2.7L ECM REPROGRAMMING FOR DTC P0133/P0153

TECHNICAL SERVICE BULLETIN

Reference Number(s): 04-36-010, Date of Issue: June, 2004
HYUNDAI: 2003-2004 Tiburon 2.7L
GROUP: 36 - Engine Electrical

DESCRIPTION

Some 2003-2004 MY Tiburon vehicles with 2.7L V6 engines may experience "Check Engine" light illumination with one or both of the following diagnostic trouble codes stored in the engine control module (ECM).

- DTC P0133: HO2S Circuit Slow Response (Bank 1, Sensor 1)
- DTC P0153: HO2S Circuit Slow Response (Bank 2, Sensor 1)

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:** Some 2003-2004 TIBURON vehicles with 2.7L engines
- **Affected Vehicle Production Date Range:**
    - January 01, 2003 through May 25, 2004

ECM REPROGRAMMING SPECIFICATIONS

ECM REPROGRAMMING SPECIFICATIONS

Model	TA	Affected ECM P/N	Previous ECM ID	New ECM ID	Manual Password
2003 Tiburon 2.7L	4AT/6MT	39109-37702	G4N7TS0A	G5N7TS0Z	7702
"	5MT	39109-37712	G4N7TS5A	G5N7TS0Z	7712
2004 Tiburon 2.7L	4AT/6MT	39109-37703	G4N7TS0B	G4N7TS0E	7703
"	"	"	G4N7TS0C	"	"
"	"	"	G4N7TS0D	"	"
"	5MT	39109-37713	G4N7TS5B	"	7713
"	"	"	G4N7TS5C	"	"
"	"	"	G4N7TS5D	"	"

CAUTIONS DURING REPROGRAMMING

1. Conduct reprogramming with the ignition key in the "ON" position.
2. 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.**

3. Do not start the engine during reprogramming.
4. Do not turn the ignition key off during reprogramming.
5. 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. Attach the Data Link Connector (DLC) cable to the Hi-Scan Pro main body and tighten the 2 bolts securely. (**Fig. 1**)
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. (**Fig. 1**)
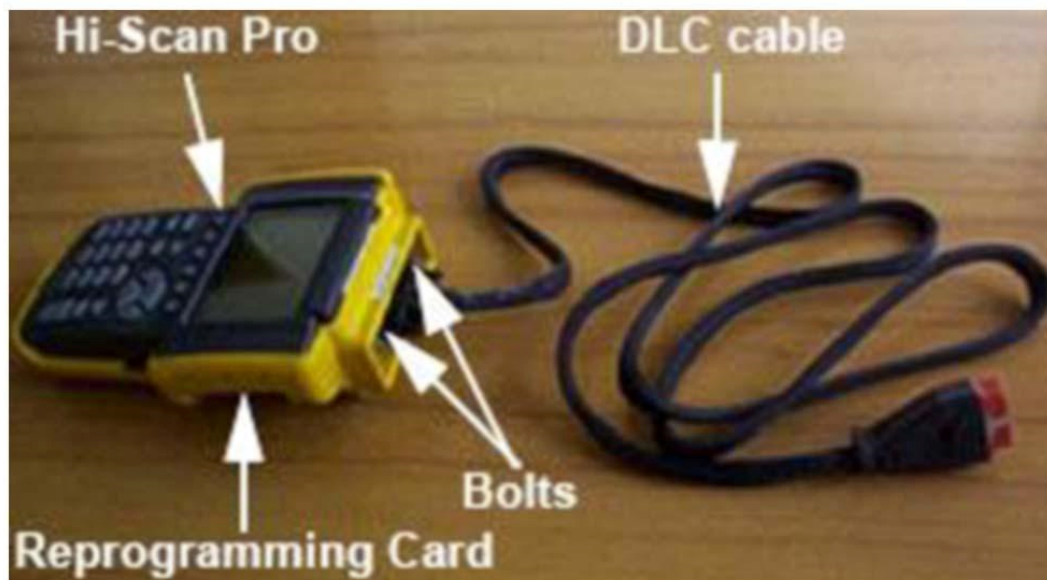
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Fig. 1: Hi-Scan Pro, Reprogramming Setup

3. 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. (**Fig. 2**)

