



HYUNDAI Technical Service Bulletin

Group	ENGINE ELECTRICAL
Number	04-36-004
Date	APRIL, 2004
Model	2001-2003 ELANTRA

Subject

2001-2003 ELANTRA ECM REPROGRAMMING FOR WARM AMBIENT COLD START STUMBLE (WACSS) AND ENGINE HESITATION AT APPROXIMATELY 3800 RPM

DESCRIPTION:

Some 2001-2003 MY Elantra vehicles may experience one or both of the following symptoms:

1. Warm ambient cold start stumble (WACSS). When the weather is hot and humid, the engine may hesitate for a short time after an initial cold start (typically, the first start in the morning).
2. Engine hesitates at 3800 to 4000 rpm.

This bulletin describes a procedure for updating the Engine Control Module (ECM) to correct the above conditions by using the Hi-Scan Pro.

VEHICLES AFFECTED:

- Model: 2001-2003 ELANTRA vehicles
- Affected vehicle production date range:
 - 4 Door: Produced through June 14, 2003
 - 5 Door: Produced through June 10, 2003

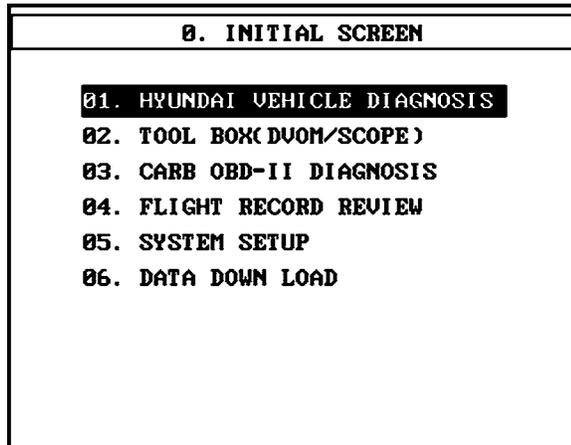
ECM REPROGRAMMING SPECIFICATIONS:

MODEL	AFFECTED ECM P/N	ECM ID		REMARKS	PASSWORD
		PREVIOUS	NEW		
2001-2003 Elantra	39109-23020	J1NOSHOA J1NOSJOA J1NOSJ4A	J1NOSJ4C	2001 MY, NLEV	3020
	39109-23021	J2NOSK2A	J2NOSK2C	2002 MY, NLEV	3021
	39109-23022	J3NOSK4A	J3NOSK4C	2003 MY, NLEV	3022
	39109-23030	J1COSHOA J1COSJOA J1COSJ4A	J1COSJ4C	(California), 2001 MY, ULEV	3030
	39109-23031	J2COSK2A	J2COSK2C	(California), 2002 MY, ULEV	3031
	39109-23032	J3COSK4A	J3COSK4C	(California), 2003 MY, ULEV	3032

ERASING ECM ADAPTATION VALUES BEFORE REPROGRAMMING:

Before reprogramming the ECM, first erase ECM adaptation values by following the procedure below:

1. Using the Hi-Scan Pro with the SOL System Card Installed, choose the HyundaiDiagnostic Menu.





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2. Choose the correct model.

1. HYUNDAI VEHICLE DIAGNOSIS	
01. ACCENT	ALL
02. ELANTRA	ALL
03. SONATA	ALL
04. SANTAFE	ALL
05. TIBURON	ALL
06. XG 300/350	ALL
07. EXCEL	ALL
08. SCOUPE	ALL

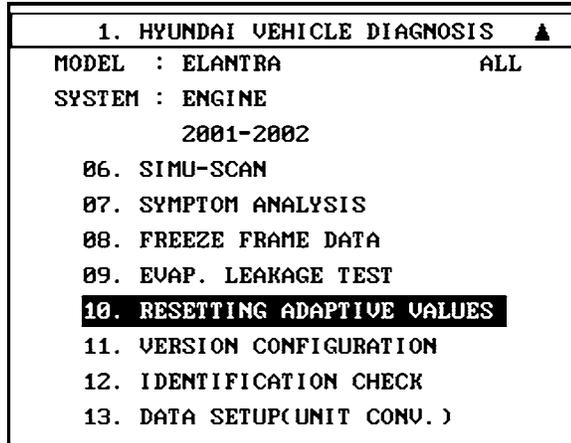
3. Choose the engine menu.

