

BMW E90 320d 10/2011 Bluetooth Handsfree installation

All dealers that I have visited told me that it is not possible to get Bluetooth handsfree in my car because of configuration but no one could tell me why. So I have to check it myself. I browsed a lot and finally I have working installation.

I am writing a short manual for those of you who have similar configuration to mine. Use on your risk. My car had no preparation for Bluetooth handsfree installation. No Bluetooth antenna in the front, no wires (for antenna or mic) coming from the trunk to the front. I just have one microphone because of S620A (Voice control) and Combox in the trunk.

The installation should finally look like this:

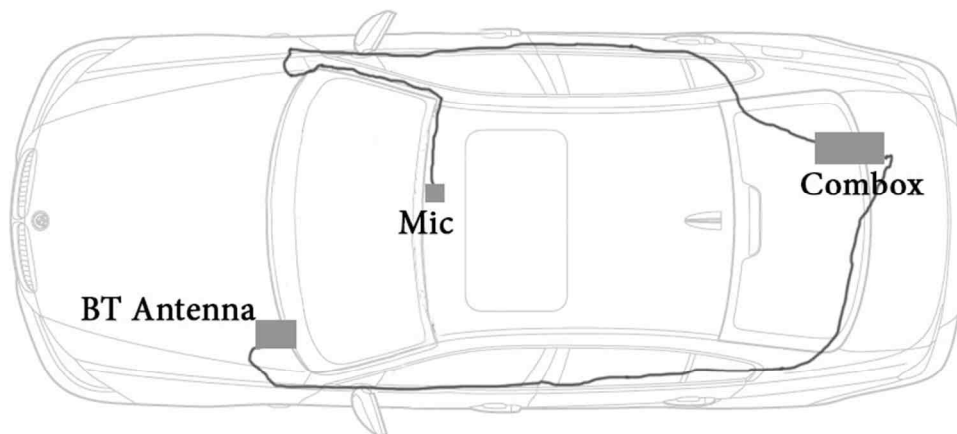


Figure 1 Cable installation

This is my car configuration:

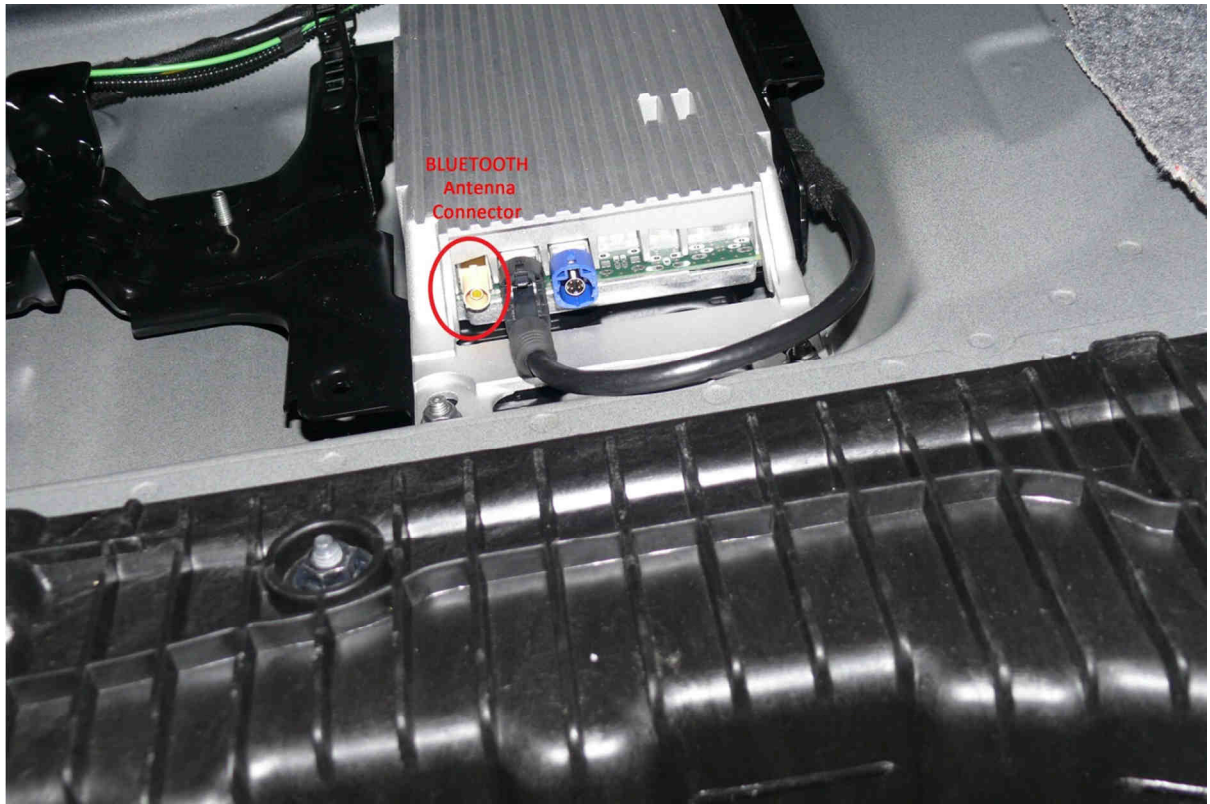
BMW type:	320D
Model:	Europa
Key type:	PP11
E-Code:	E90 (MUE)
Chassis:	Limousine
Steering:	Links
Doors:	4
Engine:	N47T - 2,00l (135kW)
Drive:	Rear Wheel drive
Transmission:	Manual

