

	GROUP Engine	MODEL 2011-2012MY Sportage (SL) Turbo
	NUMBER PS240	DATE March 2013
		
SUBJECT: EWGA INSPECTION AND ADJUSTMENT PROCEDURE		

On some Sportage (SL) vehicles equipped with 2.0 T-GDI engines, the Malfunction Indicator Lamp (MIL) may illuminate with a stored, or active, P2562 DTC - Turbocharger Boost Control Position Sensor 'A' Circuit Range / Performance. In some instances, the voltage reading for the closed throttle wastegate actuator may be too high or too low and may need to be adjusted. If you encounter a vehicle with this DTC and you have completed the diagnostic test procedures according to KGIS, then follow the adjustment procedure outlined in this article to resolve the concern.



Turbo and Boost Pressure
Actuator Assembly

Inspection Procedure:

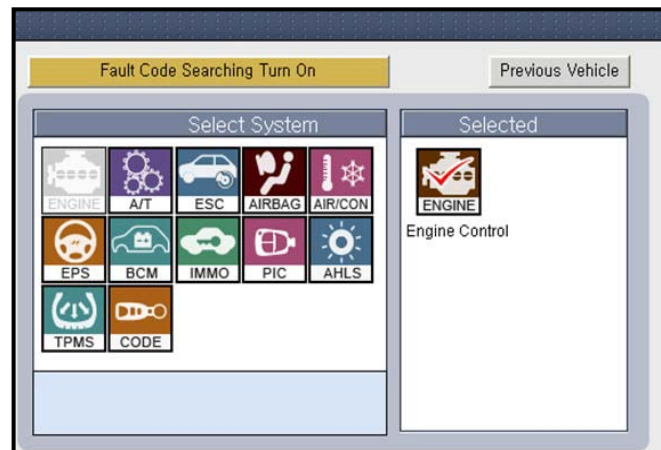
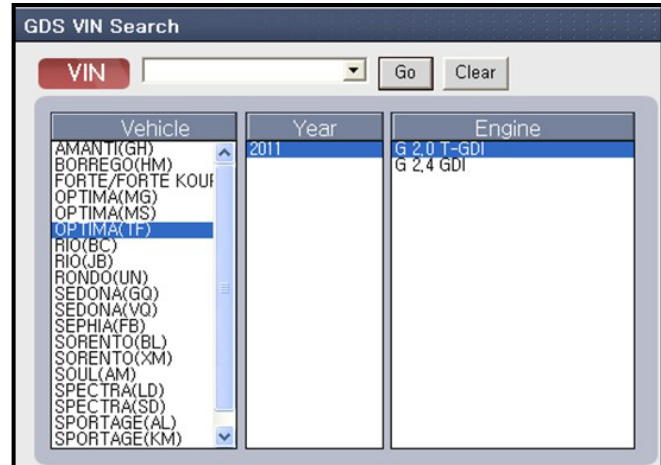
1. Turn the ignition switch to **OFF** position.

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

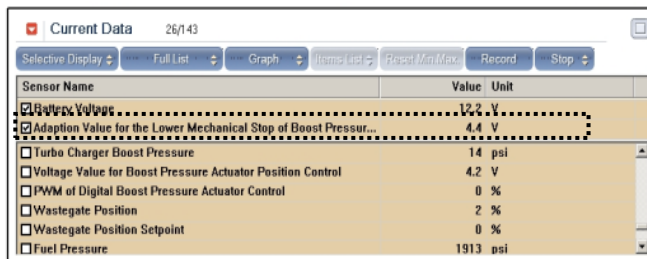
The screens above are for demonstrative purposes only. Actual content on screens may vary by model.

2. 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.

- 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 Pressure	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

- 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.