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Fig. 2: DLC Location

4. Turn the ignition to the ON position.
5. Turn the Hi-Scan Pro ON and press ENTER.
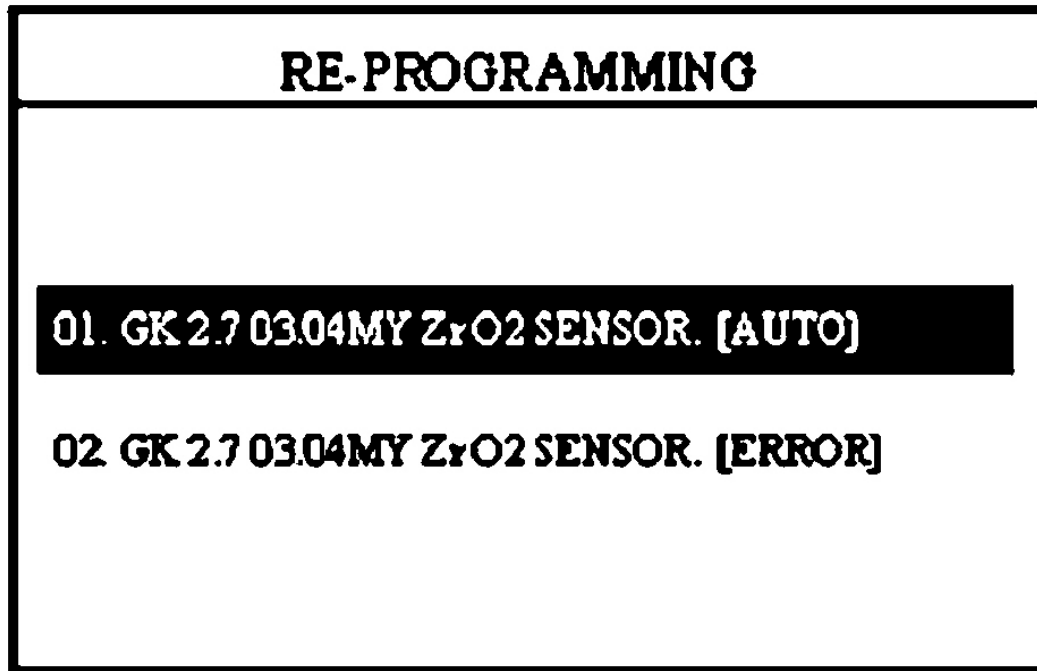6. Select option "45. GK 2.7 03/04MY Zr O2 SENSOR." and press ENTER. (**Fig. 3**)