Code	Equipment
S249A	Multifunction steering Wheel
S321A	Exterior parts in vehicle color
S520A	Fog lights
S548A	Kilometer-calibrated speedometer
S851A	Language version German

Code	Optional Equipment
S1CAA	Selection of COP relevant vehicles
S1CBA	CO2 package
S1CCA	Auto start/stop function
S1CDA	Brake Energy Regeneration
S230A	Extra package, EU-specific
S255A	Sports leather steering Wheel
S258A	Tire with run-flat functionality
S302A	Alarm system
S313A	Fold-in outside mirror
S320A	Deleted, model lettering
S3APA	Windshield with grey wedge
S428A	Warning triangle and first aid kit
S431A	Interior mirror with automatic-dip
S441A	Smoker package
S493A	Storage compartment package
S4AEA	Armrest front, retractable
S4ATA	Interior trim finishers black high-gloss
S502A	Headlight cleaning system
S508A	Park Distance Control (PDC)
S521A	Rain sensor
S522A	Xenon Light
S534A	Automatic air conditioning
S5ACA	High-beam assistant
S5DCA	Rear-seat headrests, folding
S609A	Navigation system Professional
S620A	Voice control
S676A	HiFi speaker system
S698A	Area-Code 2 for DVD
S6FLA	USB/Audio interface
S6VCA	Control for Combox
P7KCA	Navigation Professional
S7NHA	BMW Service inclusive
S818A	Battery master switch
S877A	Delete cross-pattern operation
S8SCA	Telematics access request,country-spec.
S8SPA	Control unit COP
S8TNA	Daytime running light on Menu

Check your car, what parts exactly do you need

Open your trunk and find your combox. Look at the connectors and you should see beige round connector for bluetooth. It's FACRA I-type connector originally made by Rosenberger Company and you will need 2 jacks (part numbers: 59Z063-000I – housing; 59K130-102A4 – jack).



The next one black connector is for USB – S6FLA (USB/Audio interface) and the blue one is for SAT radio, I think. Check your combox part number, maybe you can find kit for it at your local dealer.

Manufactured by

HARMAN

BMW Combox

 **CE 0700**

Bluetooth QD ID: B015049

IC: 6434-BEB019

FCC ID T8G-BEB019

THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR
SUBCHAPTER J APPLICABLE TO THE DATE OF MANUFACTURE.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT
TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE RECEIVED.
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED.
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

AGREE PAR L'ANRT MAROC

Numero d'agrément: M0 5451 ANRT 2010
Date d'agrément: 19. Mars 2010

COFETEL: RCPBMC010-0315

Aprobado CNC 16-8562

Complies with
IDA Standards
DB19172

ANATEL
1782-10-2886

(01107858926774074)