1. HYUNDAI VEHICLE DIAGNOSIS	
MODEL : ELANTRA	ALL
01. ENGINE	
02. AUTOMATIC TRANSAXLE	
03. ANTI-LOCK BRAKE SYSTEM	
04. SRS-AIRBAG	
05. CRUISE CONTROL(~2000)	
06. TRACTION CONTROL SYSTEM	
07. TRANSMITTER CODE SAVING	

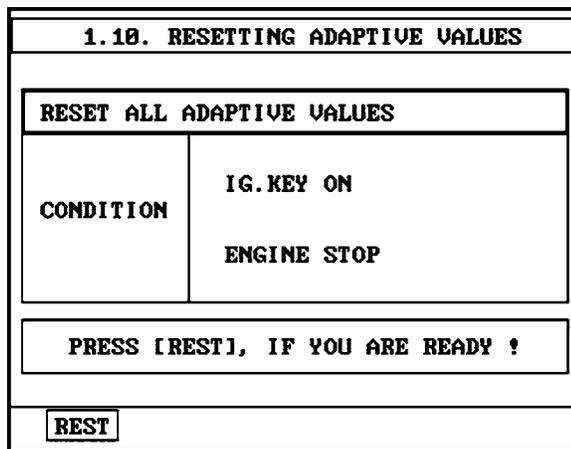
4. Choose the correct model year.

1. HYUNDAI VEHICLE DIAGNOSIS ▼	
MODEL : ELANTRA	ALL
SYSTEM : ENGINE	
01. 2004	
02. 2003(SULEV)-	
03. 2003(NO SULEV)-	
04. 2001-2002	
05. 1999-2000	
06. 1998	
07. 1997	
08. 1996	

- Choose menu number 10 for "RESETTING ADAPTIVE VALUES."



- With the key in the "ON" position and the engine not running, press the F1 button to reset the adaptation values.



CAUTIONS DURING REPROGRAMMING:

- Conduct reprogramming with the ignition key in the "ON" position.
- Be careful not to disconnect any cables connected to the vehicle or Hi-Scan Pro during reprogramming.

WARNING: If reprogramming is interrupted, the manual update procedure must be used.

- Do not start the engine during reprogramming.
- Do not turn the ignition key off during reprogramming.
- When the reprogramming is completed, turn off the ignition key for 20 seconds before starting the engine.

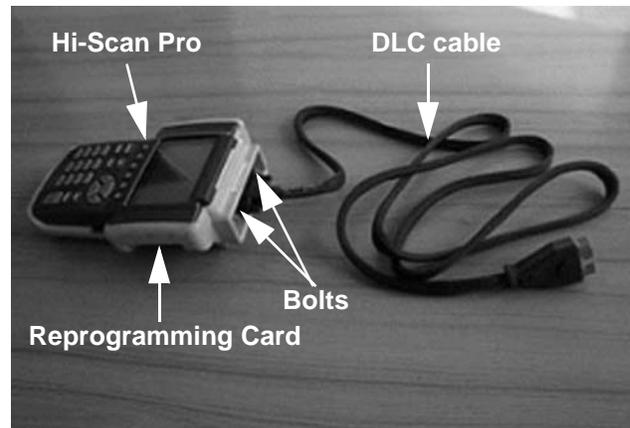


REPROGRAMMING PROCEDURE:

NOTE: Verify that the vehicle is affected by identifying the vehicle production date.

AUTOMATIC UPDATE PROCEDURE:

1. Install the Data Link Connector (DLC) cable to the Hi-Scan Pro main body and tighten the 2 bolts securely.
2. Remove the current software card from the Hi-Scan Pro and insert the reprogramming software card with the new ECM program into the Hi-Scan Pro top slot.



3. Plug the DLC cable from the Hi-Scan Pro into the data link connector (16 pin connector) under the driver's side instrument panel.



4. Turn the ignition to the **ON** position.
5. Turn the Hi-Scan Pro **ON** and press **ENTER**.

6. Select option “36. XD 2.0 WACSS & HESITATION IMPROV.” and press ENTER.

CAMPAIGN SELECTION
31. LC 00-02MY COLD STUMBLE&02MY P01 16
32. EF 2.5&2.7 TIO2S HEATING IMPROVEMENT
33. SM 2.7 TIO2S HEATING IMPROVEMENT
34. GK 2.7 TIO2S HEATING IMPROVEMENT
36. XD 2.0 WACSS & HESITATION IMPROV.

