

Procedure: L140.08.04

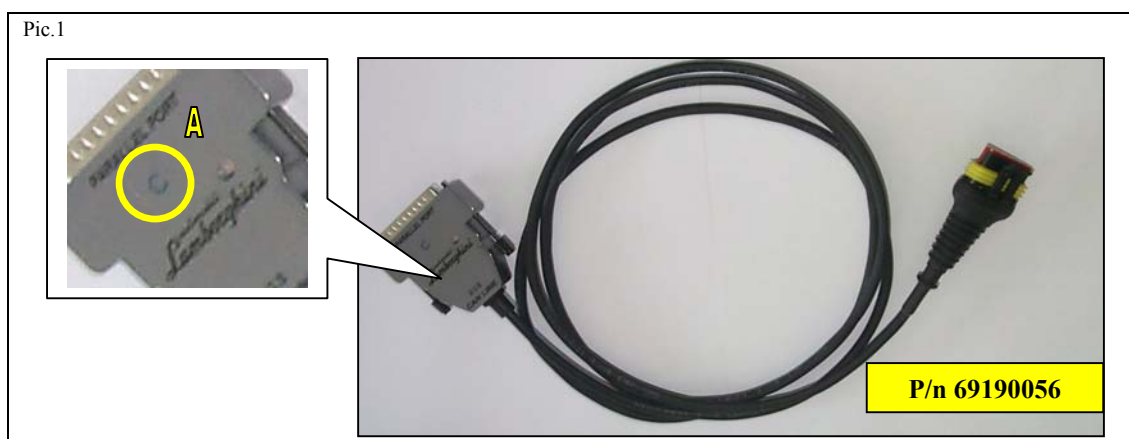
Operation: ECUs Re-flash (only for L140 with E-gear).

A Preliminary warnings

- 1.1** Before starting with the procedure be sure you are equipped with the necessary tools as point B and you have correctly configured your lap top following the instructions in Ct.06.04.

B Tools:

- 1.2** Can interface type “C”(fig. 1 p/n 69190056) recognizable from the old version from the sticker printed with the blue letter C (pic.1 ref. A).



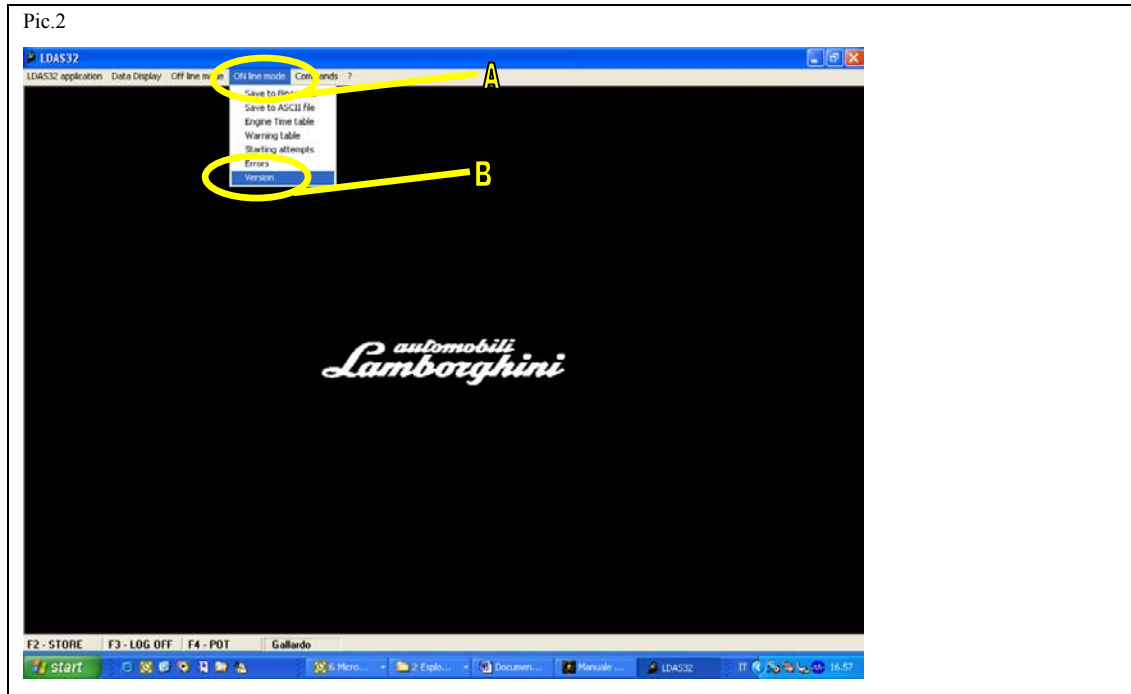
- 1.3** Lamborghini Diagnostic Tester configured as reported in C.T.06.04.