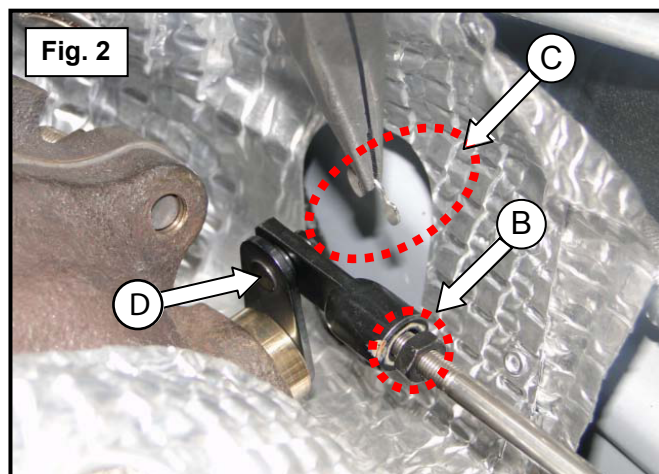
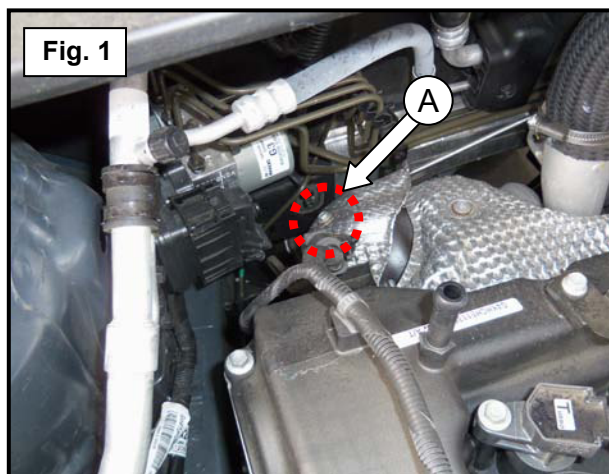
EWGA Adjustment Procedure:

- Open the hood and support it securely.

WARNING

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

- Remove the turbocharger upper heat shield bolt (A) and remove the heat shield (Fig. 1).
- Loosen the rod end lock nut (B), remove the retaining clip (C) and retaining pin (D) (Fig. 2).



- Adjust the rod end by rotating it clockwise or counterclockwise until specification is within range (Fig 3). 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).



Fig. 3

*** NOTICE**

The EWGA must be in the fully closed position while applying pressure on the EWGA lever to accurately measure the output (Fig. 4).

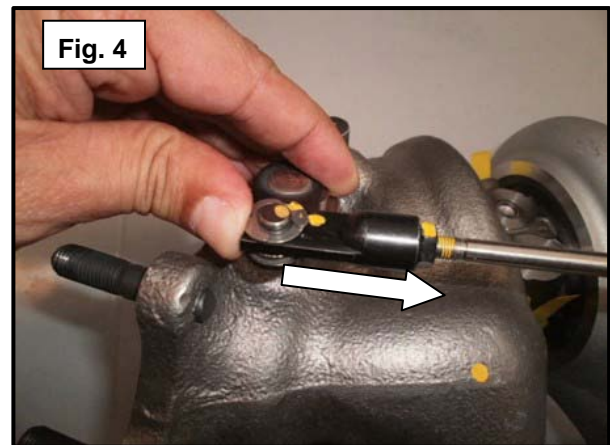


Fig. 4

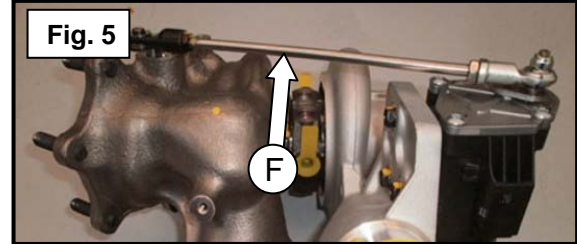
Specification: 4.2V (Cold Engine)

Current Voltage	Rotate Rod End (CW)	Voltage After Adjustment
Current $V \leq 4.2V$	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

*** NOTICE**

After an adjustment is made 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 adaptation value to change. If this step is not completed, the voltage will not adapt as described in this pitstop. Adaptation values can only be changed by cycling the ignition key after the adjustment was performed.

5. If unable to achieve proper voltage specification, it may be necessary to rotate the EWGA rod (F), in $\frac{1}{2}$ turn increments, to achieve proper voltage (Fig 5).



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

*** NOTICE**

The procedure above may also be used when EWGA replacement is required.