TA-2009/1900
APPROVED

TRA
REGISTERED NO:
0020718/10
DEALER NO:
0014517/08

Z725

CCAB10LP1090T9



방음통신위원회
Certification: T8G-Combox CMIIT ID: 2010DJ2940

00-0211

NTC
Type Approved
No: ESD-1004588C

005WVDA0275
AD10-0086005





Manufactured in Hungary by: B027J 082738218 12Volt (Minus on Chassis)
HARMAN/BECKER
AUTOMOTIVE SYSTEMS
Model No.: BE B027 SNR: 2259338 Type: Combox Media BN2000
100 991-10 EC: 011 Date: 08-10-2011 Version: ECE
HW: 004.000.004
SW: 003.004.031
BMW 84.10-9 257 160-01

Unfortunately, I didn't find anything for my combox on internet. As I don't like unoriginal self-made parts I decided to buy a kit according to some installation manual and ordered installation kit with part number: 84 64 0 441 949 (about 100 Euro and includes cables, microphone and bluetooth antenna) (FAIL!!! ☹ – cables are too short because it's made for installation with combox behind glove box: Antenna cable is about 20cm and mic cable is about 1m; different connector for different Combox). Because it is not possible to recrimp the FAKRA connectors of antenna cable I had to put antenna in the trunk next to combox. I used dual sided tape to glue it to the black metallic holder. It has no impact to the signal quality in the car.

So, DO NOT REPEAT MY MISTAKES AND CHECK THE COMBOX MAIN CONNECTOR FIRST!!! On many internet pages are 54pin connectors (with 36pin sub-connector inside) but there is only 26 pins in my case. 54pin connector is in TCU and MULF modules but in Combox there 26pin. For more information try to browse

X34130 – Connector on Combox, **Black** color, 26 pins

X14133M – Connector on MULF2HI, **Blue** color, 54 pins

X14133T – Connector on TCU, **White** color, 54 pins

Pins for **X34130**>

Pin 11 (x34130) Shield --w9110.2

Pin 12 (x34130) MIC- --0.35 SW (Black)

Pin 25 (x34130) MIC+ --0.35 GE (Yellow)