C Re-flash LIE e GFA ECU

- 1.4** Connect your p.c. by the can interface (pic.1 p/n 69190056) to the vehicle.
1.5 Open LDAS.
1.6 Key “on” battery e charged between 8-14 Volt.
1.7 From the tool bar select “ON line” (pic.2 ref. A).
1.8 Click on the command “Version” (pic.2 ref. B).



Pic.2



1.9 Note “*Firmware*” and “*Map*” code of LIE(bank1 and 2) and GFA ECU.. (pic.3).

Pic.3

Version <->		
LIE bank 1	FirmWare :	Lambo LIE2003 05Dec2003 V4018110
	Map :	U18152MD 11-12-2003 16.00
	Kernel :	LIE2003 KERNEL 24Oct02 V1.02
	FPGA :	2.30
	Work time :	14h 28' 15"
	Number :	2447
	Production year/week :	03/48
LIE bank 2	FirmWare :	Lambo LIE2003 05Dec2003 V4018110
	Map :	U18152MD 11-12-2003 16.00
	Kernel :	LIE2003 KERNEL 24Oct02 V1.02
	FPGA :	2.30
	Work time :	14h 29' 14"
	Number :	2561
	Production year/week :	03/48
GFA	FirmWare :	Lambo GFA2002 12Nov2003 G2021803
	Map :	G2218MU2 11-21-2003 09.43
	Kernel :	Lambo GFA2002 08Jan2003 K.02.02
	FPGA :	2.10
	Work time :	14h 26' 22"
	Number :	0
	Production year/week :	00/00

1.10 Use template nr 1 and 2 e to find the program step of the ECU(**step 1 or 3**) fit on the vehicle using the *Firmware* and the “*Map*” code.



Temp. 1-codes of the ECU to be re-flashed

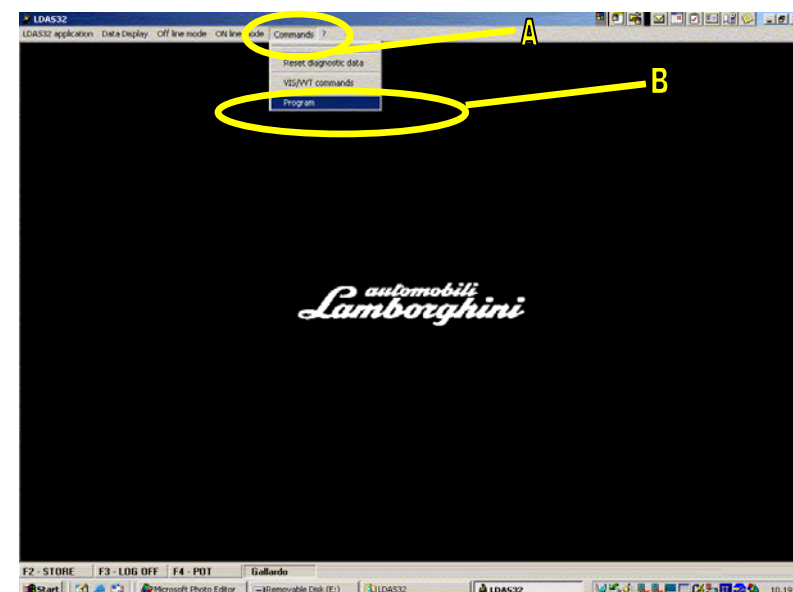
E.gear		Step 1	Step 3
Lie	Firmware	V4015608	V4022804
	Map	E15652S7	E228A2S2
	P/n	400 907 557 B	400 907 557 F
Gfa	Firmware	G2021001	G2022200
	Map	G2210SE4	G2222SE3
	P/n	400 959 433 B	400 959 433 AB

