	GROUP	MODEL
	Engine	**2011-2012MY Sportage (SL) Turbo**
	NUMBER	DATE
	130 (Rev 1, 01/17/2014)	**July 2013**

TECHNICAL SERVICE BULLETIN

SUBJECT: ECM UPGRADE – REFLASH AND EWGA ADJUSTMENT PROCEDURE (SA 149)

* NOTICE

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

On some Sportage (SL) vehicles, produced from May 1, 2011 to January 1, 2012, the Malfunction Indicator Light (MIL) may illuminate with DTC P2562 and/or P2565. Inspect the voltage value for boost pressure actuator position control, using GDS. If the voltage is not within specified value, follow the service procedure outlined below to adjust the Electronic Waste Gate Actuator (EWGA) rod length. To ensure maximum customer satisfaction, Kia is requesting the completion of this Service Action on all affected vehicles. For confirmation that the latest reflash has been done to a vehicle you are working on, verify ROM ID using the tables in this TSB.

- **P2562** - Turbocharger Boost Control Position Sensor 'A' Circuit Range / Performance
- **P2565** - Turbocharger Vane Position Sensor Circuit High Voltage

* 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 Advisors** ☒ **Technicians** ☒ **Body Shop Manager** ☒ **Fleet Repair**

SUBJECT: ECM UPGRADE – REFLASH AND EWGA ADJUSTMENT PROCEDURE (SA 149)

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 Mode" during charging. DO NOT connect any other battery charger to the vehicle during ECM/PCM upgrade.**
- **All ECM/PCM upgrades must be done with the ignition in the 'ON' position.**
- **Be careful not to disconnect any cables connected to the vehicle or GDS during the ECM/PCM upgrade procedure.**
- **DO NOT start the engine during ECM/PCM upgrade.**
- **DO NOT turn the ignition '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 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 TABLES :

Upgrade event #206

MODEL	IMMO	ECM P/No	ECM P/N		REMARK
			PREVIOUS	NEW	
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

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.

★ NOTICE

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

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

★ NOTICE

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

3. Connect the Main 16-pin DLC cable (GHDM – 241000) to the VCI.

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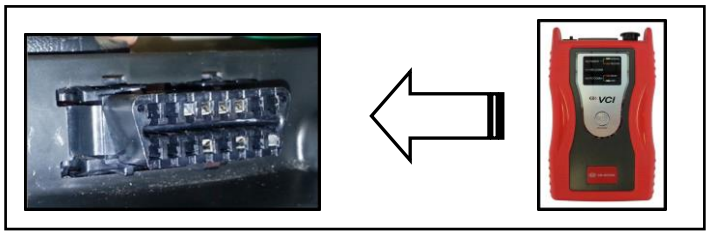
4. Connect the Main 16-pin DLC cable (GHDM – 241000) to the OBD-II connector, located under the driver's side of the instrument panel.



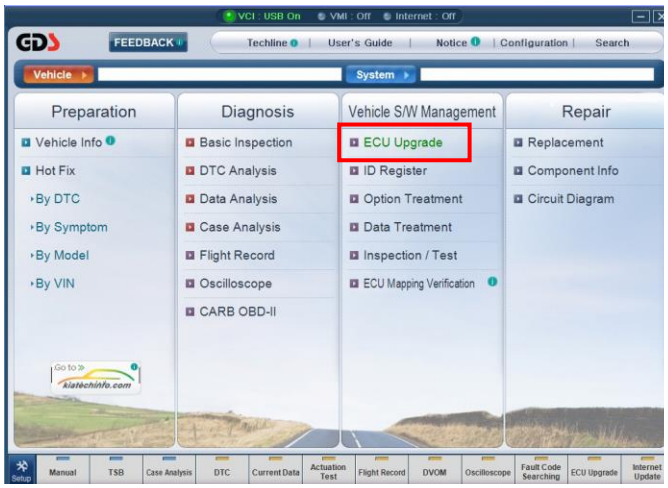
5. With the ignition key **ON**, turn on the VCI and GDS . Access the GDS vehicle identification number (VIN) screen and configure the vehicle using the **VIN AUTO DETECT** Function.