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Fig. 3: Select Option 45

7. Select option "01. GK 2.7 03/04MY Zr O2 SENSOR. [AUTO]" and press ENTER. (**Fig. 4**)

RE-PROGRAMMING

01. GK 2.7 03.04MY ZrO2 SENSOR. [AUTO]

02 GK 2.7 03.04MY ZrO2 SENSOR. [ERROR]
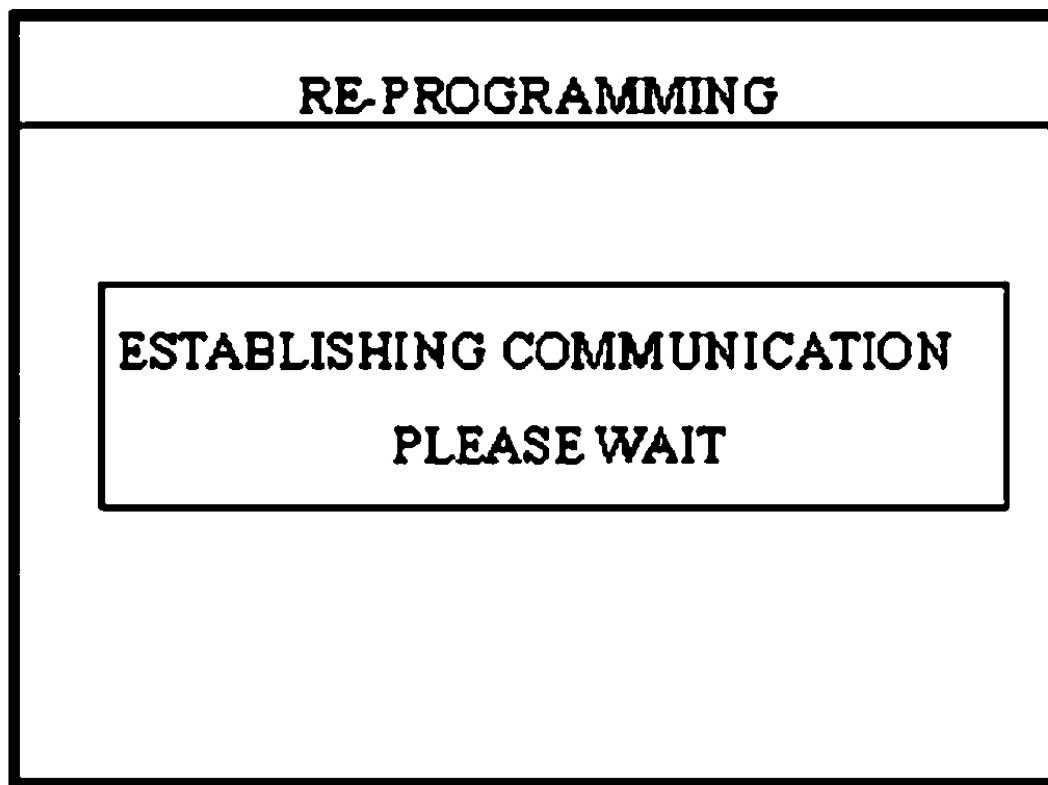
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Fig. 4: Select Option 01

8. Enter "1229" as the password for automatic update mode and press ENTER. (**Fig. 5**)
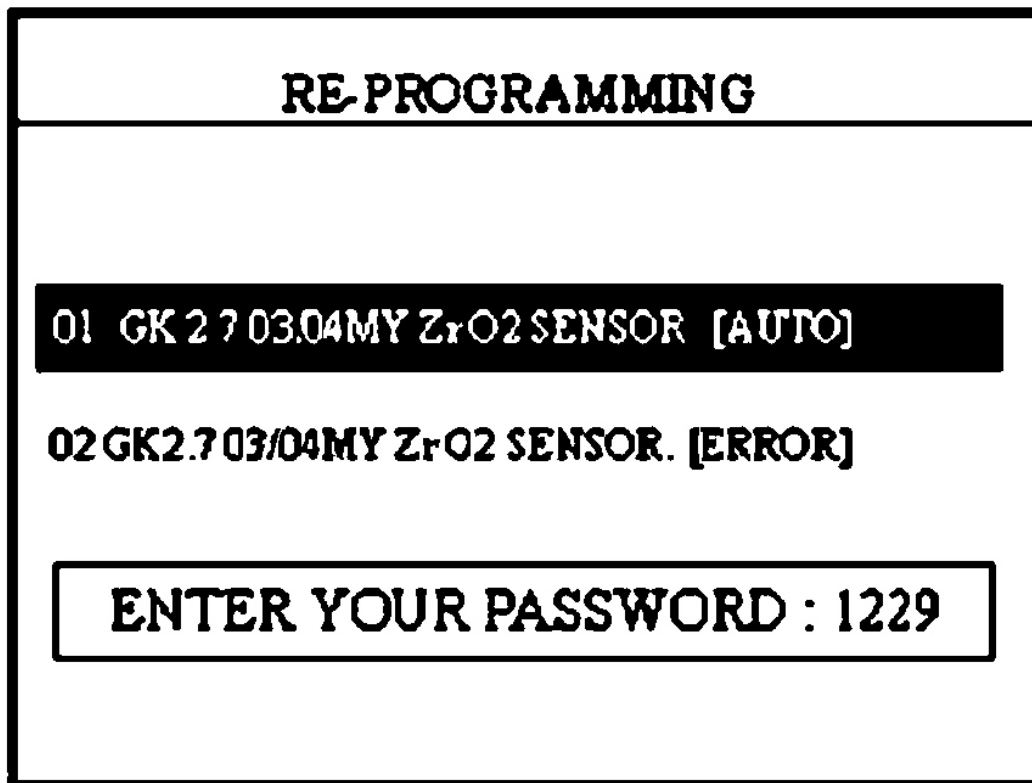
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Fig. 5: Enter Password: 1229