Temp. 2-codes of the ECU already re-flashed

E.gear		Step 1	Step 3
Lie	Firmware	V4022906	V4022804
	Map	E22952S9	E228A2S4
	P/n	400 907 557 Q	400 907 557 R
Gfa	Firmware	G2022205	
	Map	G222SE5	
	P/n	400 959 433 AD	

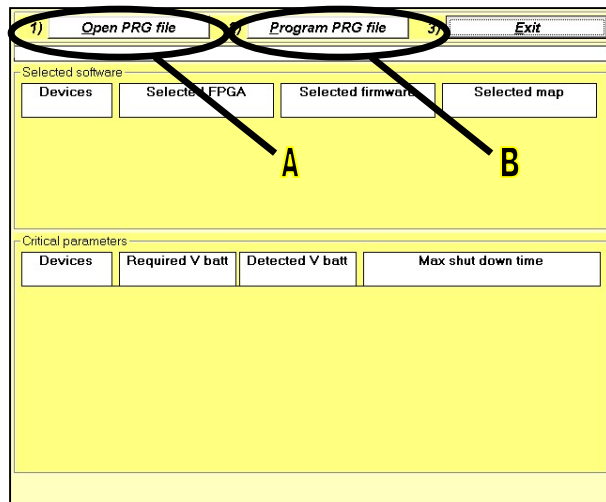
- 1.11 From the pull down menu “*Commands*” (Pic.n.4 A) select “*Program*” (Pic.n.4 B).

Pic. 4



- 1.12 On the screen it is displayed the ECU program window (Pic..8)
1.13 Select “*open PRG file*” (pic.5 A).

Pic..5



1.14 Click “service Pack 00-02” from “Look in” (pic.n.6 A)

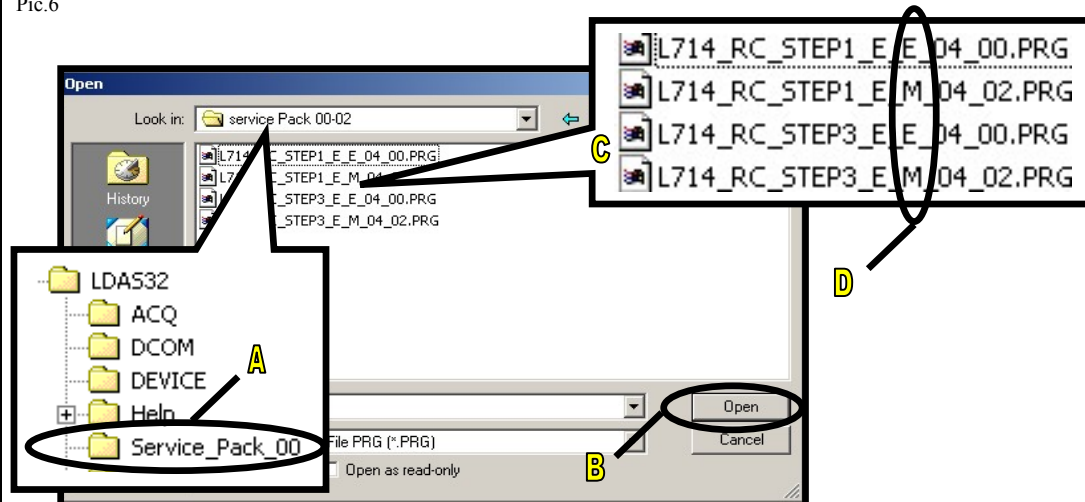
1.15 Select the file:

- L714_RC_Step1_E_E_04_00.PRG for vehicles which fit ECU with programming **step 1** (pic.6 C)**.
- L714_RC_Step3_E_E_04_00.PRG for vehicles which fit ECU. with programming **step 3** (pic.6 C)**.