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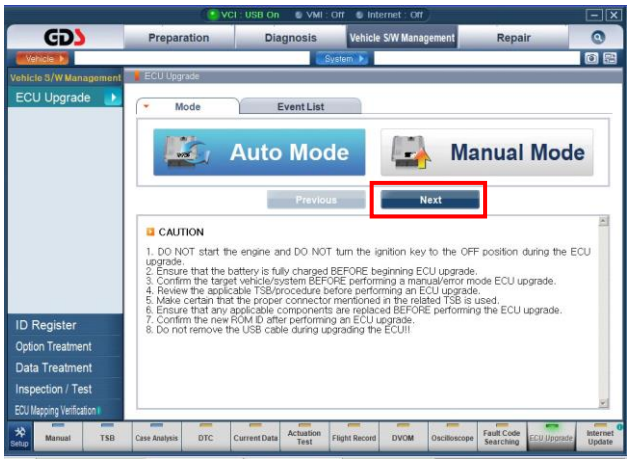
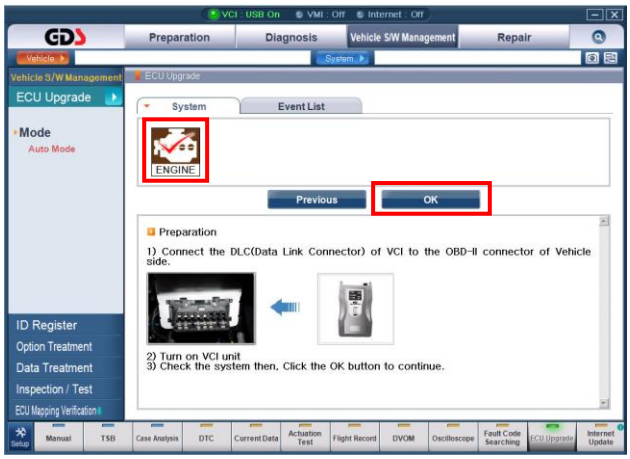
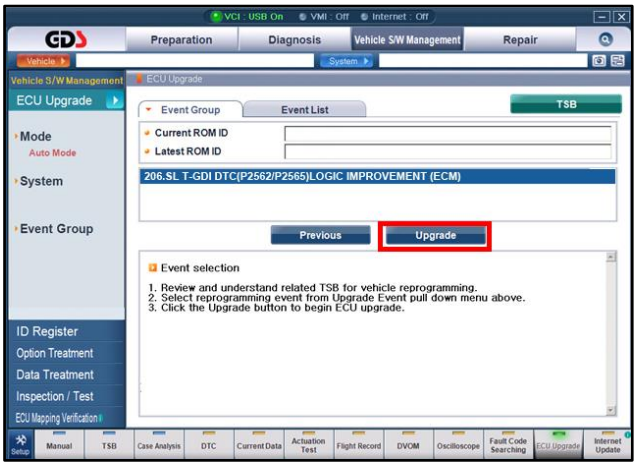
8. Select **Auto Mode**, and then **Next**.



