	GROUP Engine	MODEL 2012MY Sportage (SL) Turbo
	NUMBER 130	DATE July 2013
TECHNICAL SERVICE BULLETIN		
SUBJECT: SERVICE ACTION: ECM UPGRADE – REFLASH AND EWGA ADJUSTMENT PROCEDURE (SA 149)		

On some 2012 Sportage (SL) vehicles with 2.0 T-GDI engine produced from May 20, 2011 to January 17, 2012 the MIL may illuminate with DTC P2562 and/or P2565. To prevent and/or correct this condition, follow the procedures outlined in this bulletin to a) reflash the affected vehicle's control unit, and b) to check and if necessary adjust the Electronic Waste Gate Actuator (EWGA) rod length.

- **P2562:** Turbocharger Boost Control Position Sensor 'A' Circuit
- **P2565:** Turbocharger Boost Control Position Sensor 'A' Circuit High



Turbo and Boost Pressure Actuator Assembly

***NOTICE**

A Service Action is a repair program without customer notification that is performed during the warranty period. Any dealer requesting to perform this repair outside the warranty period will require DPSM approval.

Repair status for a VIN is provided on WebDCS (Service> Warranty Coverage> Warranty Coverage Inquiry> Campaign Information). Not completed Recall / Service Action reports are available on WebDCS (Consumer Affairs> Not Completed Recall> Recall VIN> Select Report), which includes a list of affected vehicles.

This issue number is SA149.

File Under: <Engine>

- Circulate To: General Manager Service Manager Parts Manager
 Service Advisor(s) Technician(s) Body Shop Manager Fleet Repair

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ECM Upgrade Procedure:

UPGRADE EVENT NAME
206.SL T-GDI DTC(P2562/P2565) LOGIC IMPROVEMENT (ECM)

***NOTICE**

- A fully charged battery is necessary before ECM/PCM upgrade can take place. It is recommended that the Midtronics GR8-1299 system be used in ECM/PCM mode during charging. DO NOT connect any other battery charger to the vehicle during ECM/PCM upgrade.
- All ECM upgrades must be done with the ignition key in the 'ON' position.
- Be careful not to disconnect any cables connected to the vehicle or GDS during the ECM upgrade procedure.
- DO NOT start the engine during ECM/PCM upgrade.
- DO NOT turn the ignition key 'OFF' or interrupt the power supply during ECM/PCM upgrade.
- When the ECM/PCM upgrade is completed, turn the ignition 'OFF' and wait 20 seconds before starting the engine.
- ONLY use approved ECM/PCM upgrade software designated for the correct model, year.

⚠ CAUTION

Before attempting an ECM/PCM upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the ECM/PCM to become inoperative after the upgrade and any claims associated with this repair may be subject to chargeback.

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**ROM ID Information Table:
Upgrade event #206**

MODEL	IMMO	ECM Part No.	ROM ID		Remarks
			Previous	New	
Sportage SL 2.0L T-GDI (12MY)	No (-)	39113-2G861	SCC0MB1A SCC0MB3A SCC0MC0A	SCC0MC0B	2WD
	Yes (+)	39113-2G871	SCC0RB1A SCC0RB3A SCC0RC0A	SCC0RC0B	
	No (-)	39114-2G861	SCC0MB1A SCC0MB3A SCC0MC0A	SCC0MC0B	4WD
	Yes (+)	39114-2G871	SCC0RB1A SCC0RB3A SCC0RC0A	SCC0RC0B	

To verify the vehicle is affected, be sure to check the Calibration Identification of the vehicle's ECM ROM ID and reference the Information Table as necessary.