****Warning:** Files are named (pic.n.6 C):

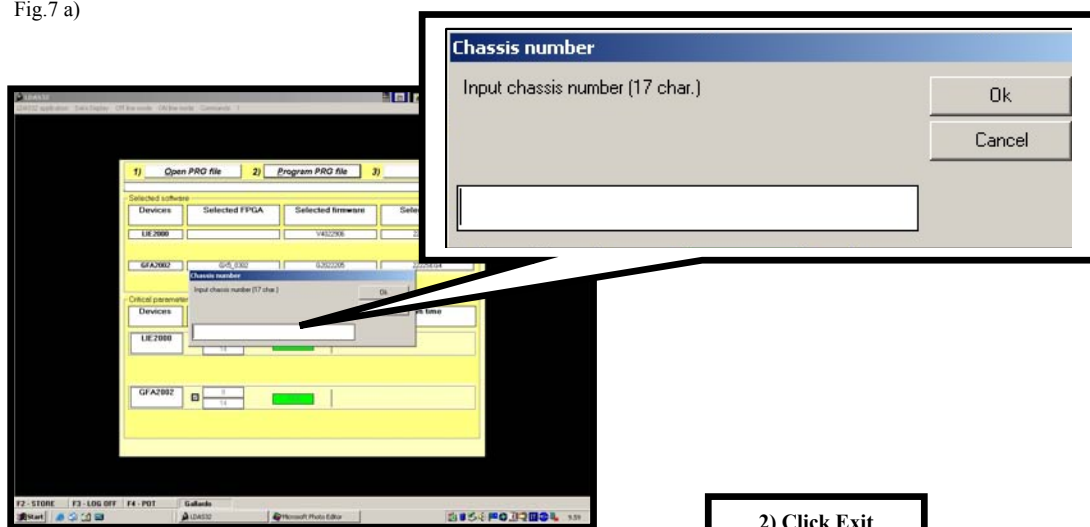
- L714_RC_ = model: Gallardo
- Step X = ECU program step.
- E = Europe: market version.
- M = manual gearbox (pic.n.6 D).
- **E** = **E-gear**(pic.n.6 D).
- 04=model year.

Pic.6



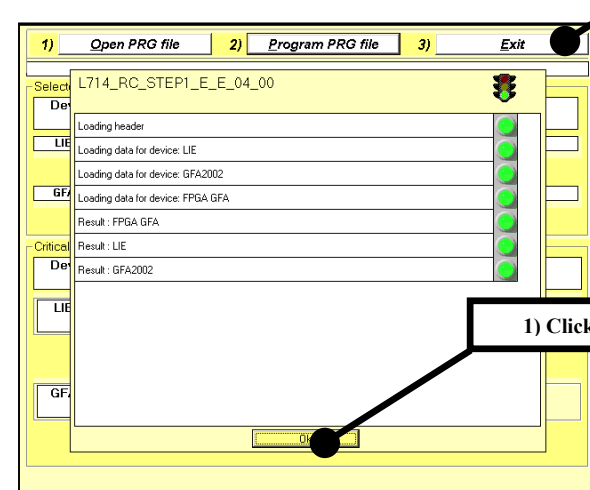
- 1.16 Click on “open”(fig.9 B) and the system automatically loads the file.
- 1.17 Select “Program PRG file” (pic.5 ref. B).
- 1.18 Enter in “Chassis number”(pic.7a)) the complete V.I.N. of the vehicle (17 digits) then click “OK” in order to re-flash the ECU.
- 1.19 Click “OK” in pic.7b.
- 1.20 Click “Exit”pic.7b.

Fig.7 a)



2) Click Exit

Fig.7 b)