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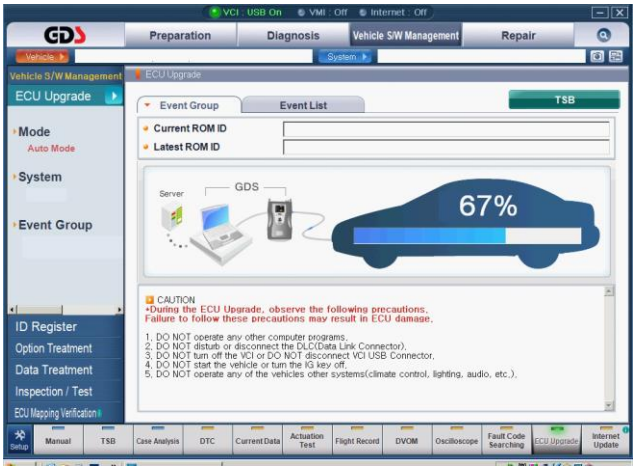
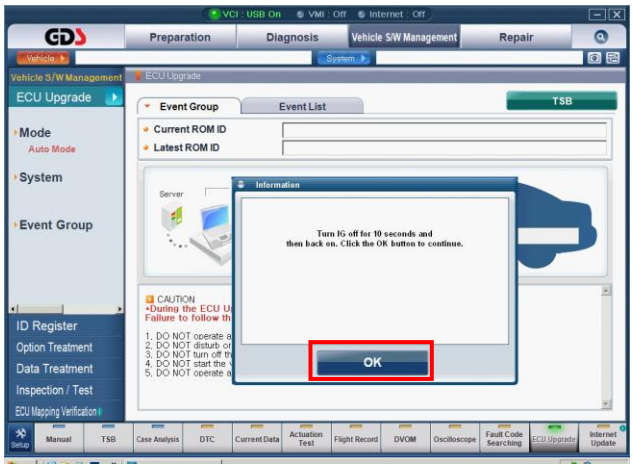
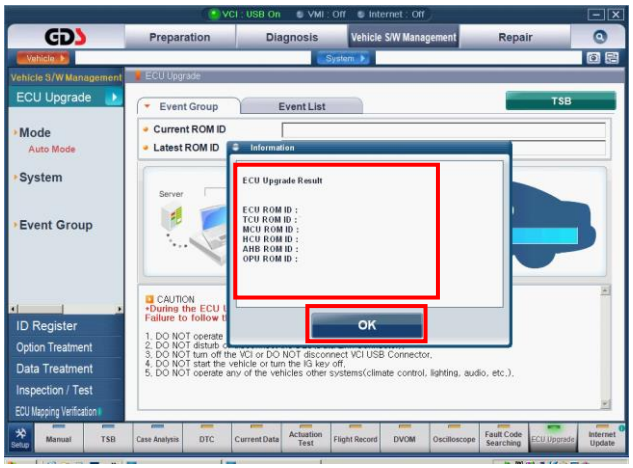
11. Upgrade will begin and the progress of the upgrade will appear on the bar graph.



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



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



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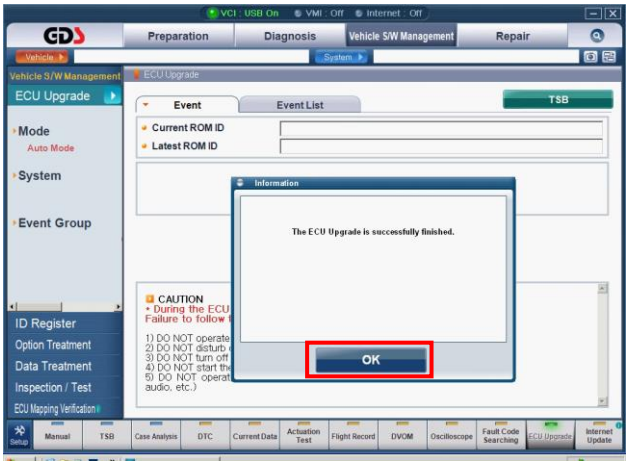
14. Click **OK** on the final screen. Upgrade event 206 is now complete.



⚠ CAUTION

Before attempting an ECM 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 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 in either Auto or Manual mode. See table for Manual Mode passwords.

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*** MANUAL MODE ECM UPGRADE PASSWORDS:**

*** Do NOT perform Manual Mode ECM upgrade unless Auto Mode fails.**

Upgrade event #206

Year	MENU	PASSWORD
12MY	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.
4. Following the guidelines displayed on the screen during upgrade procedure, cycle the ignition **OFF** ↔ **ON** one (1) time.
5. Review the ECM upgrade results and click **OK**.
6. Click **OK** on the final screen. Upgrade event 206 is now complete.