7. Select option “01. XD 2.0 WACSS & HESITATION [AUTO MODE]” and press ENTER.

RE-PROGRAMMING
01. XD 2.0 WACSS & HESITATION [AUTO MODE]
02. XD 2.0 WACSS & HESITATION [ERROR MODE]

8. Enter “1229” as the password for automatic update mode and press ENTER.

RE-PROGRAMMING
01. XD 2.0 WACSS & HESITATION [AUTO MODE]
02. XD 2.0 WACSS & HESITATION [ERROR MODE]
ENTER YOUR PASSWORD : 1229



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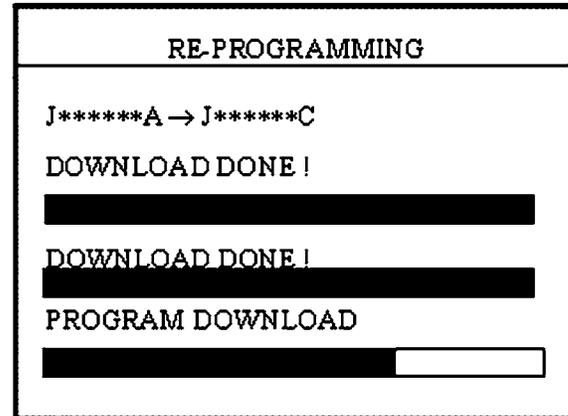
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9. The Hi-Scan Pro will establish communication and check the ECM ID. The Hi-Scan Pro will reprogram the ECM automatically.

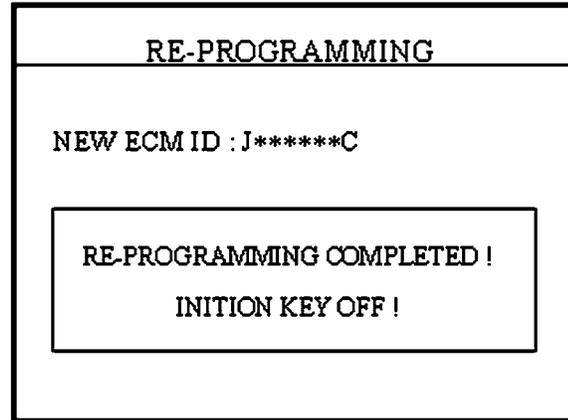


NOTES:

- The Hi-Scan Pro detects the current ECM ID (affected) and assigns the new ECM ID (target) and displays them on the Hi-Scan Pro screen.
- If the Hi-Scan Pro does not download the program, use the Manual Update Procedure following this section.
- Check the ECM IDs displayed on the Hi-Scan Pro screen to verify that the correct ECM software is being downloaded by referring to the “ECM Specifications Table” shown on page 2 of this bulletin.

WARNING: Do not interrupt the reprogramming at any time. The ECM will be rendered inoperative if the program does not download completely.

10. When the “**REPROGRAMMING COMPLETED**” message is displayed, the ECM reprogramming process is complete.



11. Turn the ignition to the OFF position for 20 seconds and then start the engine and check for proper operation.
12. Check for diagnostic trouble codes using the Hi-Scan Pro with the system software card. Erase all trouble codes.



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MANUAL UPDATE PROCEDURE:

NOTE: In the event that option “01. XD 2.0 WACSS & HESITATION [AUTO MODE]” fails to download the new ECM program, option “02. XD 2.0 WACSS & HESITATION [ERROR MODE]” must be used.

NOTE: Confirm all connections are established as shown in the “AUTOMATIC UPDATE PROCEDURE” before continuing.

1. Turn the ignition to the **ON** position.
2. Turn the Hi-Scan Pro **ON** and press **ENTER**.
3. Select option “**36. XD 2.0 WACSS & HESITATION IMPROV.**” and press **ENTER**.

CAMPAIGN SELECTION
31. LC 00-02MY COLD STUMBLE&02MY P0116
32. EF 2.5&2.7 TiO2S HEATING IMPROVEMENT
33. SM 2.7 TiO2S HEATING IMPROVEMENT
34. GK 2.7 TiO2S HEATING IMPROVEMENT
36. XD 2.0 WACSS & HESITATION IMPROV.

4. Select option “**02. XD 2.0 WACSS & HESITATION [ERROR MODE]**” and press **ENTER**.

RE-PROGRAMMING
01. XD 2.0 WACSS & HESITATION [AUTO MODE]
02. XD 2.0 WACSS & HESITATION [ERROR MODE]



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5. Choose the vehicle type which is correct for your vehicle by using the "ECM Specifications Table" shown on page 2 of this bulletin. Then press **ENTER**.

RE-PROGRAMMING	
01. 01MY US NLEV	-IMMO : 39109-23020
02. 02MY US NLEV	-IMMO : 39109-23021
03. 03MY US NLEV	-IMMO : 39109-23022
04. 02MY CAN NLEV	+IMMO : 39109-23200
05. 03MY CAN NLEV	+IMMO : 39109-23201
06. 01MY US CAL UNLEV	-IMMO : 39109-23030
07. 02MY US CAL UNLEV	-IMMO : 39109-23031
08. 03MY US CAL UNLEV	-IMMO : 39109-23032

6. Select the correct password for the manual update mode which is correct for the vehicle specification by referring to the chart below. Then press **ENTER**.