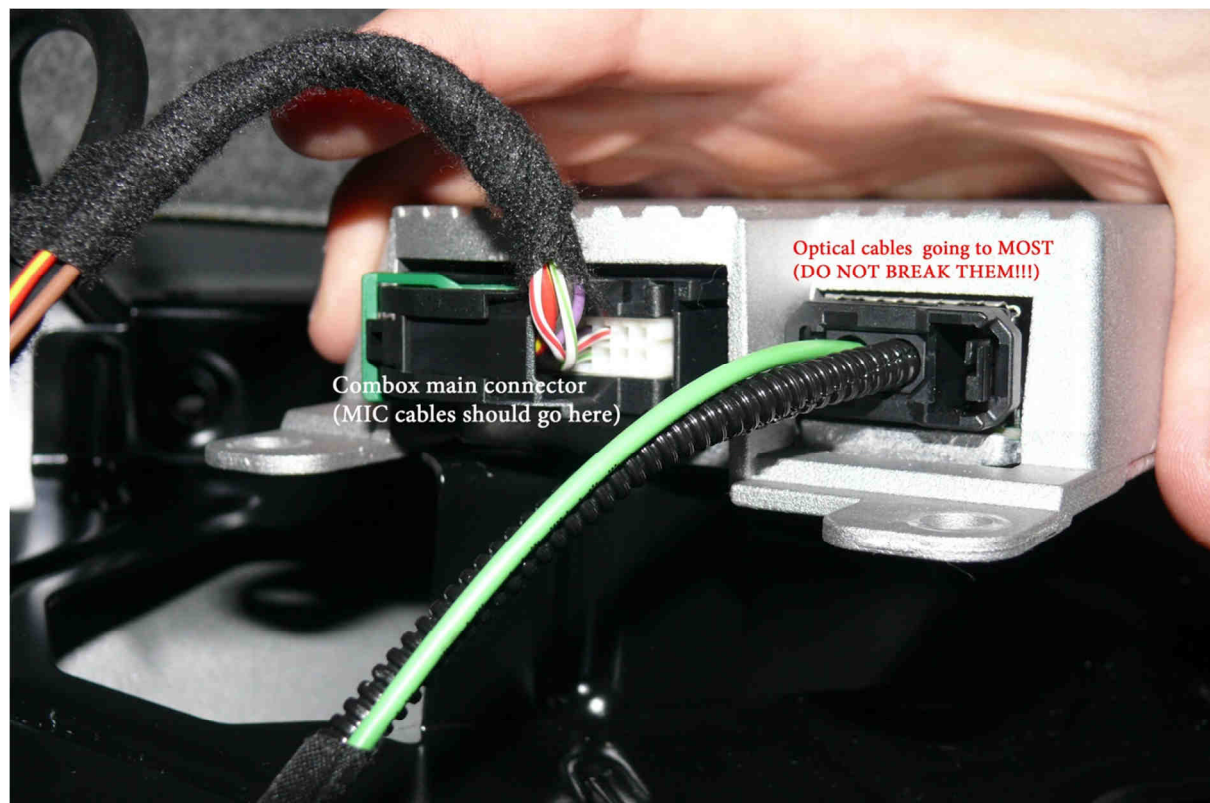
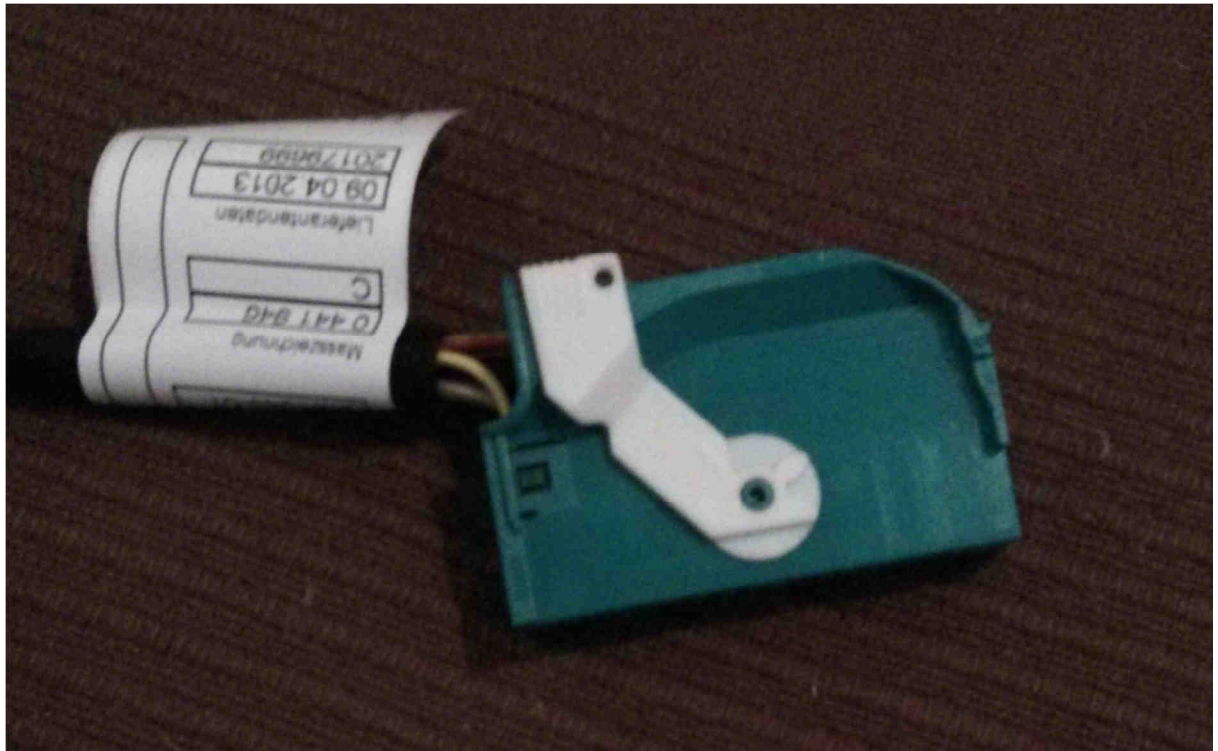


Figure 2 Combox connectors

In the kit that I have ordered, there was 54pin connector:



The pins types are the same in both versions of connectors.

Installation – prepare cables

Dismount kit connector and remove yellow, black and shielding wires from 56pin connector. Remove the tape to separate microphone cable from other wires. Now you have about 1m long cable, unfortunately it's not enough to reach from the roof light dome to the trunk. I cut the cable and soldered a piece of cable in the middle so the colors of the wires ends left unchanged. I used cable form jack to jack adapter cable that has 2 core wires with shielding.