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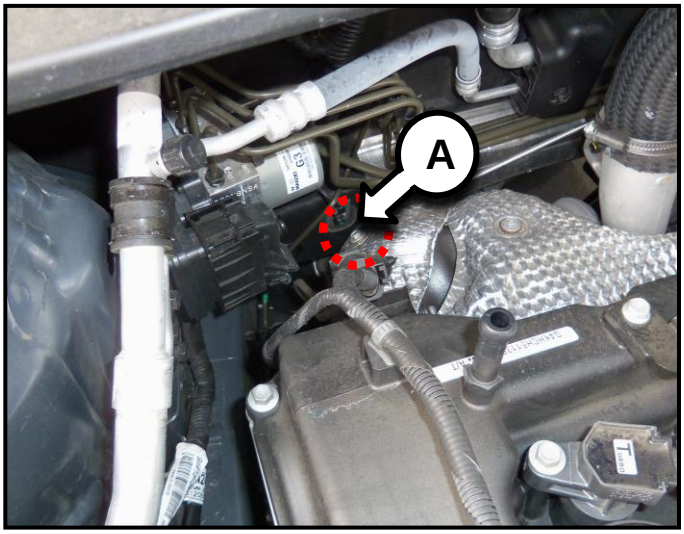
EWGA Adjustment Procedure:

1. Open the hood and support it securely.

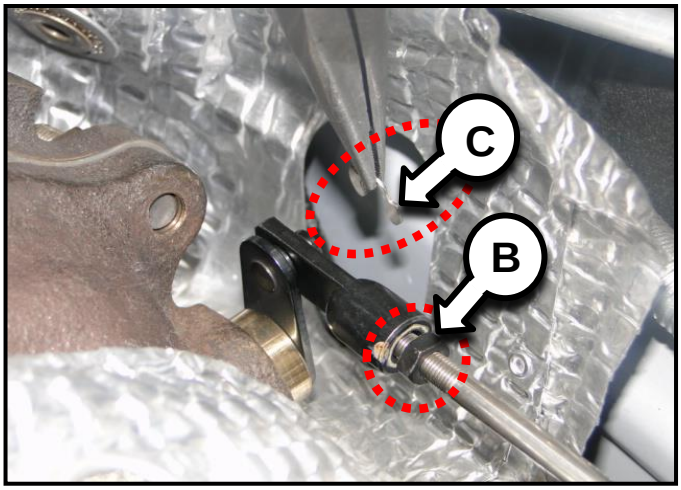
WARNING

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

2. Remove the turbocharger upper heat shield bolt (A) to allow for access to the EWGA rod attachment point.



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



*** NOTICE**

Be careful not to drop the retaining clip during removal.

