprogramming, the OBD system’s readiness code monitors will set to “incomplete”. Normally, the vehicle needs to be driven under a variety of conditions before the readiness code monitors will indicate “complete”. (See State I/M Program Advisory Bulletin number 11-98-10R, dated 3/3/11 for details.)

SERVICE PROGRAM IDENTIFICATION LABEL

Type or print the necessary information on a Service Program identification label. The completed label should be attached to the vehicle’s upper radiator support.

Additional labels are available through the Subaru Claims Helpline at 1-866-782-2782.

SUBARU
Campaign Code
WVU-31
COMPLETED
DIST./DEALER NO.
SERIAL NO.
DO NOT REMOVE

CALIFORNIA “VEHICLE EMISSION RECALL - PROOF OF CORRECTION”

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CERTIFICATE

The California Air Resources Board and the Department of Motor Vehicles Registration/ Recall Program requires that all emission related Recall/Campaign or Service Program repairs be completed before a vehicle registration is renewed. Please provide owners of vehicles registered in the state of California a completed "Vehicle Emission Recall - Proof of Correction" certificate. Vehicle owners should be advised to retain this certificate because the California Department of Motor Vehicles may require they provide proof this service program repair has been completed.

Vehicle Emission Recall - Proof of Correction				
License Number	Make	Year Model	Body Type	Vehicle Identification Number
Manufacturer <u>Subaru of America, Inc.</u>		Recall Number _____		
The above described vehicle has been repaired, modified and/or equipped with new emission control devices to meet applicable California Emission Control Laws				
Dealer's Name		Address, City, State and Zip		
Date		Dealership's Authorized Signature		
x				
Return this certificate to DMV <u>only</u> when required-otherwise retain for your records.				

CLAIM REIMBURSEMENT AND ENTRY PROCEDURES

Credit to perform this Service Program will be based on the submission of properly completed repair order information. Dealers may submit claims through Vehicle Claim Entry on Subarunet.

ECM Reprogramming

CLAIM TYPE	CAMPAIGN CODE	MODEL	LABOR OPERATION / TIME	LABOR DESCRIPTION
RC	WVU-31	2006 All Vehicles; 2007 Impreza	145-528 0.6 hrs.	Reprogram ECM.
		2007 Legacy/ Outback & Forester; 2008, 2009, 2010 Legacy/Outback, Impreza & Forester	145-528 0.4 hrs	

OWNER NOTIFICATION LETTER

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**Service Program WVU-31
Engine Control Module Reprogramming
(applicable date)**

Dear Subaru Owner:

We would like to thank you for choosing a (applicable model year) model year Subaru. At Subaru, we take pride in our products and are committed to your continued satisfaction. It is with your continued satisfaction in mind that we are announcing the following service program.

Subaru has developed a modification to the Engine Control Module software logic that will improve the performance of your vehicle's emission control system. This software change will not adversely affect fuel economy or performance.

This software update is intended to improve vehicle emissions when the vehicle is operated in cold weather and the engine is turned off and restarted within short periods of time such as in several minute intervals.

WHAT WE ARE ASKING YOU TO DO

Since this software update will improve the performance of your vehicle's emission control system, we suggest that you schedule an appointment with your Subaru dealer soon to have the Engine Control Module reprogrammed. This procedure will take approximately 40 minutes to complete. However, it may be necessary for you to leave your vehicle longer on the day of your appointment to allow your dealer flexibility in scheduling. Your Subaru dealer will perform this update at no cost to you.

Please present this letter to your Subaru Dealer on the day of your service appointment.

CALIFORNIA REGISTERED OWNERS

The California Air Resources Board requires that emission related campaigns be completed prior to California's vehicle registration renewal process; without this repair, you will not be able to register your vehicle during your next annual registration. Upon completion of this campaign, your California dealer will complete and provide you a "Proof of Correction Certificate." If required, present the certificate to the California Department of Motor Vehicles (the "DMV") when renewing your California registration as proof of campaign completion. If the DMV does not request the certificate, we recommend that you keep it for your records.

In addition, the State of California requires that every vehicle must pass an emission test (SMOG Check) every two years and before it is sold. Without the service we are providing at no charge, your vehicle may not pass this test.

CHANGED YOUR ADDRESS OR SOLD YOUR SUBARU?

If you have changed your address, or if you have sold your Subaru, please complete the enclosed prepaid postcard and mail it to us.

IF YOU NEED FURTHER ASSISTANCE

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To locate the nearest Subaru Dealer you can access our website at www.subaru.com and select "Find a Dealer".

For additional information and the most Frequently Asked Questions, please go to:

- <http://www.serviceprogramWVU31.com>

If you need additional assistance, please contact our Customer Dealer Services Department directly using any of the following methods:

- E-mail: Go to www.subaru.com and select "Contact Us".
- Telephone: 1-800-SUBARU3 (1-800-782-2783) Monday through Thursday between 8:30 a.m. and 7:00 p.m. EST and Friday between 10:30 a.m. and 5:00 p.m. EST.
- U.S. Postal mail: Write us at Subaru of America, Inc.,
Attn: CDS Department, P.O. Box 6000, Cherry Hill, NJ 08034-6000.

Please contact us immediately if the dealer fails or is unable to make the necessary repairs free of charge.

Your continued satisfaction with Subaru is important to us. This update is intended to ensure your vehicle's optimal performance. We appreciate your understanding in this matter and regret any inconvenience this may cause you.

Sincerely,

Subaru of America, Inc.

Notice to Lessors

The lessor of a vehicle who receives this letter is requested to provide a copy of it to the vehicle lessee(s) within 10 business days from receipt. The lessor should also keep a record of the lessee(s) to whom this letter is sent, the date sent, and the applicable vehicle identification number (VIN). (For the purposes of this section, a lessor means a person or entity that in the last twelve months prior to the date of this notification has been the owner, as referenced on the vehicle's title, of any five or more leased vehicles. A leased vehicle is a vehicle leased to another person for a term of at least four months.)

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