1. Connect the power supply cable to the GDS tool.

***NOTICE**

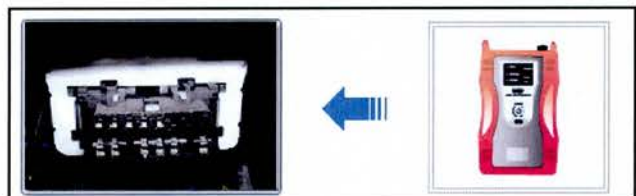
If attempting to perform the ECM upgrade with the power supply cable disconnected from the GDS tool, be sure to check that the GDS tool is fully charged before ECM upgrade. If the GDS tool is not fully charged, failure to perform the ECM upgrade may occur. Therefore, it is strongly recommended that the power supply be connected to the GDS tool.

2. Connect the USB cable between the VCI and the GDS tool.

***NOTICE**

When performing the ECM upgrade using the GDS tool, wireless communication between the VCI and GDS tool is not available. Therefore, be sure to connect the USB cable between the VCI and the GDS tool.

3. Connect the Main 16-pin DLC cable (GHDM – 241000) to the VCI.
4. Connect the Main 16-pin DLC cable (GHDM – 241000) between the VCI and the OBD-II connector, located under the driver's side of the instrument panel.



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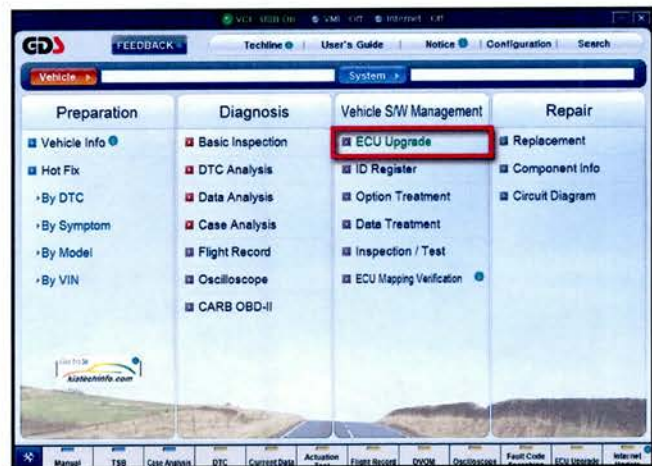
- 5. With the ignition key **ON**, turn ON the VCI and GDS tool. Access the GDS vehicle identification number (VIN) screen and configure the vehicle using the **VIN Auto Detect** function.

***NOTICE**
Ignition ON, (engine off) for push button start vehicles: Without depressing the brake pedal, push the start button twice.

- 6. Select **ENGINE** system and click **OK**.

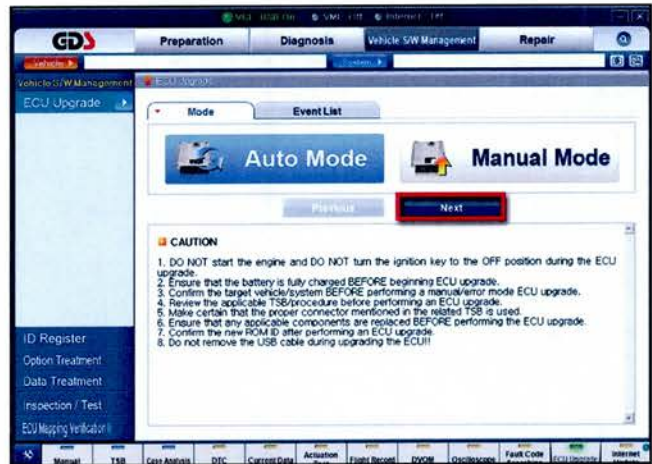


- 7. Select **ECU Upgrade**.