9. The Hi-Scan Pro will establish communication. (**Fig. 6**)

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Fig. 6: Hi-Scan Pro Establishing Communication

NOTE:
- **The current ECM ID will be replaced by the new ECM ID. (Fig. 7)**
- **To prepare for reprogramming in case of an error, write down the old and new ECM IDs displayed on the Hi-Scan Pro screen during the automatic update procedure.**
- **The recorded ECM IDs will be used if the Hi-Scan Pro fails to automatically download the new ECM software.**
- **If the Hi-Scan Pro does not download the program, use the Manual Update Procedure following this section.**
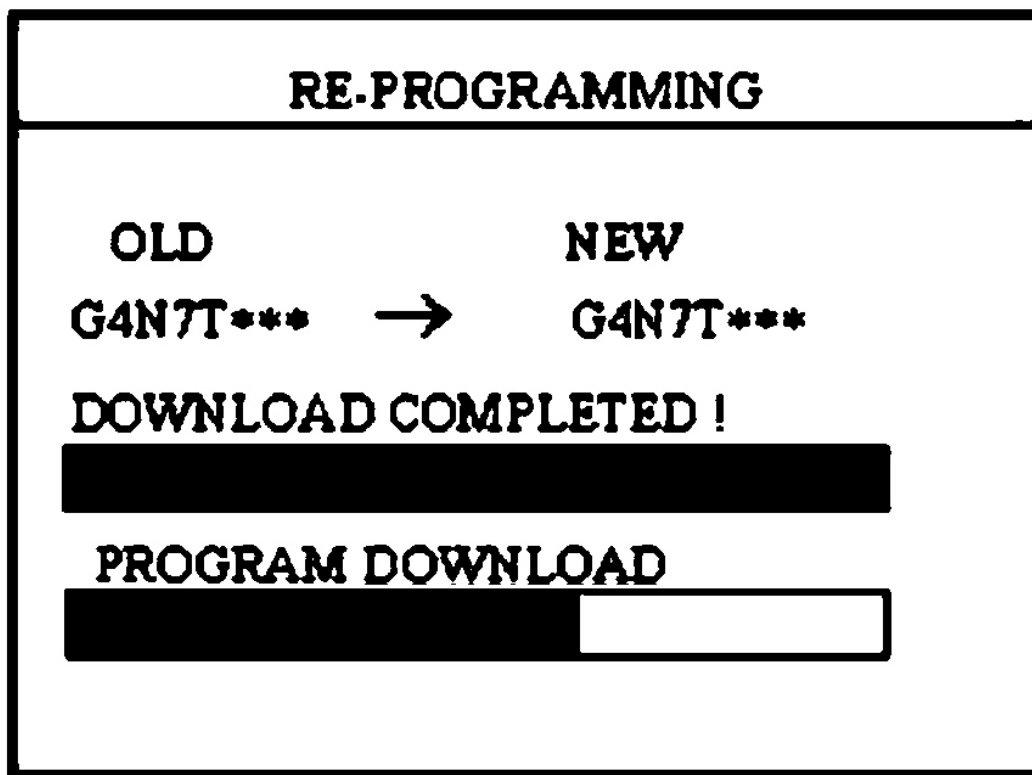
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Fig. 7: Reprogramming

