	Technical Service Bulletin	Model	**GETZ(TB)**
		Group	**ENGINE ELECTRICAL(27)**
		Number	**5-27-P11-TB**

Subject		Date	
ECM REPROGRAMMING INSTRUCTIONS FOR EXCESSIVE FUEL CONSUMPTION(F/FIX)		**Mar. 16, 2005**	
		Area	**Europe**

1. DESCRIPTION

Some GETZ(TB) 1.3L SOHC vehicles may experience excessive fuel consumption.

If the vehicle exhibits the above condition, it is necessary to replace pistons and rings with the new parts whose compression ratio have been increased from 9.5 to 10.
To match the change in compression ratio, the ECM(Engine Control Module) software must be updated with new logic.

Reprogram the ECM using the Hi-Scan Pro in accordance with the procedure as explained in this bulletin.

2. VEHICLES AFFECTED

- Model : GETZ(TB) vehicles with 1.3L SOHC gasoline engines.
- Affected vehicle production date range :
    - Leaded fuel specification vehicle : Produced through Nov. 6, 2003
    - Unleaded fuel specification vehicle : Produced through Nov. 6, 2003
- Affected VIN range :
    - Leaded fuel specification vehicle :
      Produced through KMHBT51HR4U140342
    - Unleaded fuel specification vehicle :
      Produced through KMHBT31HR4U052198
- Area : Europe

3. PARTS REQUIRED

PISTON & PIN ASSEMBLY

PART NAME	PART NUMBER	REMARKS
Piston & pin assembly (STD A)	23410-22870	Common use for Unleaded/ Leaded fuel
Piston & pin assembly (STD B)	23410-22880	
Piston & pin assembly (STD C)	23410-22890	

RING SET-PISTON

PART NAME	PART NUMBER	REMARKS
Ring set-piston	23040-22301	Common use for Unleaded/ Leaded fuel

NOTES
- **Check the piston sizes marked as "A" or "B" or "C" on the piston top surface and replace with the same size parts whose compression ratio have been increased from 9.5 to 10.**
- **Piston with pin parts and ring set-piston supply as a set.**
- **ECM software must be updated at the same time.**
- **Verify that the vehicle is affected by identifying the vehicle production date and VIN.**
- **Pistons and rings for four cylinders must be replaced at the same time.**

4. SERVICE PROCEDURE

4-1. REPLACEMENT OF PISTONS AND RINGS.

Replace the pistons and rings with corresponding new parts by referring to the shop manual.

4-2. ECM REPROGRAMMING PROCEDURE.

NOTES
- **Install the EMT(ECU Upgrade Management Tool) software on your personal computer in advance to download the new ECM software into the Hi-Scan Pro software card by referring to the EMT manual.**
- **After installing the EMT software, format the Hi-Scan Pro software card and download the new ECM software subject to this reprogramming procedure into the Hi-Scan Pro software card in accordance with the procedure specified in the EMT manual.**
- **The EMT software enables to download the ECM software stored in your computer into the Hi-Scan Pro software card.**
  It also enables to download the additional software files and delete the obsolete files from the Hi-Scan Pro software card.

A. ECM SPECIFICATIONS

| MODEL | T/M | AFFECTED ECM P/NO. | ECM ID | | REMARK |
			PREVIOUS	NEW	
Getz (TB) 1.3L SOHC	MT	39106-22030	TBE3N36	TBE4N33	EURO 3
	AT	39106-22035	TBE3P35	TBE4P34	EURO 3
	MT	39106-22040	TBE3I36	TBE4I33	EURO 3
	AT	39106-22045	TBE3M36	TBE4M34	EURO 3
	MT	39106-22060	TBH3I36	TBH4I33	EURO 4
	AT	39106-22065	TBH3M36	TBH4M34	EURO 4

B. CAUTIONS BEFORE 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.
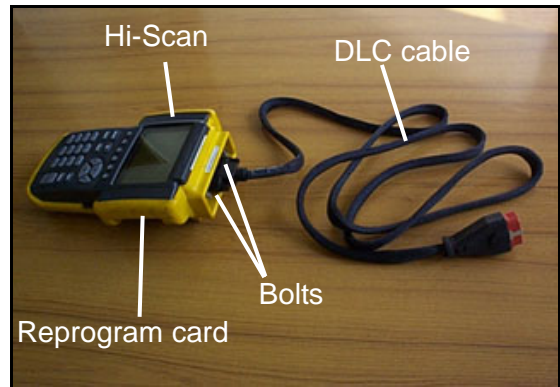5) When the reprogramming is completed, turn OFF the ignition key for 20 seconds before starting the engine.