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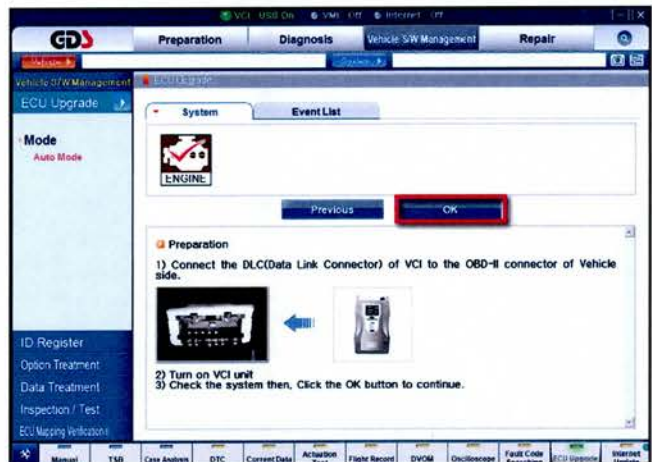
8. Select **Auto Mode**, then **Next**.



9. Select **Engine**, and click **OK**.

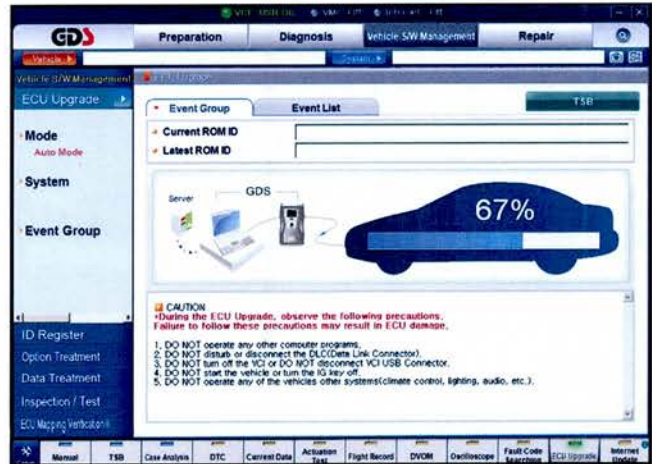


10. Select Upgrade Event: **206.SL T-GDI DTC(P2562/P2565) LOGIC IMPROVEMENT (ECM)**, then click **Upgrade** button and **OK** on battery voltage check screen.

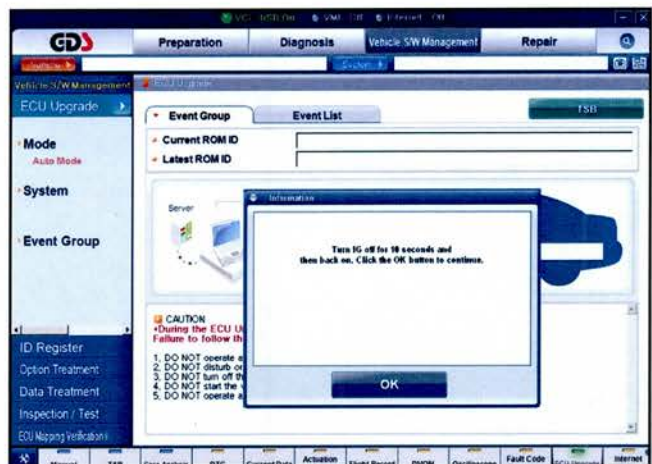


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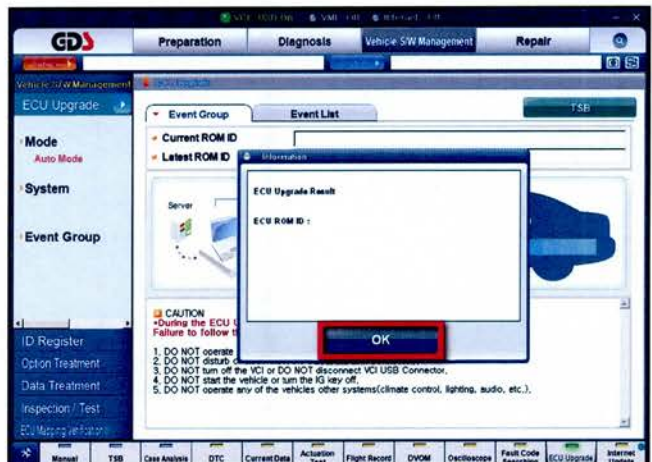
11. Upgrade will begin and the progress of the upgrade will appear on the bar graph.