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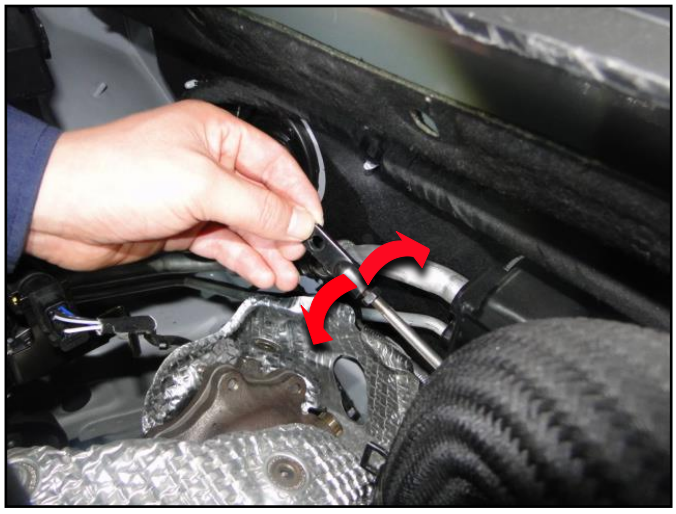
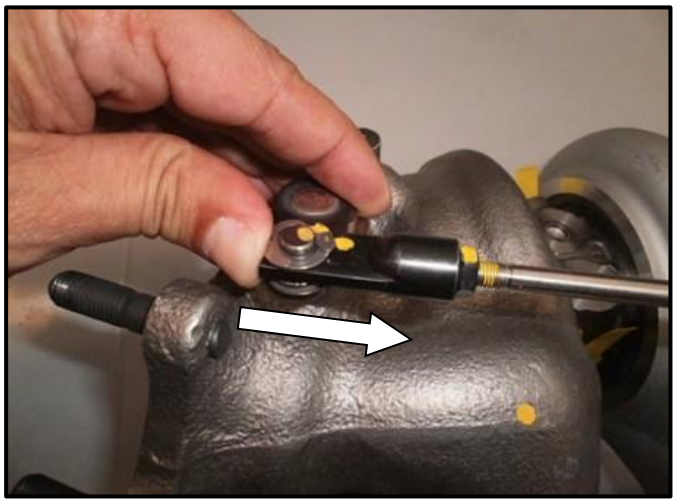
4. Adjust the rod end by rotating it clockwise or counterclockwise until specification is within range (See Tables A and B below). Then, temporarily install the rod end and tighten the rod end lock nut. Check the **Adaptation Value for the Lower Mechanical Stop of Boost Pressure**, using GDS.



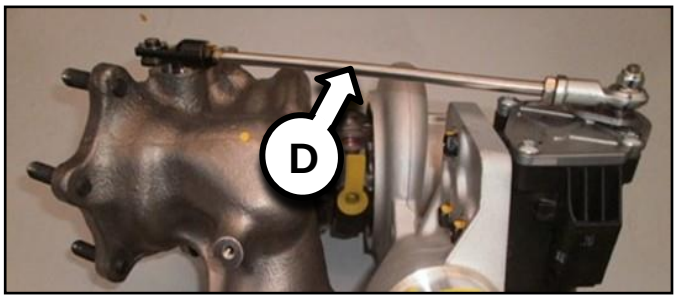
After an adjustment is made, and without starting the engine, cycle the ignition OFF for 5 seconds and then turn the ignition ON for 5 seconds. This must be completed a total of 5 times for the 'Adaption Value' to change. If this step is not completed, the voltage will not adapt as described in this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



✶ NOTICE

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

Specification: 4.1V (Cold Engine)



If unable to achieve proper voltage, it may be necessary to rotate the EWGA rod (D) to achieve proper voltage.

Table A

Coolant Temperature	Target Voltage
105.8 ~ 140°F (41 ~ 60°C)	3.80 ~ 4.00V
78.8 ~ 104°F (26 ~ 40°C)	3.85 ~ 4.05V
< 77°F (25°C)	3.90 ~ 4.10V

Table B

Rotate Rod (CW)	Estimated Voltage Change
½ Turn	0.15 ~ 0.20 V
1 Turn	0.30 ~ 0.40 V

5. If the output voltage is not within specification, repeat step 3 in EWGA adjustment procedure until specification is within range.

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6. Once the voltage is within specifications, install the c-clip to rod end and tighten the lock nut.
7. Cycle the key five (5) times as noted in step 4 and confirm the voltage reading of the Adaptation Value for the Lower Mechanical Stop is within specification.
8. Install all other components by reversing the order of removal.
9. Test drive the vehicle to confirm proper operation.

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Sportage (SL)	From May 1st, 2011 to January 1st, 2012

WARRANTY CLAIM INFORMATION:

Claim Type	Causal P/N	Qty	N Code	C Code	Repair Desc.	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.