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

10. The Hi-Scan Pro reinitializes the ECM. (**Fig. 6**)

11. When the "REPROGRAMMING COMPLETED" message is displayed (**Fig. 8**), the process is complete. Check the new ECM ID displayed on the Hi-Scan Pro screen to verify that the correct ECM software has been downloaded.

```
┌──────────────────────────────────────┐
│            RE-PROGRAMMING            │
├──────────────────────────────────────┤
│                                      │
│                                      │
│     NEW ECM ID : G4N7T***            │
│                                      │
│   ┌────────────────────────────┐     │
│   │                            │     │
│   │  REPROGRAMMING COMPLETED ! │     │
│   │                            │     │
│   │    DIAGNOSE ECM & TCM      │     │
│   │                            │     │
│   │ IF THERE IS DTC, ERASE DTC │     │
│   │                            │     │
│   └────────────────────────────┘     │
│                                      │
└──────────────────────────────────────┘
```
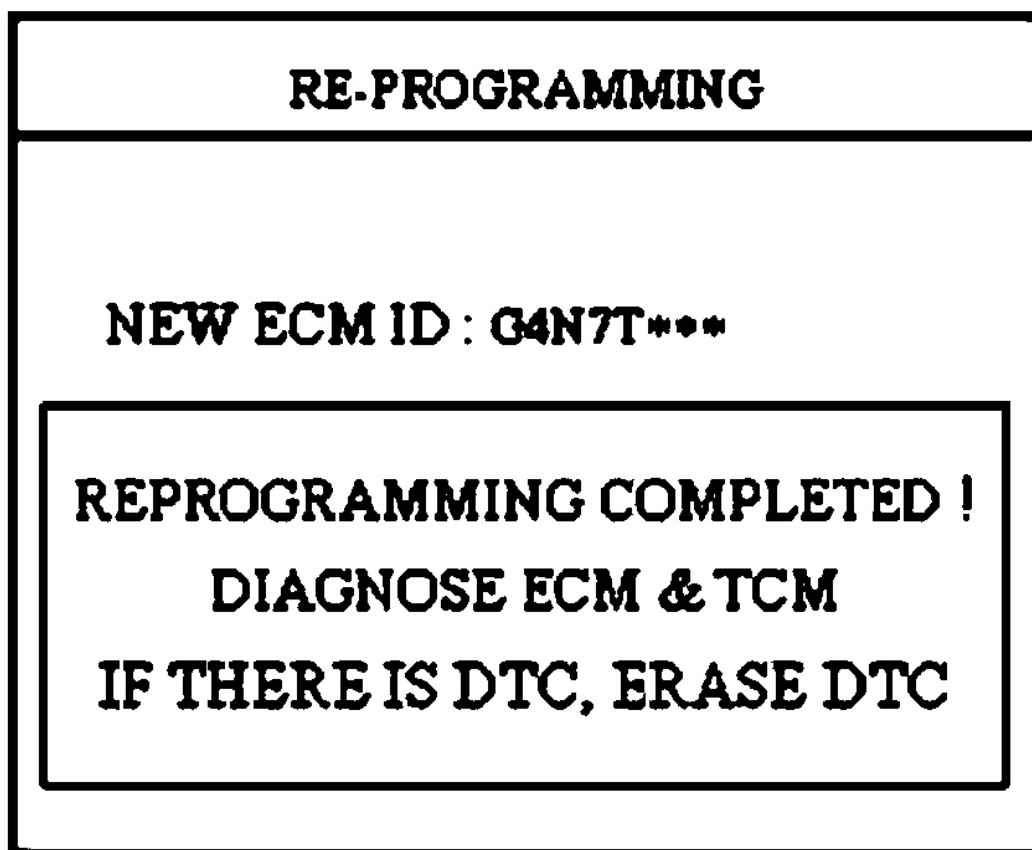
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Fig. 8: Completion

