

YEAR/MODEL	Date Of Issue	Bulletin Number	Service Campaign
<b>2008, 2009, 2010, 2010.5, 2011, 2011.5</b>	12JAN2012	<b>501355</b> Updated on 27JAN2012	<b>FSA</b>

## Title:

**Hybrid Vehicle Control Unit (VCU) and Battery Electronic Control Module (BECM) calibration update to prevent HV battery discharge**

## Issue:

The Li-Ion high voltage battery pack may become discharged if the vehicle is operated in conventional mode

## Applies To:

### Phase A: Purolator Downsview

1FC4E4KL0ADA60632	1FC4E4KL4ADA60634	1FC4E4KL9ADA60631
1FC4E4KL1ADA60638	1FC4E4KL5ADA60643	1FC4E4KL9ADA60645
1FC4E4KL1ADA60641	1FC4E4KL6ADA60635	1FC4E4KLXADA60637
1FC4E4KL2ADA60633	1FC4E4KL7ADA60630	1FC4E4KLXADA60640
1FC4E4KL3ADA60639	1FC4E4KL7ADA60644	1FCLE49L09DA62328
1FC4E4KL3ADA60642	1FC4E4KL8ADA60636	1FCLE49LX9DA62322

### Phase B: All Balance 10.5 vehicles (Purolator, Cintas, ILDOT, Aramark and University of Washington)

1FC4E4KL0ADA60629	1FC4E4KL2ADB02024	1FC4E4KL5ADB01059	1FC4E4KL9ADA60662
1FC4E4KL0ADA60646	1FC4E4KL3ADA60642	1FC4E4KL5ADB01062	1FC4E4KL9ADA60676
1FC4E4KL0ADA60663	1FC4E4KL3ADA60673	1FC4E4KL5ADB02020	1FC4E4KL9ADA60693
1FC4E4KL0ADA60677	1FC4E4KL3ADA60687	1FC4E4KL6ADA60649	1FC4E4KL9ADA60709
1FC4E4KL0ADA60680	1FC4E4KL3ADA60690	1FC4E4KL6ADA60652	1FC4E4KL9ADA60712
1FC4E4KL0ADA60694	1FC4E4KL3ADA60706	1FC4E4KL6ADA60666	1FC4E4KL9ADA60726
1FC4E4KL0ADA60713	1FC4E4KL3ADA60723	1FC4E4KL6ADA60683	1FC4E4KL9ADA73699
1FC4E4KL0ADA60727	1FC4E4KL3ADA60737	1FC4E4KL6ADA60697	1FC4E4KL9ADA73704
1FC4E4KL0ADA60730	1FC4E4KL3ADA60740	1FC4E4KL6ADA60702	1FC4E4KL9ADA73718
1FC4E4KL0ADA73705	1FC4E4KL3ADA73701	1FC4E4KL6ADA60716	1FC4E4KL9ADA73721
1FC4E4KL0ADA73719	1FC4E4KL3ADA73715	1FC4E4KL6ADA60733	1FC4E4KL9ADA73735