1) Click OK


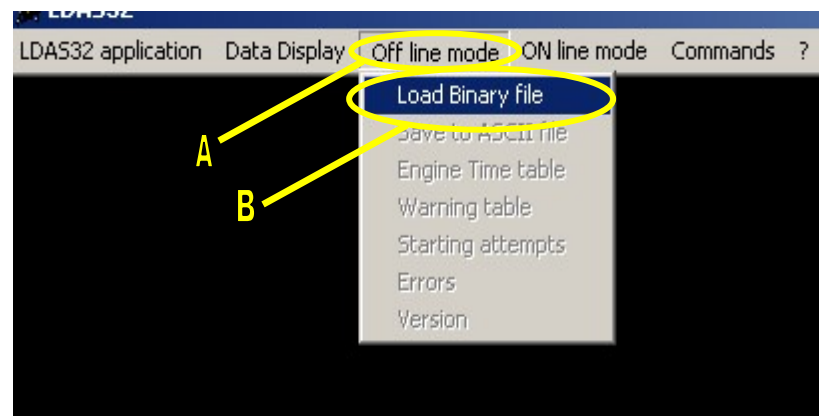
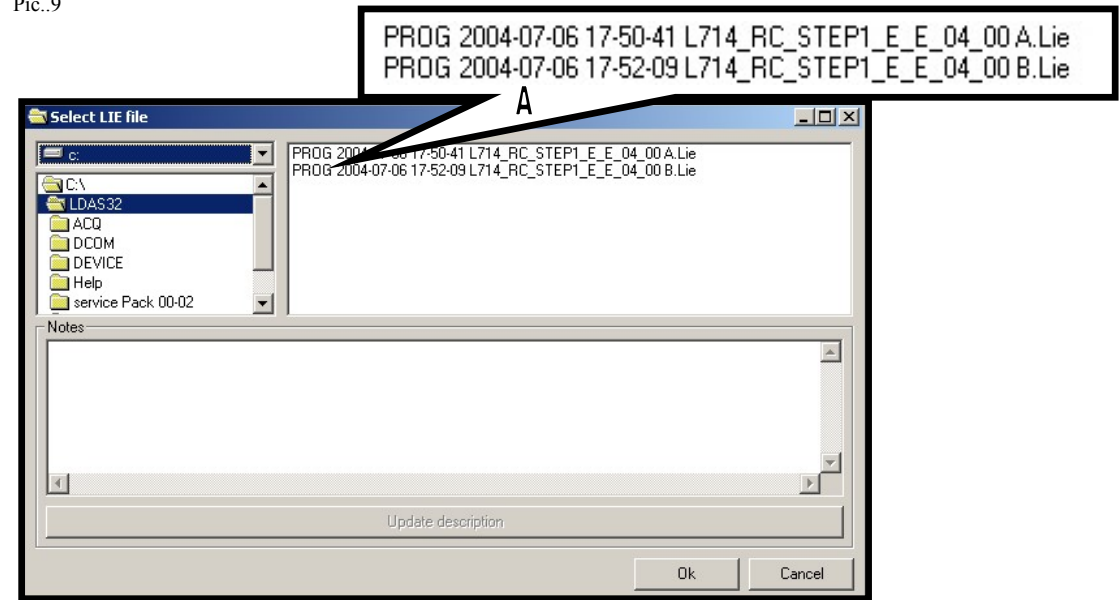
- 1.21 After the ECU re-flash re-open the program clicking the icon  on the tool bar of the desktop.
- 1.22 Select “Off line mode” from the tool bar.(ref A fig.8)
- 1.23 Select “Load Binary file” in the pull down menu.

Fig.8



1.24 The system creates two files, one that reports the data before the ECU programming and another one after it. They are identified by the capital letters A and B (pic.9 ref. A).


Pic..9



1.25 Enclose file afore mentioned files (pic.9 ref. A) to the warranty claim.



- 1.26** Put on the two LIE ECUs the sticker (p/n 901475000) for identification that the reflash was done. Fill in with the number: L140.A-???.04 (?? Number of the service group) and date.

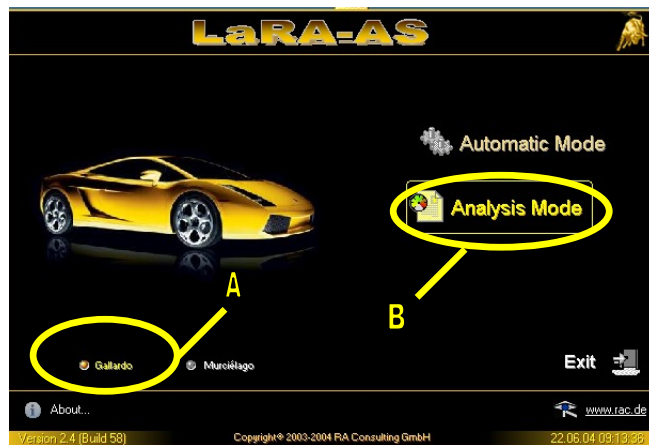
Automobili Lamborghini	
Service Campaign	
	