NOTE: **Refer to the ECM REPROGRAMMING SPECIFICATIONS for the ECM ID listing.**

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

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

MANUAL UPDATE PROCEDURE

NOTE: **In the event that option "01. GK 2.7 03/04MY Zr O2 SENSOR. [AUTO]" fails to download the new ECM program, option "02. GK 2.7 03/04MY Zr O2 SENSOR. [ERROR]" 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 "45. GK 2.7 03/04MY Zr O2 SENSOR." and press ENTER. (**Fig. 3**)
4. Select option "02. GK 2.7 03/04MY Zr O2 SENSOR. [ERROR]" and press ENTER. (**Fig. 9**)

```
RE-PROGRAMMING

01. EF 2.7 03/04MY Zr O2 SENSOR. [AUTO]

02 EF 2.7 03/04MY Zr O2 SENSOR. [ERROR]
```
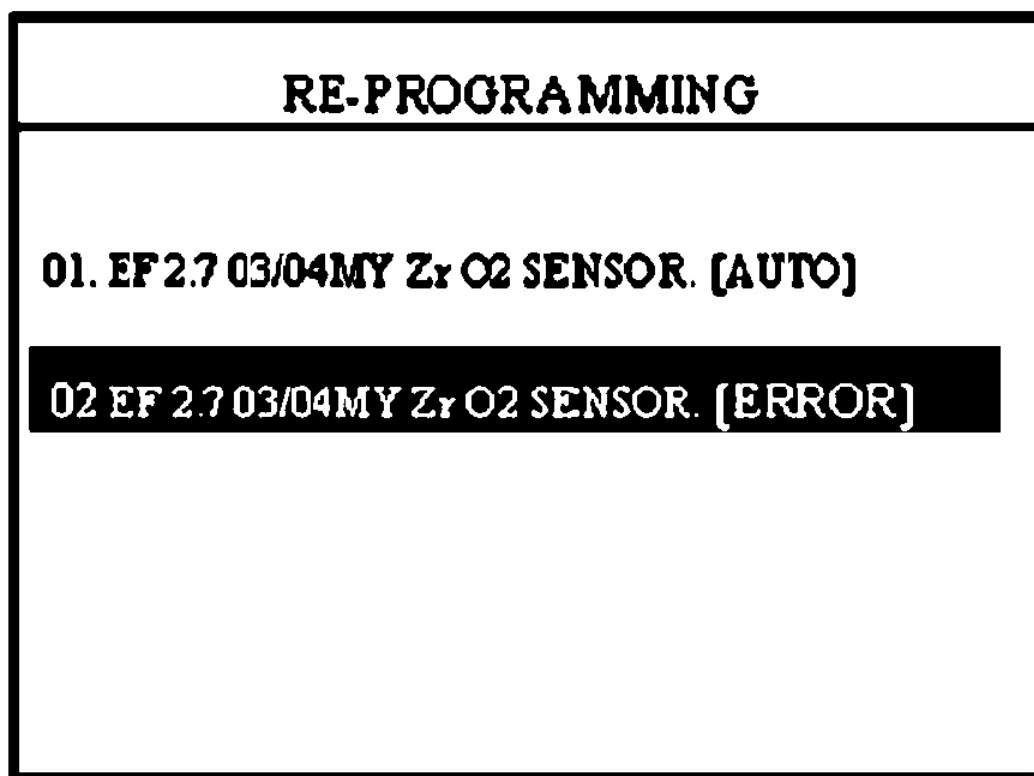
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Fig. 9: Select Option 02

5. Choose the vehicle type which is correct for your vehicle by using the "ECM Specifications Table" shown in **ECM REPROGRAMMING SPECIFICATIONS** . Then press ENTER. (**Fig. 10**)

```
RE-PROGRAMMING

01. 03MY 4AT/6MT     -IMMO : 39109-37702

02. 03MY SMT         -IMMO : 39109-37712

03. 03MY 4AT/6MT     +IMMO : 39109-37722

04. 03MY SMT         +IMMO : 39109-37732

05. 04MY 4AT/6MT     -IMMO : 39109-37703

06. 04MY SMT         -IMMO : 39109-37713

07. 04MY 4AT/6MT     +IMMO : 39109-37723

08. 04MY SMT         +IMMO : 39109-37733
```

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Fig. 10: Vehicle Type Selection

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. (**Fig. 11**)

