

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: 2015 MY WRX 2.0L DIT Models
 2014-2015 MY Forester 2.0L DIT Models
SUBJECT: Engine Control Module (ECM)
 Reprogramming

NUMBER: WQW-58R
DATE: February 10, 2016
REVISED: February 24, 2016

INTRODUCTION

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

This bulletin includes the service procedure for diagnosis and repair of customer concerns involving engine idle roughness or in some cases, engine noise and / or damage resulting from spark knock (pre-ignition). The Engine Control Module logic has also been optimized requiring the ECM reprogramming.

The new logic optimizes the ECM for control of the following parameters:

- Change to Fuel Cut control when fuel level is extremely low / near empty
- Change to improve idle smoothness / quality
- Change to boost pressure control under wide-open throttle (WOT) conditions.

Under certain high engine load driving conditions, spark knock can occur which results in elevated cylinder temperatures and pressures. Over time, excessive erosion of the spark plugs and possible damage to the pistons can be consequences of continued operation with these conditions present.

AFFECTED VEHICLES

- Certain 2015 model year WRX 2.0L DIT (Direct Injection Turbo) vehicles
- Certain 2014-2015 model year Forester 2.0L DIT vehicles

Not all vehicles listed below are covered by this service program. Coverage for all affected vehicles must be confirmed by using the Vehicle Coverage Inquiry function on subarunet.com. This data is scheduled to be available in the system when owner notification begins.

MODEL YEAR	MODEL	STARTING PRODUCTION DATE	ENDING PRODUCTION DATE
2015	WRX 2.0L DIT	January 17, 2014	September 26, 2014
2014 & 2015	Forester 2.0L DIT	January 15, 2013	November 4, 2014

OWNER NOTIFICATION

Notification letters will be sent by First Class mail to owners of all potentially affected vehicles in early February, 2016. A copy of the letter is included at the end of this bulletin.

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RETAILER AFFECTED VIN LISTS

Each Subaru retailer will receive an affected VIN list from their Zone Office when owner notification begins. Vehicles will be assigned to retailers in the affected VIN list as follows:

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

IMPORTANT: Retailer affected VIN lists include owner name and address information for vehicles affected by this service program. This information will enable retailers 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, retailers are required to limit the use of these lists for the purpose of completion of this Service Program.

SUBARU RETAILER PROGRAM RESPONSIBILITY

Retailers are to promptly perform the applicable service procedures to correct all affected vehicles in their inventory. Additionally, whenever a vehicle subject to this service program is taken into inventory or in for service, necessary steps should be taken to ensure the Service Program has been performed before selling or releasing the vehicle.

Any vehicles listed in a Service Program that are in the retailer's stock must be:

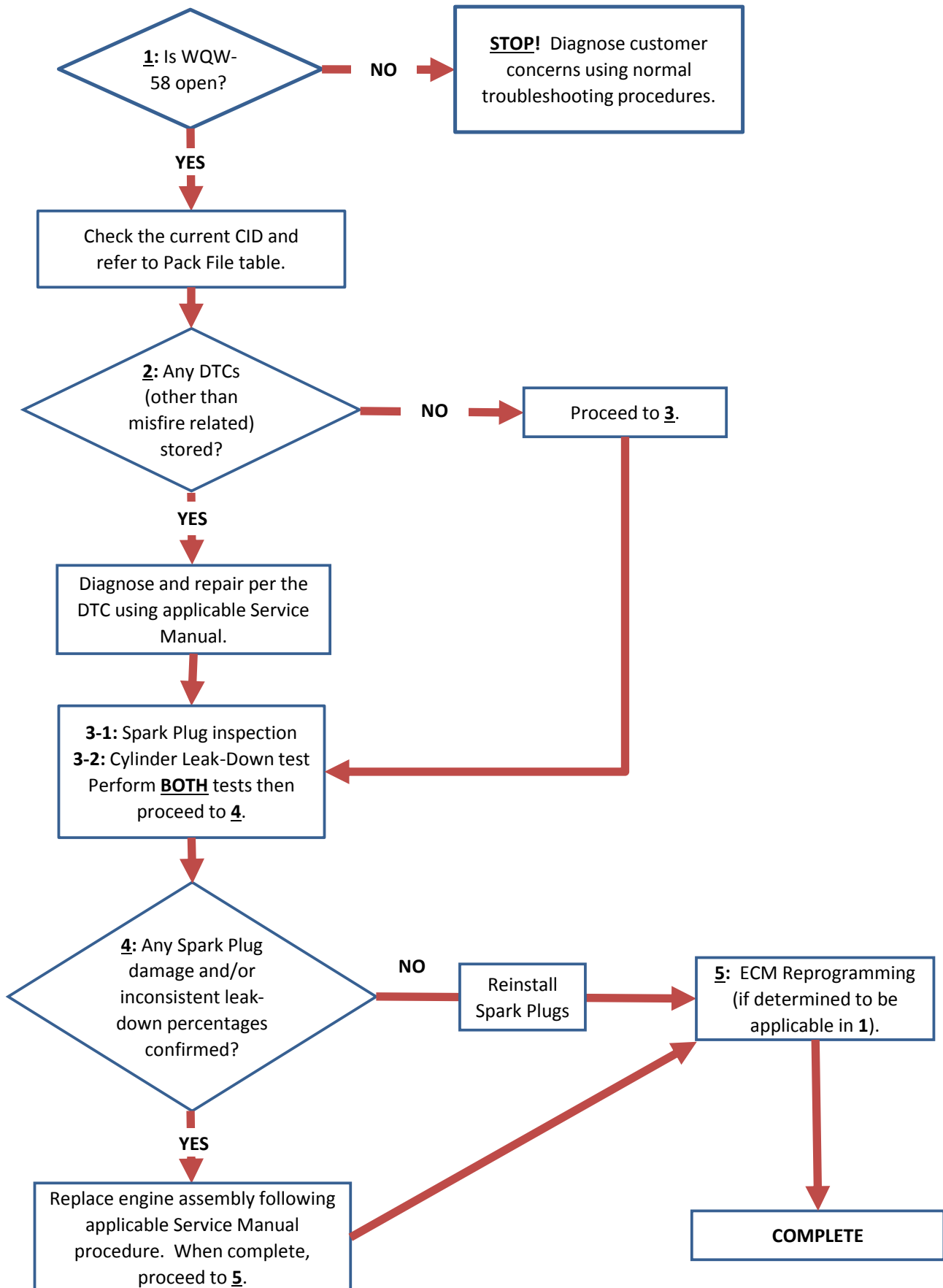
- Immediately identified
- Tagged or otherwise marked to prevent their delivery or use prior to inspection and/or repair
- Repaired in accordance with the repair procedures outlined in this Service Program bulletin.

PACK FILE APPLICABILITY:

MODEL / MODEL YEAR		TRANSMISSION	PAK FILE NAME	NEW ECM PART NUMBER	OLD ECM PART NUMBERS	NEW CID NUMBER
2015MY WRX 2.0L		MT	22765AG235.pak	22765AG235	22765AG230, 31, 32, 33 & 34	LF75300S
		CVT	22765AG245.pak	22765AG245	22765AG240, 41, 42, 43 & 44	LF75300T
Forester Turbo	2014	CVT	22611AW068.pak	22611AW068	22611AW060, 61, 62, 63, 64, 65, 66 & 67	AF56D00B
	2015		22765AG974.pak	22765AG974	22765AG970, 71, 72 & 73	LF61700B

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SERVICE PROCEDURE / INFORMATION



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Follow the procedure steps below when a potentially affected vehicle presents for repair. Perform a Vehicle Inquiry before proceeding to Step 1.

Step 1: Is WQW-58 open?

YES: Check the current CID of the ECM using SSMIV. Refer to the above Pack File Applicability table and proceed to **Step 2**.

VERY IMPORTANT: Regardless of whether the CID check shows the ECM is or is not suitable for reprogramming (latest version already installed), this ENTIRE Service Procedure MUST be performed on any vehicle subject to this Service Campaign. **Note the CURRENT (if ECM already has the latest logic installed) or the NEW (after reprogramming) CID on the repair order hard copy as it is required for claim submission.**

NO: STOP. Do not proceed any further with this bulletin procedure. Diagnose any Customer concerns following normal troubleshooting procedures using the applicable Service Manual.

Step 2: Are there any DTCs (other than misfire related DTCs) stored in memory?