C. ECM REPROGRAMMING

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

C-1. AUTOMATIC UPDATE PROCEDURE

1) Attach the Data Link Connector (DLC) cable to the Hi-Scan Pro main body and securely tighten the two bolts.

2) Remove the system software card from the Hi-Scan Pro and insert the reprogramming software card, with the new ECM program, into the Hi-Scan top slot.
The only card in the Hi-Scan should be the reprogramming card.

DCP03217

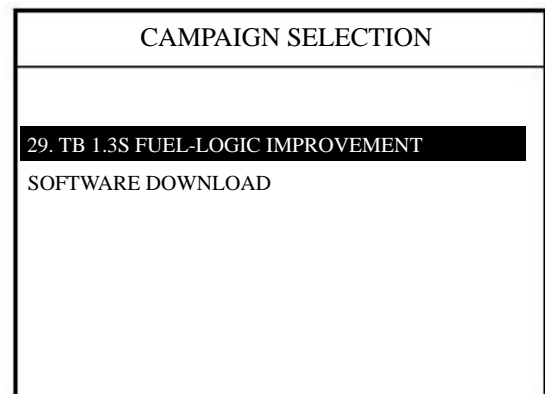3) Plug the DLC cable from the Hi-Scan Pro into the data link connector (16 Pin connector) under the instrument panel on the driver's side.
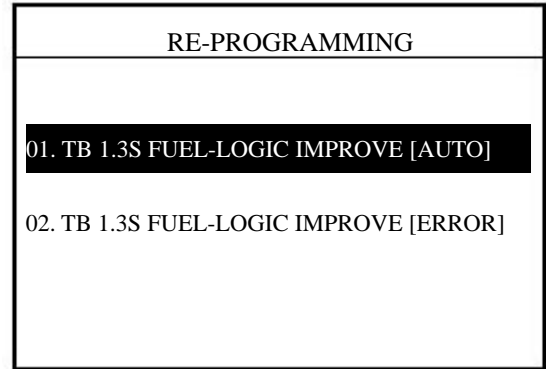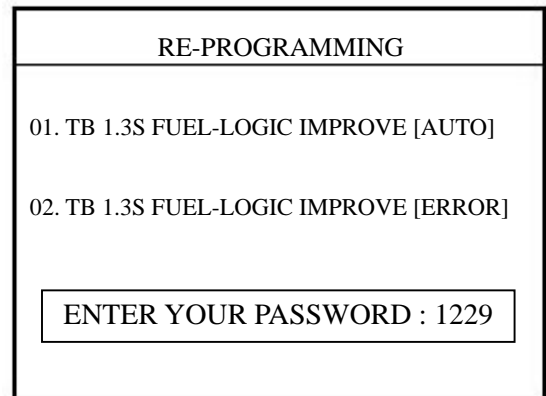

DCP09950

4) Turn the ignition switch to the ON position (Do not start the engine).

5) Turn the Hi-Scan Pro ON and press ENTER.

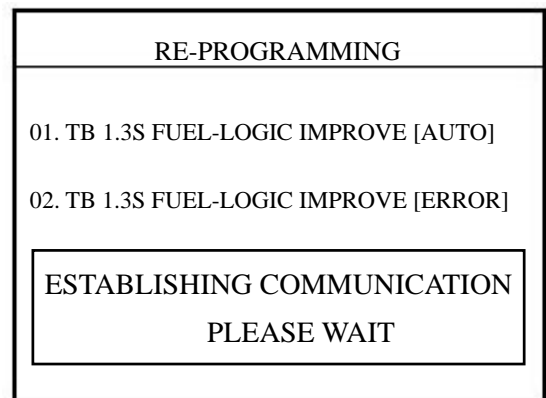6) Select option "30. TB 1.3S FUEL-LOGIC IMPROVEMENT" and press ENTER.