Numero - Nummer - Number	
Data - Datum - Date	
Eseguito dal Concessionario - Ausgeführt vom Händler - Done by Dealer	
Firma - Unterschrift - Signature	
p/n 901475000	

- 1.27** Go on with step D

D E-gear ECU re-flash

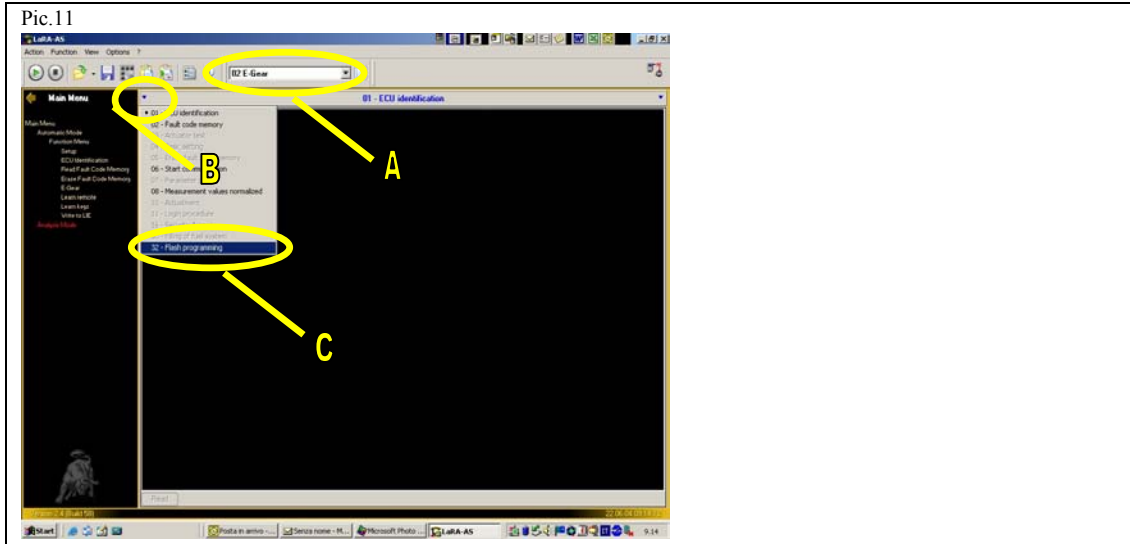
- 1.28** Connect the lap top to the vehicle by OBDII port.
1.29 Enter in laRA-AS sw. and select the model :*Gallardo* (pic.10 ref. A).
1.30 Start the program in “*Analysis mode*” (pic.10 ref. B).