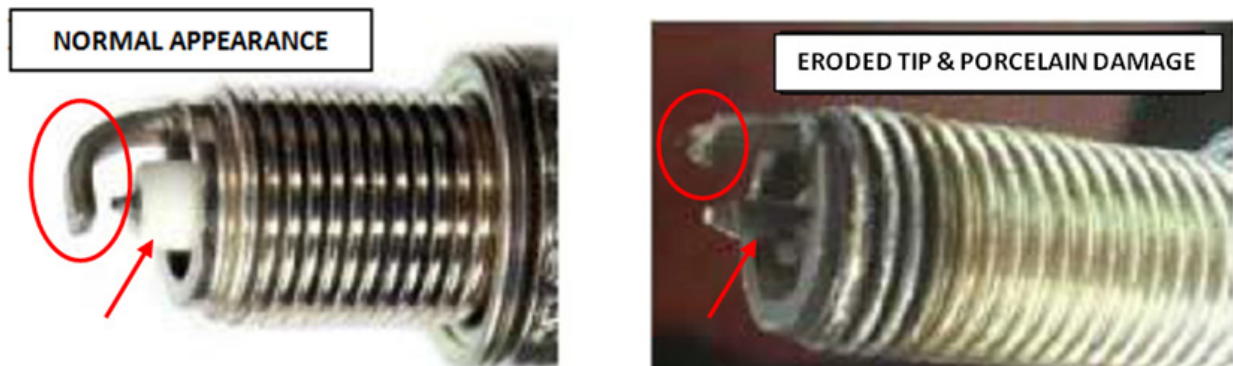
YES: Diagnose and repair as per the stored DTC(s) using the applicable Service Manual.

NO: Proceed to **Step 3**.

Step 3:

- **3-1:** Remove and inspect the spark plugs closely for any damage or excessive erosion. Inspect, rotate, turn upside-down and shake each spark plug to check for a cracked or loose porcelain insulator around the center electrode. Take note which cylinder(s) have spark plugs with verified damage and mark each plug, damaged or not, with the corresponding cylinder number.

NOTE: Any damage to the spark plug porcelain outside of the cylinder head is not a result of this condition.



- **3-2:** Perform a cylinder leak-down test on ALL 4 cylinders following the procedures supplied with the testing equipment being used. Record test results on the Repair Order hard copy. Due to differences in leak-down test equipment, an actual cylinder leakage specification cannot be provided. However, your results should be consistent from cylinder to cylinder. Large variations in cylinder leakage readings will direct you toward a problem cylinder. Experience with the test equipment being used and past engine failure diagnosis should be your guides for how much variation between cylinders is acceptable when damage has occurred to one or more cylinders. If any of the test results show a high leak-down percentage, regardless of whether or not the corresponding cylinder has spark plug damage as described above, the engine assembly must be replaced following the procedure in the applicable Service Manual.

NOTE: More information regarding cylinder leak-down testing can be found on STIS in Technician's Reference Booklet: Engine Theory and Diagnosis (MSA5P2106C).

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Step 4: Evaluation of Test Results

- **4-1:** If the inspections performed in **Step 3-1** above revealed spark plug damage, the engine assembly must be replaced following the procedure in the applicable Service Manual. When complete, proceed to **Step 5** if reprogramming was determined to be necessary in **Step 1**. If no spark plug damage is found, proceed to **4-2**.
- **4-2:** If the inspections performed in **Step 3-2** above revealed high cylinder leak down percentages as described in the test equipment instructions or inconsistencies between cylinders, the engine assembly must be replaced following the procedure in the applicable Service Manual. When complete, proceed to **Step 5** if reprogramming was determined to be necessary in **Step 1**. If no leak-down inconsistencies were found, reinstall the spark plugs and proceed to **Step 5**.

IMPORTANT: When determined necessary, complete engine assemblies (NOT short blocks) are to be used for the repair. Because some engine assemblies are no longer in active production or available, the following substitutions must be used to complete those repairs.

REMINDER: Engine assembly replacement will only be required in a **very limited** number of cases.

- For 2014MY Forester XT- order the 2016MY Forester XT Engine assembly and replace the engine harness included on the 2016MY engine with a 2014/15MY engine harness (2014-15 MY engine harnesses are identical. The part numbers are same).
- For 2015MY Forester XT- order the 2016MY Forester XT Engine assembly and replace the engine harness included on the 2016MY engine with a 2014/15MY engine harness (2014-15 MY engine harnesses are identical. The part numbers are same).
- For 2015MY WRX, once any remaining engine assembly inventory is exhausted, order the 2016MY WRX engine assembly as there is no difference between 2015-16MY engines.

NOTE: Some additional parts (e.g. intake gaskets) will be needed when changing out the engine wiring harness. Consult the applicable Service Manual and your Parts department for details.

Step 5: Reprogram the ECM following the currently established normal procedure. When this reprogramming is complete, confirm the running condition of the engine. If the engine runs normally, no further action is required. Affix the campaign sticker to the radiator support and release the vehicle.