CAMPAIGN SELECTION

29. TB 1.3S FUEL-LOGIC IMPROVEMENT

SOFTWARE DOWNLOAD

7) Select option "01. TB1.3S FUEL-LOGIC
    IMPROVE [AUTO]" and press ENTER.

```
┌─────────────────────────────────────┐
│            RE-PROGRAMMING            │
├─────────────────────────────────────┤
│                                      │
│ ████████████████████████████████████ │
│ 01. TB 1.3S FUEL-LOGIC IMPROVE [AUTO]│
│                                      │
│ 02. TB 1.3S FUEL-LOGIC IMPROVE [ERROR]│
│                                      │
│                                      │
└─────────────────────────────────────┘
```

8) Enter "1229" as the password for automatic
    reprogramming mode and press ENTER.

```
┌─────────────────────────────────────┐
│            RE-PROGRAMMING            │
│                                      │
│ 01. TB 1.3S FUEL-LOGIC IMPROVE [AUTO]│
│                                      │
│ 02. TB 1.3S FUEL-LOGIC IMPROVE [ERROR]│
│                                      │
│  ┌─────────────────────────────────┐ │
│  │ ENTER YOUR PASSWORD : 1229      │ │
│  └─────────────────────────────────┘ │
└─────────────────────────────────────┘
```

9) The Hi-Scan Pro will establish
    communication, check the ECM ID, and
    reprogram the ECM automatically.
    Wait until the reprogramming is finished.

```
┌─────────────────────────────────────┐
│            RE-PROGRAMMING            │
│                                      │
│ 01. TB 1.3S FUEL-LOGIC IMPROVE [AUTO]│
│                                      │
│ 02. TB 1.3S FUEL-LOGIC IMPROVE [ERROR]│
│  ┌─────────────────────────────────┐ │
│  │ ESTABLISHING COMMUNICATION      │ │
│  │         PLEASE WAIT             │ │
│  └─────────────────────────────────┘ │
└─────────────────────────────────────┘
```

NOTES
- **The Hi-Scan Pro detects the current ECM ID, assigns the new ECM ID and displays them on the Hi-Scan Pro screen.**
- **Check the ECM IDs displayed on the Hi-Scan Pro screen to verify that the correct ECM software is being downloaded.**
  Refer to the "ECM SPECIFICATION TABLE" on page 4 of this TSB.
- **If the Hi-Scan Pro does not download the program, use the Manual Update Procedure following this section.**
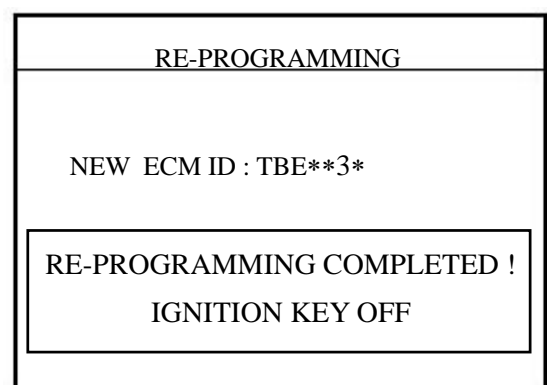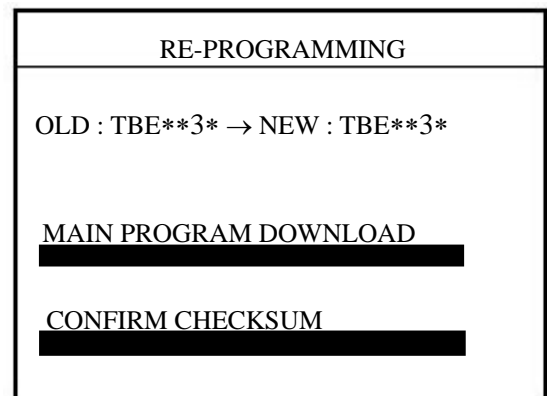
WARNINGS
- **Do not interrupt the reprogramming at any time.**
- **The ECM will be rendered inoperative if the program does not download completely.**

```
┌─────────────────────────────────────┐
│            RE-PROGRAMMING            │
├─────────────────────────────────────┤
│                                      │
│ OLD : TBE**3* → NEW : TBE**3*        │
│                                      │
│                                      │
│ MAIN PROGRAM DOWNLOAD                │
│ ████████████████████████████████     │
│                                      │
│ CONFIRM CHECKSUM                     │
│ ████████████████████████████████     │
└─────────────────────────────────────┘
```

