(KIN)	GROUP TRANS	MODEL All Models w/6-speed A/T		
	NUMBER 049	DATE <b>May 2013</b>		
TECHNICAL SERVICE BULLETIN				
SUBJECT: 6-SPEED A/T TRANSMISSION ADAPTIVE VALUES RESET/RELEARN				

This bulletin provides the procedures necessary to reset and relearn the adaptive values after transmission replacement or reprogramming/replacement of the ECM/PCM. After the adaptive values are reset, the transmission computer adaptive values must be relearned by driving in a precise manner to "teach" the computer the proper solenoid duty and line pressure for the new transmission/computer combination.



## AFFECTED MODELS:

YEAR	Model	Engine
2011>	Optima (TF & QF)	2.0L Theta II & 2.4L Theta II
2011>	Optima Hybrid (TF HEV)	2.4L Theta II (Hybrid)
2011>	Sorento (XMa)	2.4L Theta II & 3.5L Lambda II
2012>	Soul (AM)	1.6L Gamma GDI & 2.0L Nu
2011>	Sportage (SL)	2.0L Theta II & 2.4L Theta II
2011>	Sedona (VQ)	3.5L Lambda II
2011>	Forte (TD) Sedan, Koup & 5-Door	2.0L Theta II & 2.4L Theta II
2012>	Rio (UB) 4 and 5 door	1.6L Gamma GDI
2014>	Forte (YD)	1.8L Nu MPI & 2.0L Nu GDI

## File Under: <Transmission>

Circulate To: X General Manager

X Service Manager

X Parts Manager

X Service Advisor(s) Technician(s)

X Body Shop Manager X Fleet Repair

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## I. RESET PCM/TCM ADAPTIVE VALUES USING GDS:

 Connect a GDS unit. Select VIN, then select A/T menu.

Select "OK".



2. At the main screen, select "Option Treatment".



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3. Select "Resetting Auto T/A Values".

VCI : WLAN On S VMI : Off S Internet : Off					
GD	Preparation	Diagnosis	Vehicle S/W Mana	gement Repa	r O
Vehicle RIO(UB)/2013/G 1.6 GDI System N Transmission/Automatic Transaxle					0 2
Vehicle 3/W Management	Vehicle SAV Managemer	t.			8
ECU Upgrade	ID Register				
ID Register	System Identi	fication			
Option Treatment					
Data Treatment 🏾 🕑	Data Treatment				
Resetting Auto T/A Value	Resetting Aut	o T/A Values			
4>					
Inspection / Test					
ECU Mapping Verification					
Manual TSB	Case Analysis DTC Cu	Actuation Test	Flight Record DVOM	Oscilloscope Fault Code Searching	ECU Upgrade Internet

4. Follow the on-screen instructions, then select "**Reset**".



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## **II. RELEARN ADAPTIVE VALUES**

- 1. Select the Diagnosis Tab, then open Current Data.
- Select the check boxes for Throttle Position Sensor and Oil Temperature Sensor.
- 3. Select the Graph Tab.

VCI : WLAN On VMI : Off Internet : Off						L 🗵	
GD)	Preparation	Diagnosis	Vehicle S	S/W Management	Repa	ir	0
Vehicle > RIO(UB)/20	13/G 1.6 GDI		System 🕨 Tra	ansmission/Autom	atic Transaxle		•
Diagnosis	Current Data						
Basic Inspection	Selective Display 🗘 🛛 Fu	ll List 🗧 Graph 🗘	tems List ¢	Reset Min.Max R	ecord Stop 🕻	Grouping	/\$\$
DTC Analysis	Concor Namo	_	-		alua Unit		
Data Analysis	<ul> <li>Throttle Position Sense</li> <li>Oil Temperature Sense</li> </ul>	or Angle or			2.0 % 95 F		
Oli Temperature Sensor     General Information     Scantool Diagnostics     W/Harness Inspection     Component Inspection     Verification of Vehicle	Input Speed(PG-A) Output Speed(PG-B) Shift Lever Switch Current Gear Next Gear Poolition Engine RPM Gear Ratio Shift Control Solenoid	Valve A(UD/B) Valve B(2.6/B) Valve C(35R/C) Valve D(0D/C) Valve E(SS-A) Valve E(SS-B)			539         RPM           0         RPM           P         -           1         -           662         RPM           0.0         -           850         mA           50         mA           50         mA           60         mA           60         -           60         -           60         -           850         mA           60         mA           60         -           60         -		
X	Pressure Control Soler     Torque Converter Clute     Torque Converter Clute     Torque Converter Clute     Torque Converter Clute	toid Valve(VFS) "A" ch Solenoid Valve ch Control State ch Slip			680 mA 50 mA 0FF - 123 RPM		
Case Analysis	Vehicle Speed Engine Torgue				0 MPH 3.1 %		_
Flight Record	Sports Mode Select				OFF -		
Oscilloscope	Sports Mode Down Sw Caccelerator Pedal Posi	itch ition Sensor			OFF - 0.0 %		
CARB OBD-II	Brake Switch				OFF -		×
Sehin Manual TSB	Case Analysis DTC	Current Data Actuation Test	Flight Record	DVOM Oscilloso	ope Fault Code Searching	ECU Upgrade	Internet Update

 Use the Graph Screen to monitor Throttle Position Sensor Angle and Oil Temperature Sensor data while performing the Dynamic Test (Step 5).



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#### 5. Dynamic Test

- Request an assistant to monitor the graph data on GDS (Step 4).
- Drive the vehicle until the ATF temperature is between 86°F ~ 203°F (30°C ~ 95°C)
- Ensure that traffic conditions are safe to conduct this portion of the Dynamic Test. Ensure that vehicle is *not* in Sport Mode. Accelerate from a stop in "D" ("Drive" mode), and maintain 10~20% APS while the transmission shifts through gears 1-2-3-4-5-6. Next, decelerate slowly to a stop without applying the brakes or with very little brake application, only when safe to do so.

## Repeat this step a total of 5 times.

# \*NOTICE

Follow these safety precautions and criteria while conducting the Dynamic Test:

- Select a route that will allow you to SAFELY perform the procedure, without interfering with traffic.
- Avoid abruptly lifting off or heavily depressing the throttle pedal while the transmission shifts through the gears.
- Avoid heavy brake application, as this may result in an incorrectly performed relearn procedure.
- 6. Static Test
  - **Safely** bring vehicle to a stop. With the engine and transmission still at full operating temperature, the gear selector in Drive (**"D"**), confirm idle speed is below 700 RPM, then perform the following sequence:

Move shift lever to "**P**", then to "**R**" $\rightarrow$ "**N**" $\rightarrow$ "**D**" $\rightarrow$ "**N**" $\rightarrow$ "**R**" $\rightarrow$ "**P**", remaining in each gear for 3~5 seconds. <u>*Repeat this sequence a total of 5 times*</u>.

7. Confirm the transmission shifts smoothly prior to releasing the vehicle to the customer.

## WARRANTY CLAIM INFORMATION:

# \*NOTICE

Use Op Code 95440A00 (0.6 M/H) with the transmission replacement or ECM/PCM replacement / reflash claim.