Fig.10



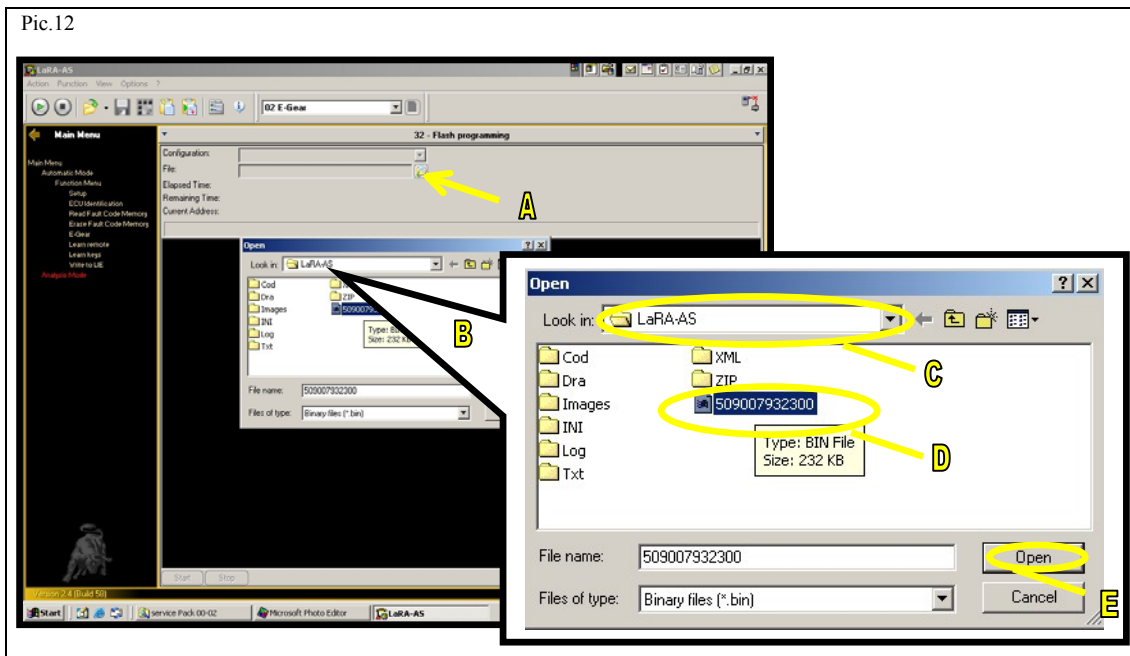
- 1.31** Select “02-E-gear” from A (fig.11)
1.32 Click B (pic.11) and select “32-flash programming” from the pull down menu (pic.11 ref. C).


Pic.11



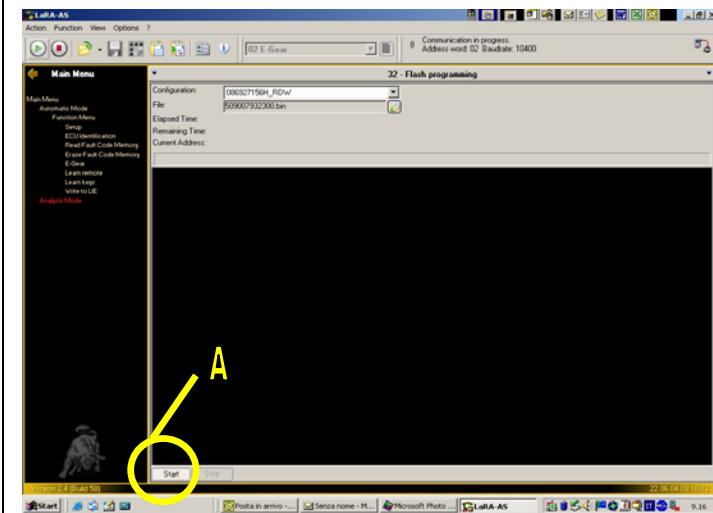
- 1.33 Load the e-gear ECU mapping click “file” (pic.12 ref. A) so that you access to the files saved on the hard disc the (ref. B pic.12).

Pic.12

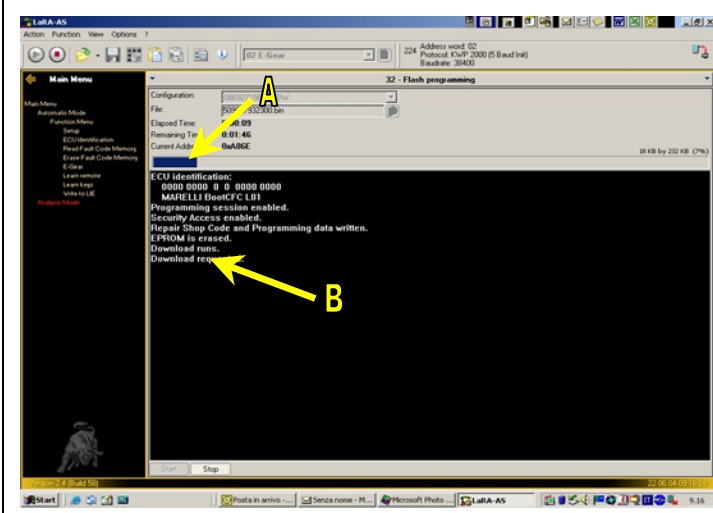


- 1.34 Select “LaRA- As” folder (ref. C fig.12) and open the file (pic.12 ref. D) clicking the button “Open” (ref. E).
- 1.35 Click the button  to start the system connection and the “start” button is activated (pic.13 ref. A)
- 1.36 Click “start” and the system starts to load the new ECU mapping.