VERY IMPORTANT: If the engine continues to exhibit any idle roughness after completing the testing and this ECM reprogramming, confirm your work to ensure the ignition coils and spark plugs are correctly installed and undamaged. If any concerns are found, correct as needed then check the engine's running condition again. If any concerns persist, collect and save an SSM IV data file showing the condition. While recording, be sure to mark the data whenever any roughness occurs. Share the data file with the SOA Technical Helpline through the SDS notebook. Include any FFD should a DTC set during these checks. Follow up with the SOA Technical Helpline to review the saved data before proceeding further as engine assembly replacement may still be required.

NOTES:

SOA now highly recommends connecting the Midtronics GR8 Diagnostic Battery Charger to the vehicle and utilizing the Power Supply Mode feature anytime a vehicle control module is being reprogrammed. Once the GR8 is connected to the vehicle, as long as the battery is fully charged, it takes less than 3 minutes to boot-up the charger, select the Power Supply Mode, and have the battery voltage stabilized and ready for reprogramming.

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VERY IMPORTANT: This information is applicable to the Midtronics GR8 Diagnostic Battery Charger **ONLY**. It does not apply to any other brand / type of “generic” battery charger whatsoever. **ONLY** the GR8 and its Power Supply Mode feature has been tested and approved by Subaru of America, Inc. (SOA).

- If the GR8 indicates the vehicle’s battery must be charged, charge the battery using the GR8 before proceeding to reprogram the vehicle while using the Power Supply Mode.
- Control module failures as a result of battery discharge during reprogramming are not a matter for warranty. Should any DTCs reset after the reprogramming update is performed, diagnose per the procedure outlined in the applicable Service Manual.

IMPORTANT: The **NEW** Calibration Identification number (CID) for any newly-installed programming (as confirmed from the actual control module **AFTER** installation) **MUST** be noted on the repair order as this information is required for claim submission.

NOTE: The pack file listings provided in this bulletin are the latest available at the time of publishing. Updates are often released thereafter without revision to the original bulletin. For this reason, it is critical to always have the latest version of Select Monitor software installed on your system. You can confirm if a later version is available by entering the CID listed in this bulletin into FlashWrite. If a newer CID is shown as available in FlashWrite, reprogram using that file.

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 11-120-12R, dated 2-02-2016 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 normal parts ordering channels. The part number is MSA6P1302. Ordering qty 1 = 1 sheet of 20 labels.

PART NUMBER	APPLICABILITY	DESCRIPTION	ORDER QUANTITY
MSA6P1302	All models	Campaign Completion Labels (contains one sheet of 20 labels)	1

SUBARU
Campaign Code
WQW-58
COMPLETED
DIST./DEALER NO.
SERIAL NO.
DO NOT REMOVE

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CALIFORNIA “VEHICLE EMISSION RECALL - PROOF OF CORRECTION” 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.

Additional certificates are available through normal parts ordering channels using part number MSA6P1301. Quantity 1 = 1 booklet of 50 certificates.

Vehicle Emission Recall - Proof of Correction				
License Number	Make	Year Model	Body Type	Vehicle Identification Number
Manufacturer		Subaru of America, Inc.		
		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 only when required-otherwise retain for your records.				

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CLAIM REIMBURSEMENT AND ENTRY PROCEDURES

Credit to perform this service program will be based on the submission of properly completed repair order information. Retailers may submit claims through Vehicle Claim Entry on subaru-net.com. Enter the Recall Claim the same day as the recall is performed to update the recall status to “Completed”.

OUTCOME	LABOR DESCRIPTION	LABOR OPERATION #	LABOR TIME	CLAIM TYPE & CAMPAIGN CODE
Spark Plugs- OK Leak-Down Test- OK ECM is up-to-date	INCLUDES: CID CHECK, SPARK PLUG REMOVAL FOR INSPECTION, MARKING, REINSTALLATION, CYLINDER LEAK-DOWN TEST	A114-550	3.3	RC WQW-58
Spark Plugs - OK Leak-Down Test- OK ECM reprogramming	INCLUDES: CID CHECK, SPARK PLUG REMOVAL FOR INSPECTION, MARKING, REINSTALLATION, AND ECM REPROGRAMMING	A114-558	3.6	
Spark Plugs- N/G and /or Leak-Down Test- N/G ECM reprogramming	INCLUDES: CID CHECK, SPARK PLUG REMOVAL FOR INSPECTION, MARKING, REINSTALLATION, ENGINE REPLACEMENT AND ECM REPROGRAMMING	B114-551	7.3	
n/a	ENGINE HARNESS CHANGE- OVER TO REPLACEMENT ENGINE ASSEMBLY WHEN REQUIRED ON APPLICABLE FORESTER MODELS	C114-556	1.9	
NOTE: The claim coding below is to be used ONLY when the engine continues to exhibit any idle roughness after completing the ECM reprogramming as outlined in Step 5 above.				
Spark Plugs- OK Leak-Down Test- OK ECM reprogramming BUT engine operation issue(s) persist	INCLUDES: CID CHECK, SPARK PLUG REMOVAL FOR INSPECTION, MARKING, REINSTALLATION, ECM REPROGRAMMING AND DATA FILE COLLECTION FOR SUBMISSION TO TECHLINE	B114-553	3.9	
n/a	ENGINE ASSEMBLY REPLACEMENT (IF REQUIRED AFTER TECHLINE REVIEW) AND PERFORMING B114-553 ABOVE	C114-554	3.7	