MENU	PASSWORD
01. 01MY US NLEV: -IMMO: 39109-23020	3020
02. 02MY US NLEV: -IMMO: 39109-23021	3021
03. 03MY US NLEV: -IMMO: 39109-23022	3022
06. 01MY US CAL ULEV: -IMMO: 39109-23030	3030
07. 02MY US CAL ULEV: -IMMO: 39109-23031	3031
08. 03MY US CAL ULEV: -IMMO: 39109-23032	3032

WARNING: Be sure to input the correct password. If an incorrect password is selected, the correct program will not be downloaded.

RE-PROGRAMMING	
01. 01MY US NLEV	-IMMO : 39109-23020
02. 02MY US NLEV	-IMMO : 39109-23021
03. 03MY US NLEV	-IMMO : 39109-23022
04. 02MY CAN NLEV	+IMMO : 39109-23200
05. 03MY CAN NLEV	+IMMO : 39109-23201
06. 01MY US CAL ULEV	-IMMO : 39109-23030
07. 02MY US CAL ULEV	-IMMO : 39109-23031
08. 03MY US CAL ULEV	-IMMO : 39109-23032
ENTER YOUR PASSWORD : 3***	

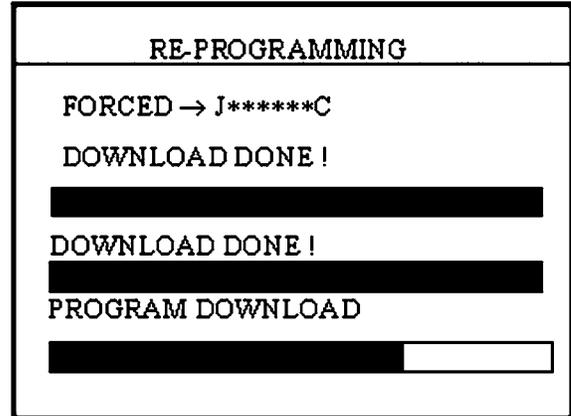


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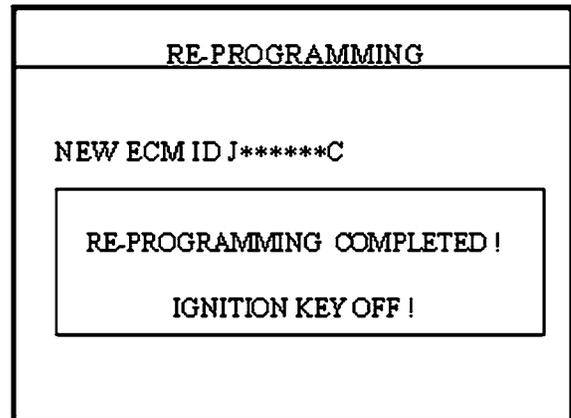
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7. Wait until the reprogramming is completed.

NOTE: Check the ECM ID displayed on the Hi-Scan Pro screen to verify that the correct ECM software is being downloaded by referring to the “ECM Specifications Table” shown on page 2 of this bulletin.



8. When the “**REPROGRAMMING COMPLETED**” message is displayed, the ECM reprogramming process is complete.



9. Turn the ignition to the OFF position for 20 seconds and then start the engine and check for proper operation.

10. Check for diagnostic trouble codes using the Hi-Scan Pro with the system software card. Erase all trouble codes.

EXPLANATION OF ERROR MESSAGE:

1. **“INVALID PASSWORD”**: Please enter the correct password again.
2. **“REPROGRAMMING ERROR, PLEASE WAIT FOR RETRY”**: An error occurred during reprogramming, the Hi-Scan Pro will retry the reprogramming automatically.
3. **“THIS ECM IS DIFFERENT TYPE”**: The ECM on this vehicle is not the type subject to this reprogramming procedure.
4. **“ALREADY REPROGRAMMED”**: This reprogramming has previously been done on this vehicle.
5. **“REPROGRAM ERROR, PLEASE CHECK THE SYSTEM”**: In this case, you must reprogram manually after selecting the menu option **“02. XD 2.0 WACSS & HESITATION [ERROR MODE]”**.

WARRANTY INFORMATION:

OP CODE	OPERATION	OP TIME	CAUSAL PART NUMBER	NATURE CODE	CAUSE CODE
39110F05	ECM Software Reprogramming	0.3 M/H	Please refer to ECM Part Numbers on page 2 of this bulletin	*N03	**C40

***N03: Surge, stumble, hesitate**

****C40: Improper adjustment**