PASSWORD CHART

Menu	Password
01. 03MY 4AT/6MT -IMMO: 39109-37702	7702
02. 03MY 5MT -IMMO: 39109-37712	7712
05. 04MY 4AT/6MT -IMMO: 39109-37703	7703
06. 04MY 5MT -IMMO: 39109-37713	7713

```
┌─────────────────────────────────────────┐
│           RE-PROGRAMMING                  │
├─────────────────────────────────────────┤
│  01. 03MY 4AT/6MT    -IMMO : 39109-37702 │
│  02. 03MY SMT        -IMMO : 39109-37712 │
│  03. 03MY 4AT/6MT    +IMMO : 39109-37722 │
│  04. 03MY SMT        +IMMO : 39109-37732 │
│  05. 04MY 4AT/6MT    -IMMO : 39109-37703 │
│  06. 04MY SMT        -IMMO : 39109-37713 │
│  07. 04MY 4AT/6MT    +IMMO : 39109-37723 │
│  08. 04MY SMT        +IMMO : 39109-37733 │
└─────────────────────────────────────────┘
```
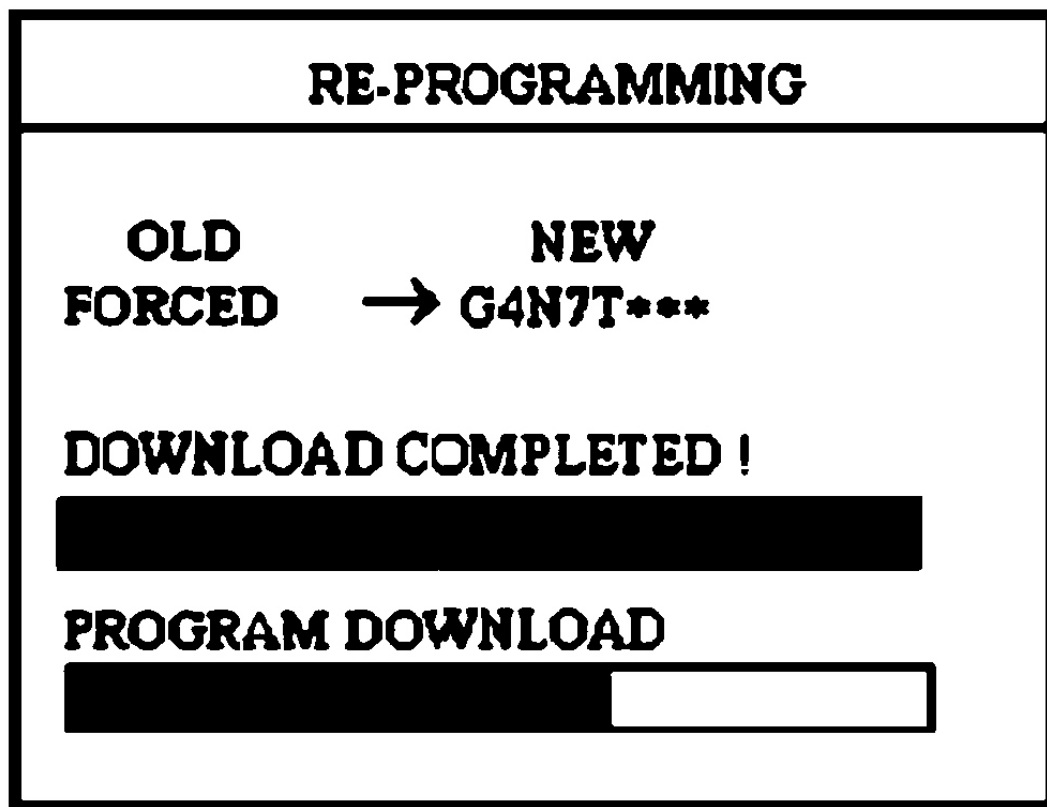
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Fig. 11: Select Correct Password

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

7. The Hi-Scan Pro will establish communication. (**Fig. 6**)

NOTE:
- **The Hi-Scan Pro displays the new ECM ID on the screen. (Fig. 12)**
- **The program will take approximately 7 minutes to download completely.**

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Fig. 12: Download Screen

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

8. The Hi-Scan Pro reinitializes the ECM. (**Fig. 6**)

9. When the "REPROGRAMMING COMPLETED" message is displayed, the process is complete. Check the new ECM ID displayed on the Hi-Scan Pro screen to verify that the correct ECM software has been downloaded. (**Fig. 8**)

NOTE: Refer to **ECM REPROGRAMMING SPECIFICATIONS** for the ECM ID listing.

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

11. 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": The reprogramming has previously been done on this vehicle.
5. "REPROGRAM ERROR, PLEASE CHECK THE SYSTEM": In this case, you must reprogram manually after selecting menu option "02. GK 2.7 03/04MY Zr O2 SENSOR. [ERROR]".

WARRANTY INFORMATION

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Op Code	Operation	Op Time	Causal P/N	Nature Code	Cause Code
39109F04	ECM Software Reprogramming	0.3 M/H	(1)	(2) N69	(3) C40
(1) Please refer to ECM REPROGRAMMING SPECIFICATIONS Table (2) N69: Warning light on (3) C40: Improper adjustment					