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OUTCOME	LABOR DESCRIPTION	LABOR OPERATION #	LABOR TIME	CLAIM TYPE & CAMPAIGN CODE
n/a	ENGINE HARNESS CHANGE-OVER TO REPLACEMENT ENGINE ASSEMBLY WHEN REQUIRED ON APPLICABLE FORESTER MODELS	C114-556	1.9	RC WQW-58

IMPORTANT REMINDERS:

- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.

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.

SUBARU OF AMERICA, INC. IS "ISO 14001 COMPLIANT"

The international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

OWNER NOTIFICATION LETTER



Subaru of America, Inc

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Cherry Hill, NJ 08034-6000
800-782-2783
www.subaru.com

**Subaru Service Program WQW-58
February 2016**

Dear Subaru Owner:

We would like to thank you for your selection of a Subaru vehicle. We take pride in our products and are committed to your continued satisfaction.

Subaru has developed a modification to the Engine Control Module (ECM) software logic due to a possible pre-ignition issue on certain 2015 model year WRX vehicles and certain 2014 and 2015 model year 2.0XT Forester vehicles, equipped with a 2.0 liter turbocharged engine.

You received this notice because our records indicate that you currently own one of these vehicles.

DESCRIPTION

Under certain high engine load driving conditions, engine combustion may occur prior to spark ignition resulting in elevated cylinder temperatures and pressures. This could cause a rough idle and engine noise, and if left unaddressed it could lead to excessive erosion of the spark plugs and possible engine damage.

REPAIR

The repair will be performed at no cost to you. Subaru will inspect your vehicle and reprogram the ECM. If any related spark plug or engine damage is detected during the inspection, your vehicle will be repaired.

WHAT YOU SHOULD DO

You should immediately contact your Subaru retailer (dealer) for an appointment to have this repair performed.

HOW LONG WILL THE REPAIR TAKE?

The time to perform the inspection and reprogramming is approximately three hours. However, it may be necessary to leave your vehicle for a longer period of time on the day of your scheduled appointment to allow your Subaru retailer flexibility in scheduling, or for repair.

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.

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CHANGED YOUR ADDRESS OR SOLD YOUR SUBARU?

If you have moved or sold your vehicle, please complete the enclosed prepaid postcard and mail it to us. Or if you prefer to update this information online, please go to www.subaru.com, select 'Customer Support,' then select 'Address Update' or 'Ownership Update' from the drop down menu.

IF YOU NEED FURTHER ASSISTANCE:

To locate the nearest Subaru retailer you can access our website at www.subaru.com and select 'Find a Retailer.'

For additional information, please go to: <http://www.wqw58.service-campaign.com>.

If you need additional assistance, please contact us directly:

- By e-mail: Go to www.subaru.com, Customer Support and select "Contact Us"
- By telephone: 1-800-SUBARU3 (1-800-782-2783)
Monday through Thursday between 7:30 a.m. and 8:00 p.m. ET
Friday between 10:30 a.m. and 5:00 p.m. ET
Saturday between 9:00 a.m. and 3:30 p.m. ET
- By U.S. Postal mail: Write us at Subaru of America, Inc., Attn: Customer-Retailer Services Department, P.O. Box 6000, Cherry Hill, NJ 08034-6000

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

Your continued satisfaction with your Subaru is important to us. Please understand that we have taken this action in the interest of your vehicle's proper operation. We sincerely apologize for any inconvenience this matter may cause and urge you to schedule an appointment as soon as possible to have this repair performed.

Sincerely,
Subaru of America, Inc.

Notice to Lessors: Under Federal law the lessor of a vehicle who receives this letter must provide a copy of it to the vehicle lessee(s) within 10 business days from receipt. The lessor must 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.)

A subsidiary of Fuji Heavy Industries Ltd.

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