10) When the "COMPLETED" message is displayed, turn the Hi-Scan Pro OFF and the process is complete.

```
┌─────────────────────────────────────┐
│            RE-PROGRAMMING            │
├─────────────────────────────────────┤
│                                      │
│                                      │
│      NEW  ECM ID : TBE**3*           │
│                                      │
│  ┌───────────────────────────────┐   │
│  │  RE-PROGRAMMING COMPLETED !   │   │
│  │      IGNITION KEY OFF         │   │
│  └───────────────────────────────┘   │
└─────────────────────────────────────┘
```

11) When the reprogramming is completed successfully, turn the ignition to the OFF position for 20 seconds and then start the engine to check for proper operation.

12) Check for diagnostic trouble codes using the Hi-Scan Pro with system software card. Erase any trouble codes.

C-2. MANUAL UPDATE PROCEDURE

NOTES

- **In the event that "01. TB 1.3S FUEL-LOGIC IMPROVE [AUTO]" fails to download the new ECM program, option "02. TB 1.3S FUEL-LOGIC IMPROVE [ERROR]" must be used.**
- **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 "30. TB 1.3S FUEL-LOGIC IMPROVE" and press ENTER.

```
                CAMPAIGN SELECTION



 29. TB 1.3S FUEL-LOGIC IMPROVEMENT
 SOFTWARE DOWNLOAD
```

4) Select option "02. TB 1.3S FUEL-LOGIC IMPROVE [ERROR]" and press ENTER.

```
                 RE-PROGRAMMING


 01. TB 1.3S FUEL-LOGIC IMPROVE [AUTO]

 02. TB 1.3S FUEL-LOGIC IMPROVE [ERROR]
```

5) Choose 1 of the 6 vehicle types which is correct for your vehicle by using the "ECM SPECIFICATION TABLE" shown on page 2 of this TSB.
And then press ENTER.

```
                 RE-PROGRAMMING

 01. TB 1.3S M/T EURO3 -IMMO  :  39106-22030

 02. TB 1.3S A/T EURO3 -IMMO  :  39106-22035

 03. TB 1.3S M/T EURO3 +IMMO :  39106-22040

 04. TB 1.3S A/T EURO3 +IMMO  :  39106-22045

 05. TB 1.3S M/T EURO4 +IMMO :  39106-22060

 06. TB 1.3S A/T EURO4 +IMMO  :  39106-22065
```

6) Enter the correct password by using the chart below and press ENTER.
   WARNINGS
   - **Be sure to input the correct password.**
   - **If an incorrect password is selected, the correct ECM software will not be downloaded.**

MENU	PASSWORD
01. TB 1.3S M/T EURO3 -IMMO : 39106-22030	2030
02. TB 1.3S A/T EURO3 -IMMO : 39106-22035	2035
03. TB 1.3S M/T EURO3 +IMMO : 39106-22040	2040
04. TB 1.3S A/T EURO3 +IMMO : 39106-22045	2045
05. TB 1.3S M/T EURO4 +IMMO : 39106-22060	2060
06. TB 1.3S A/T EURO4 +IMMO : 39106-22065	2065