12. Follow the guidelines displayed on the screen during upgrade procedure and make sure to cycle the ignition **OFF** ↔ **ON** one (1) time.

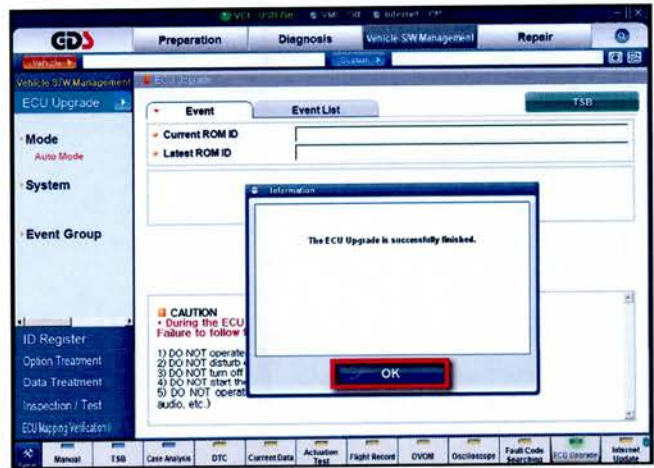


13. Review the ECM upgrade results and click **OK**.



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14. Click **OK** on the final screen. Upgrade event 206 is now complete.



⚠ CAUTION

Before attempting an ECM/PCM upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the ECM/PCM to become inoperative after the upgrade and any claims associated with this repair may be subject to chargeback.

*** NOTICE**

Do NOT attempt to perform a Manual Mode upgrade unless Auto Mode fails. Always follow the instructions given on the GDS tool in either Auto or Manual mode. See table for Manual Mode passwords.

MANUAL MODE ECM UPGRADE PASSWORDS:

DO NOT perform Manual Mode ECM upgrade unless Auto Mode fails.

Upgrade event #206:

MODEL YEAR	MENU	PASSWORD
2012	SL 2.0 T-GDI -IMMO : 39113/39114-2G861	2861
	SL 2.0 T-GDI +IMMO : 39113/39114-2G871	2871

1. Within the **ECM Upgrade** screen, select **Manual Mode** in the left column, select **Engine** and then select **Upgrade Event 206**. Select the appropriate control unit part number by referring to the ROM ID Information Table on Page 3 and click **OK**.
2. Enter the appropriate password from the table above, and then click **OK**.
3. Upgrade will begin and the progress of the upgrade will appear on the bar graph.

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- Following the guidelines displayed on the screen during upgrade procedure, cycle the ignition **OFF** ↔ **ON** a total of one (1) time.
- Review the ECM upgrade results and click **OK**.
- Click **OK** on the final screen. Upgrade Event 206 is now complete.

EWGA Inspection Procedure:

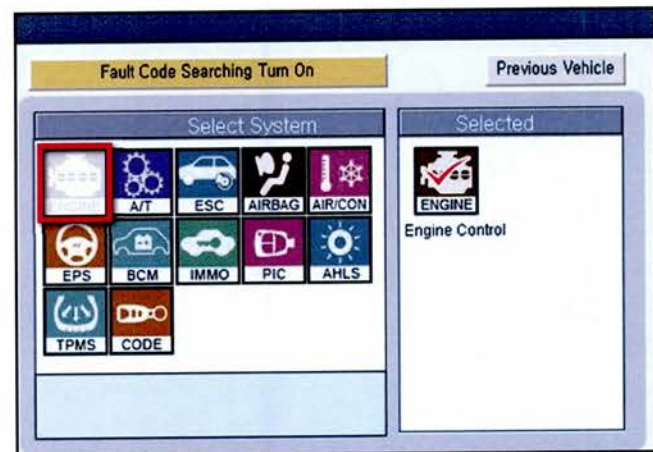
- Turn the ignition switch to the **OFF** position.