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1FC4E4KL0ADA73722	1FC4E4KL3ADA73729	1FC4E4KL6ADA73708	1FC4E4KL9ADA76408
1FC4E4KL0ADA73736	1FC4E4KL3ADA73732	1FC4E4KL6ADA73711	1FC4E4KL9ADA82516
1FC4E4KL0ADA82517	1FC4E4KL3ADA76405	1FC4E4KL6ADA73725	1FC4E4KL9ADA82533
1FC4E4KL0ADA82520	1FC4E4KL3ADA82527	1FC4E4KL6ADA73739	1FC4E4KL9ADA95525
1FC4E4KL0ADA82534	1FC4E4KL3ADA82530	1FC4E4KL6ADA82523	1FC4E4KL9ADA95539
1FC4E4KL0ADA93890	1FC4E4KL3ADA82544	1FC4E4KL6ADA82537	1FC4E4KL9ADB01002
1FC4E4KL0ADA95526	1FC4E4KL3ADA84892	1FC4E4KL6ADA82540	1FC4E4KL9ADB01016
1FC4E4KL0ADB01003	1FC4E4KL3ADA95519	1FC4E4KL6ADA87284	1FC4E4KL9ADB01033
1FC4E4KL0ADB01017	1FC4E4KL3ADA95522	1FC4E4KL6ADA95529	1FC4E4KL9ADB01047
1FC4E4KL0ADB01020	1FC4E4KL3ADA95536	1FC4E4KL6ADA95532	1FC4E4KL9ADB01050
1FC4E4KL0ADB01034	1FC4E4KL3ADB01013	1FC4E4KL6ADB01006	1FC4E4KL9ADB02019
1FC4E4KL0ADB01048	1FC4E4KL3ADB01027	1FC4E4KL6ADB01023	1FC4E4KL9ADB02022
1FC4E4KL0ADB01051	1FC4E4KL3ADB01030	1FC4E4KL6ADB01037	1FC4E4KLXADA60654
1FC4E4KL0ADB02023	1FC4E4KL3ADB01044	1FC4E4KL6ADB01040	1FC4E4KLXADA60668
1FC4E4KL1ADA60655	1FC4E4KL3ADB01058	1FC4E4KL6ADB01054	1FC4E4KLXADA60671
1FC4E4KL1ADA60669	1FC4E4KL3ADB01061	1FC4E4KL6ADB02026	1FC4E4KLXADA60685
1FC4E4KL1ADA60672	1FC4E4KL3ADB02033	1FC4E4KL7ADA60658	1FC4E4KLXADA60699
1FC4E4KL1ADA60686	1FC4E4KL4ADA60651	1FC4E4KL7ADA60661	1FC4E4KLXADA60704
1FC4E4KL1ADA60705	1FC4E4KL4ADA60665	1FC4E4KL7ADA60675	1FC4E4KLXADA60718
1FC4E4KL1ADA60719	1FC4E4KL4ADA60679	1FC4E4KL7ADA60689	1FC4E4KLXADA60721
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1FC4E4KL1ADA60736	1FC4E4KL4ADA60696	1FC4E4KL7ADA60708	1FC4E4KLXADA73713
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1FC4E4KL1ADA73714	1FC4E4KL4ADA60715	1FC4E4KL7ADA60725	1FC4E4KLXADA73730
1FC4E4KL1ADA73728	1FC4E4KL4ADA60729	1FC4E4KL7ADA60739	1FC4E4KLXADA82525
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1FC4E4KL1ADA82526	1FC4E4KL4ADA73707	1FC4E4KL7ADA73703	1FC4E4KLXADA82542
1FC4E4KL1ADA82543	1FC4E4KL4ADA73710	1FC4E4KL7ADA73717	1FC4E4KLXADA95517
1FC4E4KL1ADA95518	1FC4E4KL4ADA73724	1FC4E4KL7ADA73720	1FC4E4KLXADA95520
1FC4E4KL1ADA95521	1FC4E4KL4ADA73738	1FC4E4KL7ADA73734	1FC4E4KLXADA95534
1FC4E4KL1ADA95535	1FC4E4KL4ADA82519	1FC4E4KL7ADA76407	1FC4E4KLXADB01008

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1FC4E4KL1ADB01009	1FC4E4KL4ADA82522	1FC4E4KL7ADA82515	1FC4E4KLXADB01011
1FC4E4KL1ADB01012	1FC4E4KL4ADA82536	1FC4E4KL7ADA82529	1FC4E4KLXADB01025
1FC4E4KL1ADB01026	1FC4E4KL4ADA87283	1FC4E4KL7ADA82532	1FC4E4KLXADB01039
1FC4E4KL1ADB01043	1FC4E4KL4ADA93889	1FC4E4KL7ADA95524	1FC4E4KLXADB01042
1FC4E4KL1ADB01057	1FC4E4KL4ADA95528	1FC4E4KL7ADA95538	1FC4E4KLXADB01056
1FC4E4KL1ADB01060	1FC4E4KL4ADA95531	1FC4E4KL7ADB01015	1FC4E4KLXADB02028
1FC4E4KL1ADB02029	1FC4E4KL4ADB01005	1FC4E4KL7ADB01029	1FC4E4KLXADB02031
1FC4E4KL1ADB02032	1FC4E4KL4ADB01019	1FC4E4KL7ADB01032	1FCLE49L39DA13110
1FC4E4KL2ADA60647	1FC4E4KL4ADB01022	1FC4E4KL7ADB01046	1FCLE49L79DA13109
1FC4E4KL2ADA60650	1FC4E4KL4ADB01036	1FC4E4KL7ADB01063	1FDFE4FL0ADB00738
1FC4E4KL2ADA60664	1FC4E4KL4ADB01053	1FC4E4KL7ADB02021	1FDFE4FL0ADB00741
1FC4E4KL2ADA60678	1FC4E4KL4ADB02025	1FC4E4KL8ADA60653	1FDFE4FL0ADB00755
1FC4E4KL2ADA60681	1FC4E4KL5ADA60643	1FC4E4KL8ADA60667	1FDFE4FL1ADA97574
1FC4E4KL2ADA60695	1FC4E4KL5ADA60657	1FC4E4KL8ADA60670	1FDFE4FL1ADB00733
1FC4E4KL2ADA60700	1FC4E4KL5ADA60660	1FC4E4KL8ADA60684	1FDFE4FL1ADB00747
1FC4E4KL2ADA60714	1FC4E4KL5ADA60674	1FC4E4KL8ADA60698	1FDFE4FL1ADB00750
1FC4E4KL2ADA60728	1FC4E4KL5ADA60688	1FC4E4KL8ADA60703	1FDFE4FL2ADB00739
1FC4E4KL2ADA60731	1FC4E4KL5ADA60691	1FC4E4KL8ADA60717	1FDFE4FL2ADB00756
1FC4E4KL2ADA73706	1FC4E4KL5ADA60707	1FC4E4KL8ADA60720	1FDFE4FL3ADA93459
1FC4E4KL2ADA73723	1FC4E4KL5ADA60710	1FC4E4KL8ADA60734	1FDFE4FL3ADB00734
1FC4E4KL2ADA73737	1FC4E4KL5ADA60724	1FC4E4KL8ADA73709	1FDFE4FL3ADB00748
1FC4E4KL2ADA73740	1FC4E4KL5ADA60738	1FC4E4KL8ADA73712	1FDFE4FL4ADB00743
1FC4E4KL2ADA82518	1FC4E4KL5ADA60741	1FC4E4KL8ADA73726	1FDFE4FL5ADB00735
1FC4E4KL2ADA82521	1FC4E4KL5ADA73697	1FC4E4KL8ADA82524	1FDFE4FL5ADB00749
1FC4E4KL2ADA82535	1FC4E4KL5ADA73702	1FC4E4KL8ADA82538	1FDFE4FL5ADB00752
1FC4E4KL2ADA87282	1FC4E4KL5ADA73716	1FC4E4KL8ADA82541	1FDFE4FL6ADB00744
1FC4E4KL2ADA93888	1FC4E4KL5ADA73733	1FC4E4KL8ADA87285	1FDFE4FL7ADB00736
1FC4E4KL2ADA93891	1FC4E4KL5ADA76406	1FC4E4KL8ADA95533	1FDFE4FL7ADB00753
1FC4E4KL2ADA95527	1FC4E4KL5ADA82528	1FC4E4KL8ADB01007	1FDFE4FL8ADA97572
1FC4E4KL2ADA95530	1FC4E4KL5ADA82531	1FC4E4KL8ADB01010	1FDFE4FL8ADB00731
1FC4E4KL2ADB01004	1FC4E4KL5ADA95523	1FC4E4KL8ADB01024	1FDFE4FL8ADB00745