Pic.13



Pic.14



1.37 From the tool bar (pic.14 ref .A) check the status of the download.***

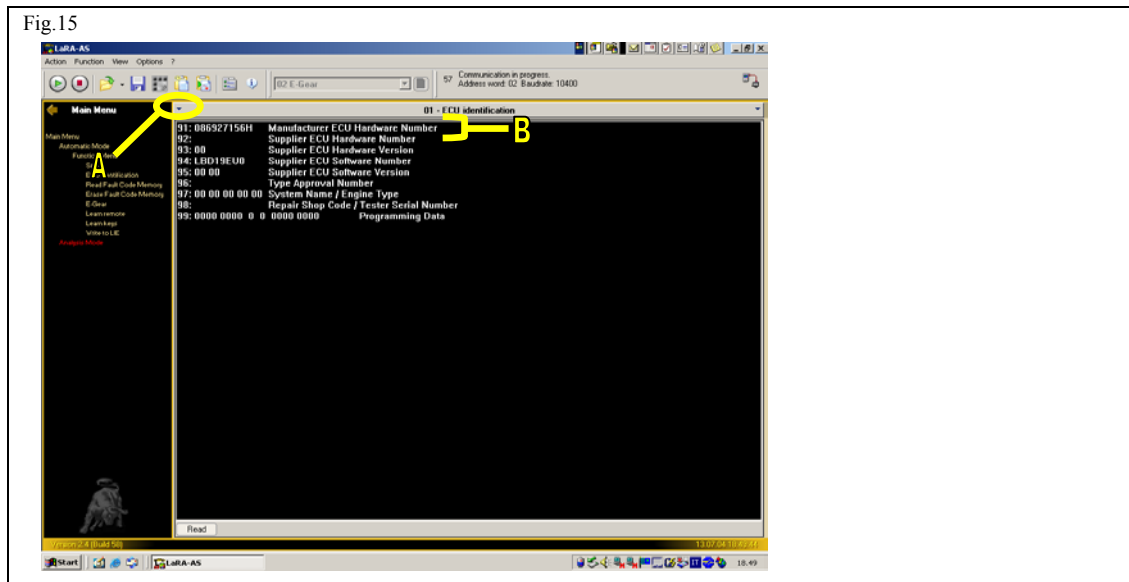
*****Warning:** during this operation do not touch any lap top command because the procedure can be miscarried.

1.38 When 232 Kb download is completed (the bar gets fully blue see ref. A pic.14) and a message confirms that the operation has been successfully carried out (ref. B).

1.39 Delete all the possible errors stored using LDAS and LaRA-AS (fault memory code).

1.40 Choose the command “01-ECU-identification” from the pull down menu that it is displayed clicking on A (pic.15).

Fig.15



- 1.41 Check that the : “*Manufacturer ECU Hardware Number*” (ref. B pic.15) meets the one in the template nr..3.

Tab. 3- “*Manufacturer ECU Hardware Number*” e-gear ECU.

Step	before the reflash	after the reflash
1	086 927 156F	086 927 156H
3	086 927 156H	

- 1.42 Disconnect the p.c.
1.43 Go on with step E

E Road test.

- 1.44 Turn the engine on and warm it up until the water and oil temperature are higher than **90 °C**. For this purpose it is recommended to drive the car for at least ten kilometres. Now the system automatically starts a “*self learning*”****.

******Warnings:** The engine can idling irregularly because the throttle valve is not properly adjusted.

- 1.45 Once the temperature is 90 °C wait **60 seconds** so that the system acquires the data for the DBW adjustment.
1.46 Let the engine run at idle until it becomes stable.
1.47 Keep driving for **30 minutes**.*****



*******Warnings:** In this period the system can not shift correctly the gears.
Please **drive only in normal modality**(=no drive modalities are in:
Automatic, low adherence and sportive).

- 1.48** In this time the system restart the correct gears engagement without storing errors.