Connect the 16-pin DLC cable from the VCI into the vehicle's 16-pin connector under the driver side instrument panel.

Turn on the VCI and diagnostic terminal with the ignition key in the ON position. **NOTE: Do NOT start the engine.**

Choose VIN or Vehicle on the initial screen.

Enter vehicle information by pressing the **VIN Auto Detect** button; entering the VIN or selecting the vehicle model, model year, engine type, and **Engine Control** as the system, and then click **OK**.

***NOTICE**

The screens above are for demonstrative purposes only. Actual content on screens may vary by model.

- Without starting the engine, cycle the ignition **ON** for 5 seconds. Then, switch the ignition **OFF** for 5 seconds. Perform this step for a total of 5 cycles. After completing the 5 cycles, leave the ignition in the **ON** position to access **GDS Engine > Current Data**.

***NOTICE**

Do not start the engine. This is critical to read the correct adaptation value.

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3. Under **Current Data**, select “**Adaptation Value for the lower mechanical Stop of Boost Pressure**”.

Sensor Name	Value	Unit
<input checked="" type="checkbox"/> Battery Voltage	12.2	V
<input checked="" type="checkbox"/> Adaption Value for the Lower Mechanical Stop of Boost Pressur...	4.4	V
<input type="checkbox"/> Turbo Charger Boost Pressure	14	psi
<input type="checkbox"/> Voltage Value for Boost Pressure Actuator Position Control	4.2	V
<input type="checkbox"/> PWM of Digital Boost Pressure Actuator Control	0	%
<input type="checkbox"/> Wastegate Position	2	%
<input type="checkbox"/> Wastegate Position Setpoint	0	%
<input type="checkbox"/> Fuel Pressure	1913	psi

4. If the voltage is **less than or equal to 4.2V**, no adjustment will be needed.
If the voltage is greater than or equal to 4.3V; then adjust the EWGA rod length following the **EWGA ADJUSTMENT PROCEDURE** below.

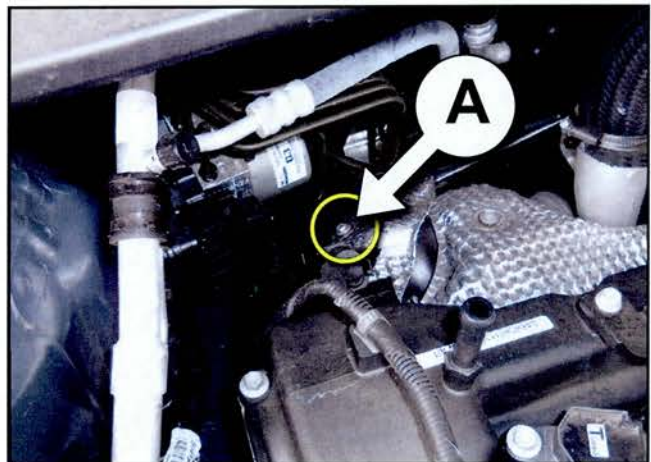
EWGA Adjustment Procedure:

1. Open the hood and support it securely.

WARNING

To avoid possible injury, allow the engine to cool down before performing the procedure.

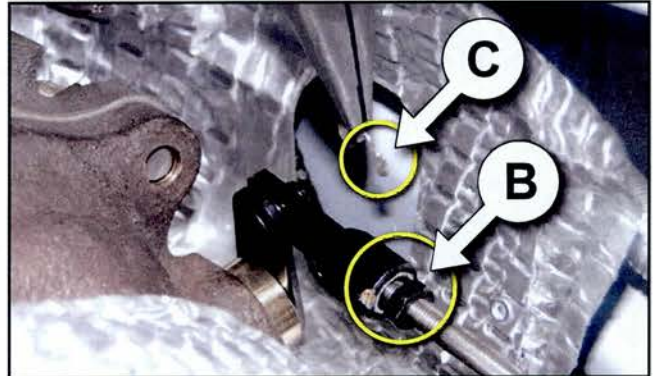
2. Remove the turbocharger upper heat shield bolt (A) and remove the heat shield.