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1FC4E4KL2ADB01018	1FC4E4KL5ADA95537	1FC4E4KL8ADB01038	1FD4E4FL9ADB00737
1FC4E4KL2ADB01021	1FC4E4KL5ADB01014	1FC4E4KL8ADB01041	1FD4E4FL9ADB00740
1FC4E4KL2ADB01035	1FC4E4KL5ADB01028	1FC4E4KL8ADB01055	1FD4E4FL9ADB00754
1FC4E4KL2ADB01049	1FC4E4KL5ADB01031	1FC4E4KL8ADB02027	1FD4E4FLXADA97573
1FC4E4KL2ADB01052	1FC4E4KL5ADB01045	1FC4E4KL8ADB02030	1FD4E4FLXADB00732
		1FC4E4KL9ADA60659	1FD4E4FLXADB00746

## Special Tools or Software Required:

Where Available	Type of Tool	Equipment Description
AZDtec.com (Downloadable)	Calibration	VCU calibration 12.1.1
AZDtec.com (Downloadable)	Calibration and Programming Tool	BECM GDS2 launcher 1.2.4
AZDtec.com (Downloadable)	Programming Tool	Moto Update
AZDtec.com (Purchasable)	Interface Device	Kvaser Leaf Lite
AZDtec.com (Purchasable)	Interface Harness	BDT Diag Harness
AZDtec.com (Purchasable)	License Dongle	Moto Update License Key

## Action:

Reprogram the Hybrid Vehicle Control Unit (VCU) and the High Voltage Pack Battery Electronic Control Module (BECM) using Moto Update and the BECM programming GDS2 launcher

**Note: Both control modules must be programmed to complete this action**

## Service Procedure:

### Before Starting Programming Procedure:

1. Check for Diagnostic Trouble Codes (DTC's) in all modules: VCU, PCM, ESS, and all DMoC's
2. If there are any DTC's stored save codes
3. Repair DTC's prior to performing programming updates to the VCU and BECM

### Hybrid Vehicle Control Module VCU Programming:

1. Download the latest VCU software calibration package version 12.1.1 or later from AZDtec.com

Note: Software package 12.1.1 may already be installed on the laptop, it is not necessary to if you have previously done so

AZD Diagnostic Drivers V1.2.4 will be required for first time users

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## 2. Program VCU

For VCU programming instructions please visit the Service Diagnostic Reference available on <http://service.azdtec.com/bhev/Powertrain/03E/pdf/303-14E-F1-P.pdf>

### High Voltage Battery Control Module (BECM) Programming:

1. Download the latest BECM GDS2 launcher version 1.2.4 or later from AZDtec.com
2. Program BECM

For BECM programming instructions please visit the Service Diagnostic Reference available at <http://service.azdtec.com/bhev/Electrical/14E/pdf/414-03e-c1-p.pdf>

### VCU and BECM Programming Verification

3. Using the Balance Diagnostic Tool (BDT) clear all codes within the VCU and PCM
4. Road test the vehicle and check for proper operation.

## Warranty Information:

Code	Description	Time
501355	Reprogram VCU and BECM	.3

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