	GROUP	MODEL
	Engine	**2012MY Optima (QF)**
	NUMBER	DATE
	138	**January 2014**

TECHNICAL SERVICE BULLETIN

SUBJECT: SERVICE ACTION: OPTIMA (QF) EWGA INSPECTION AND ADJUSTMENT (SA119A)

On some Optima (QF) vehicles with a 2.0 T-GDI engine produced from start of production to December 13, 2011, the Malfunction Indicator Light (MIL) may illuminate with DTC P2562 and/or P2565. Inspect the voltage value for boost pressure actuator position control by 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 2012MY Optima turbo equipped vehicles.

- **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 SA119A.

File Under: <Engine>

Circulate To: ☒ **General Manager** ☒ **Service Manager** ☒ **Parts Manager**

☒ **Service Advisor(s)** ☒ **Technician(s)** ☒ **Body Shop Manager** ☐ **Fleet Repair**

SUBJECT: SERVICE ACTION: OPTIMA (QF) EWGA INSPECTION AND ADJUSTMENT (SA119A)

Inspection Procedure:

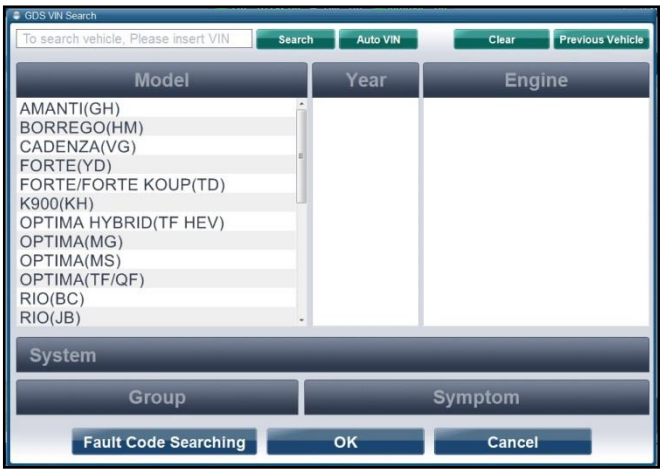
1. Turn the ignition switch to OFF position.

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

   Turn on the VCI and GDS with the ignition in the ON position.

   NOTE: Do <u>NOT</u> start the engine.

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





2. **<u>Without starting the engine</u>**, cycle the ignition ON for 5 seconds then ignition OFF for 5 seconds. Repeat this step for a total of 5 cycles leaving the ignition in the **ON** position to access GDS **Engine** > **Current Data**.

★ NOTICE

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

3. Under **Current Data**, select **Adaptation Value for the Lower Mechanical Stop of Boost Pressure** and **Coolant Temperature**.



4. Inspect the voltage reading and refer to Table A (below) for target voltages based on engine coolant temperature.

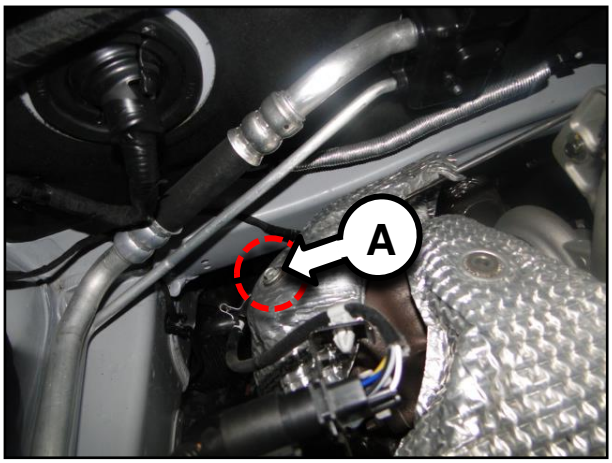
   If the voltage is not within the voltage ranges on Table A; then adjust the EWGA rod length following the **EWGA ADJUSTMENT PROCEDURE** below.

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

EWGA Adjustment Procedure:

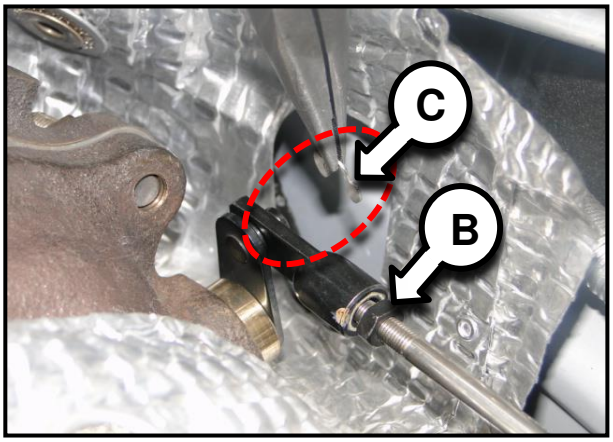
1. Open the hood and remove bolt (A) to allow for access to the EWGA rod attachment point.



⚠ WARNING

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

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



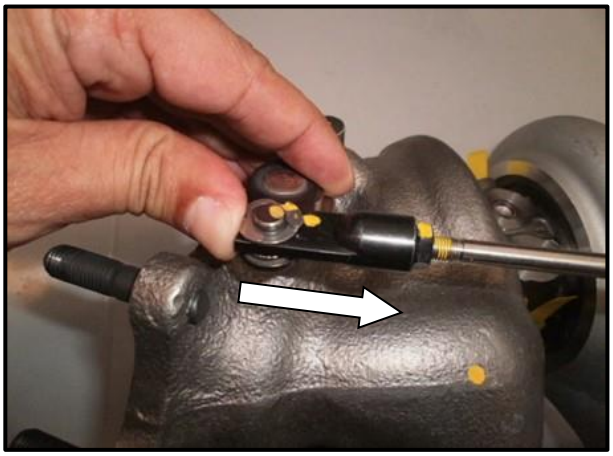
✶ NOTICE

Be careful not to drop the retaining clip during removal.

3. 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.

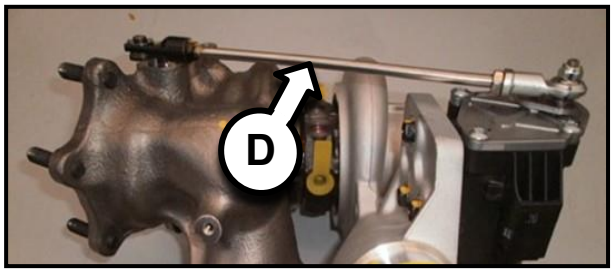


Table A

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

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

5. Once the voltage is within specifications, install the c-clip to rod end and tighten the lock nut.
6. Cycle the key five (5) times as noted in step 3 and confirm the voltage reading of the Adaptation Value for the Lower Mechanical Stop is within specification.
7. Install all other components by reversing the order of removal.
8. Test drive the vehicle to confirm proper operation.

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Optima (QF)	Start of production to December 13, 2011

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	39400 2G700	0	N69	C40	(SA119A) QF T-GDI EWGA Voltage Check	140A01R0	0.2 M/H	N/A	0
		0			(SA119A) QF T-GDI EWGA Voltage Check/Adjust	140A14R1	0.4 M/H		0

★ NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA119A when accessing the WebDCS system.