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- Loosen the rod end lock nut (B) and remove the retaining clip (C).

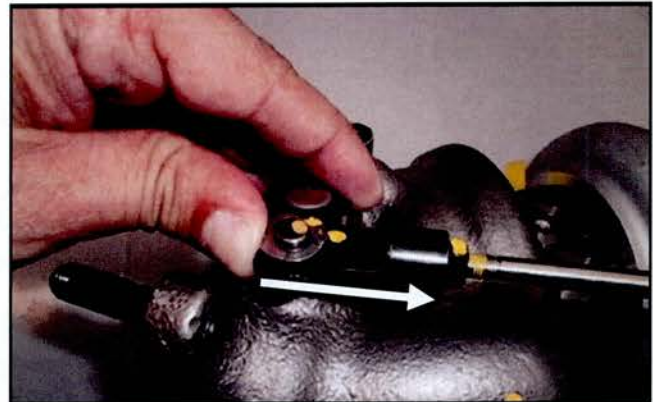


- Adjust the rod end by rotating it clockwise or counterclockwise until specification is within range. Then, temporarily install the rod end, tighten the rod end lock nut and check the "Adaptation Value for the lower mechanical stop of boost pressure" using GDS (See table below).



***NOTICE**

Verify the EWGA is in the fully closed position by applying pressure on the EWGA lever to accurately measure the output.



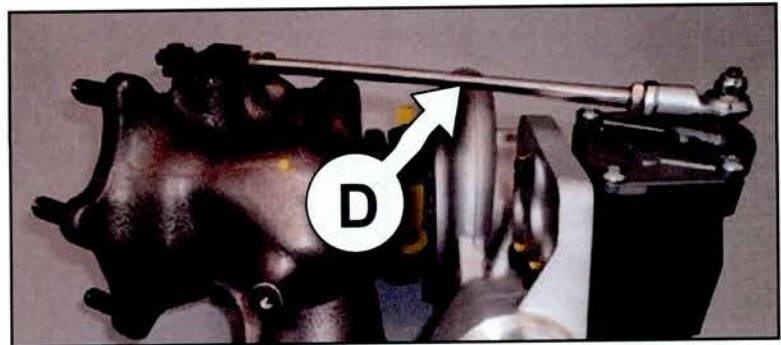
Specification: 4.2V (Cold Engine)		
Current Voltage	Rotate Rod End (CW)	Voltage After Adjustment
Current V ≤ 4.2V	No Adjustment Needed	4.2V
4.3 ~ 4.4V	½ Turn	4.1 ~ 4.2V
4.5V	1 Turn	4.1 ~ 4.2V
4.6 ~ higher	1 ½ Turn	4.1 ~ 4.2V

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***NOTICE**

After the adjustment is made, cycle the ignition OFF for 5 seconds and then ON for 5 seconds, without starting the engine. This must be completed a total of 5 times for the adaptation value to change. If this step is not completed, the voltage will not adapt as described in this bulletin. Adaptation values can only be changed by cycling the ignition key after the adjustment was performed.

- If unable to achieve proper voltage specification, it may be necessary to rotate the EWGA rod (D) in 1/2 turn increments, to achieve proper voltage.



- If the output voltage is not within specification, repeat step 4 until specification is within range.
- Reinstall heat shield and retaining clip by reversing the order of removal
- Clear any remaining DTCs and start the engine to confirm proper operation.

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Sportage (SL)	From May 20, 2011 to Jan. 17, 2012

WARRANTY CLAIM INFORMATION:

Claim Type	Causal P/N	Qty.	N Code	C Code	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty
V	39113 2G861	0	N69	C40	(SA 149) ECM Reflash & EWGA Adjustment	130042R0	0.5 M/H	N/A	0

***NOTICE**

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA149 when accessing the WebDCS system.