7) Wait until the reprogramming is completed. Hi-Scan Pro will reprogram the ECM.
   WARININGS
   - **Do not interrupt the reprogramming at any time.**
   - **The ECM will be rendered inoperative if the program does not download completely.**

   NOTES
   - **The Hi-Scan Pro displays the new ECM ID on the Hi-Scan Pro screen.**
   - **Check the new ECM ID displayed on the Hi-Scan Pro screen to verify that the correct ECM software is being downloaded. Refer to the "ECM SPECIFICATION TABLE" shown on page 4 of this TSB.**

RE-PROGRAMMING

01. TB 1.3S M/T EURO3 -IMMO : 39106-22030

02. TB 1.3S A/T EURO3 -IMMO : 39106-22035

03. TB 1.3S M/T EURO3 +IMMO : 39106-22040

04. TB 1.3S A/T EURO3 +IMMO : 39106-22045

05. TB 1.3S M/T EURO4 +IMMO : 39106-22060

ENTER YOUR PASSWORD : 20∗∗

RE-PROGRAMMING

01. TB 1.3S M/T EURO3 -IMMO : 39106-22030

02. TB 1.3S A/T EURO3 -IMMO : 39106-22035

03. TB 1.3S M/T EURO3 +IMMO : 39106-22040

04. TB 1.3S A/T EURO3 +IMMO : 39106-22045

05. TB 1.3S M/T EURO4 +IMMO : 39106-22060

ESTABLISHING COMMUNCATION
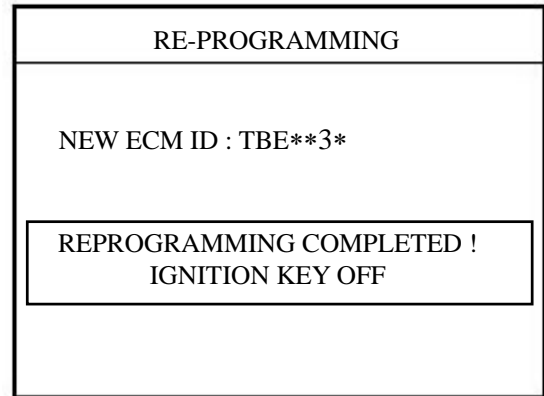PLEASE WAIT

RE-PROGRAMMING

FORCED→ TBE∗∗3∗

MAIN PROGRAM DOWNLOAD

CONFIRM CHECKSUM

8) When the "COMPLETED" message is
   displayed, turn the Hi-Scan OFF and the
   process is complete.

```
┌─────────────────────────────────────┐
│           RE-PROGRAMMING             │
│                                      │
│                                      │
│   NEW ECM ID : TBE**3*               │
│                                      │
│  ┌────────────────────────────────┐  │
│  │  REPROGRAMMING COMPLETED !     │  │
│  │       IGNITION KEY OFF         │  │
│  └────────────────────────────────┘  │
│                                      │
└─────────────────────────────────────┘
```

9) When the reprogramming is completed
   successfully, turn the ignition to the OFF
   position for 20 seconds and then start the
   engine to check for proper operation.

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

5. EXPLANATION OF ERROR MESSAGE

1) "INVALID PASSWORD" : Please enter the exact password again.
2) "REPROGRAMMING ERROR, PLEASE WAIT FOR RETRY" : An error occurred
   during reprogramming, the Hi-Scan Pro will retry reprogramming automatically.
3) "ALREADY REPROGRAMMED " or " INCORRECT TARGET ID" : This reprogramming
   has previously been done on this vehicle or the ECM is not the type subject to this
   reprogramming procedure.
4) "REPROGRAM ERROR, PLEASE CHECK THE SYSTEM" : In this case, you must
   reprogram manually after selecting the menu option "02. TB 1.3S FUEL-LOGIC
   IMPROVE [ERROR]".

6. WARRANTY INFORMATION

OP CODE	OPERATION	OP TIME	DEFECT CODE	
			NATURE	CAUSE
39106F05	Piston & ring set replacement and ECM reprogramming	6.2 M/H	*N07	**C40

*N07 : Excessive fuel consumption
** C40 : Improper adjustment