On the other side of cable should be 3pin microphone connector with only 2 connected pins (black and yellow wire).



Remove interior light dome from the roof. It's a little bit tricky but it can be done very quickly if you know how to do it. Sit at the passenger seat with back to the windshield. Remove white semi-transparent plastic cover from the lights. Now try to locate 2 clips according to picture and push it inside with trim tool (or with screwdriver very carefully, not to scratch anything).



Disconnect all connectors (don't worry they are different size so It won't be problem to connect them back). Because I have kit with another one microphone I decided install it in the empty space for second microphone. This is not necessary and you should be able to use original one.



Now install the microphone cable. I took it over the roof through the right side as shown in the Figure 1.



Microphone cable



Microphone Cable

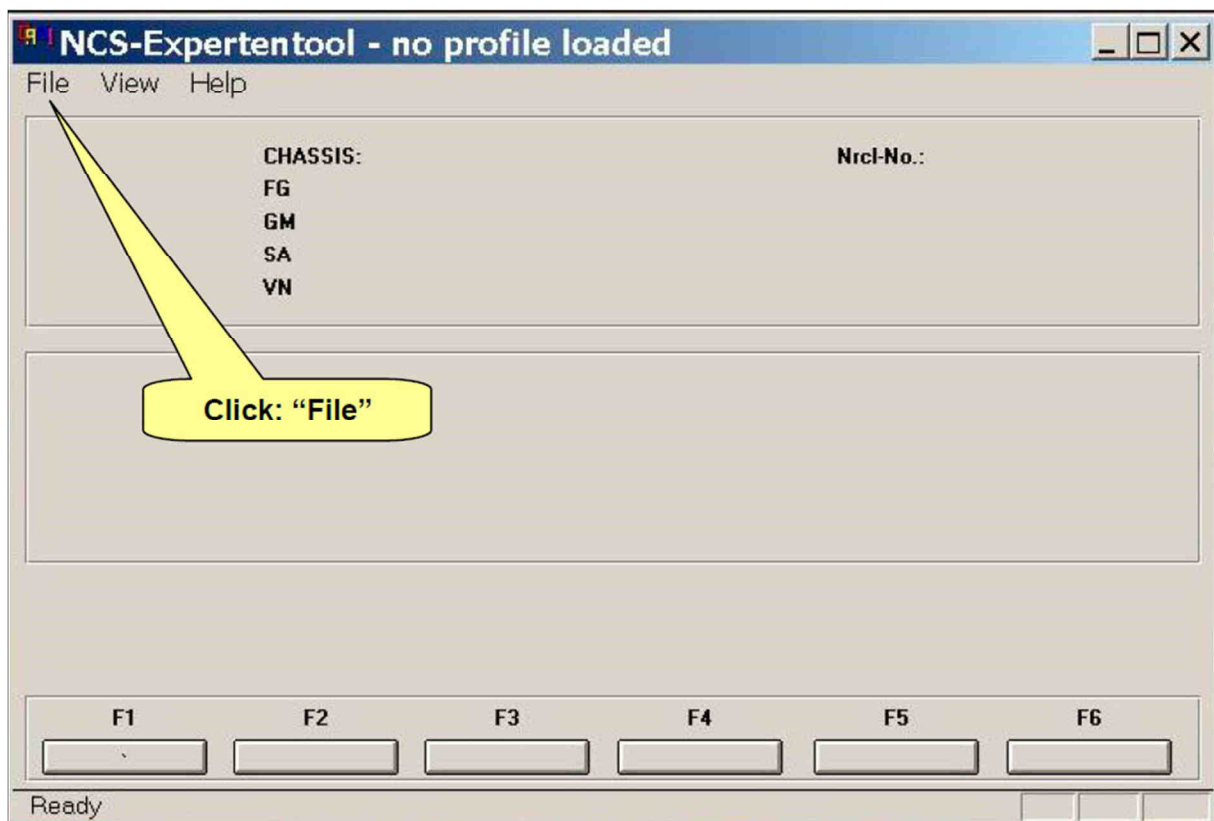
Remove Black 36pin connector from Combox (see Figure 2) and install Microphone pins (Pin 11, 12, 25). Pin numbers are written on the connector. Plug in the connector back to the Combox.

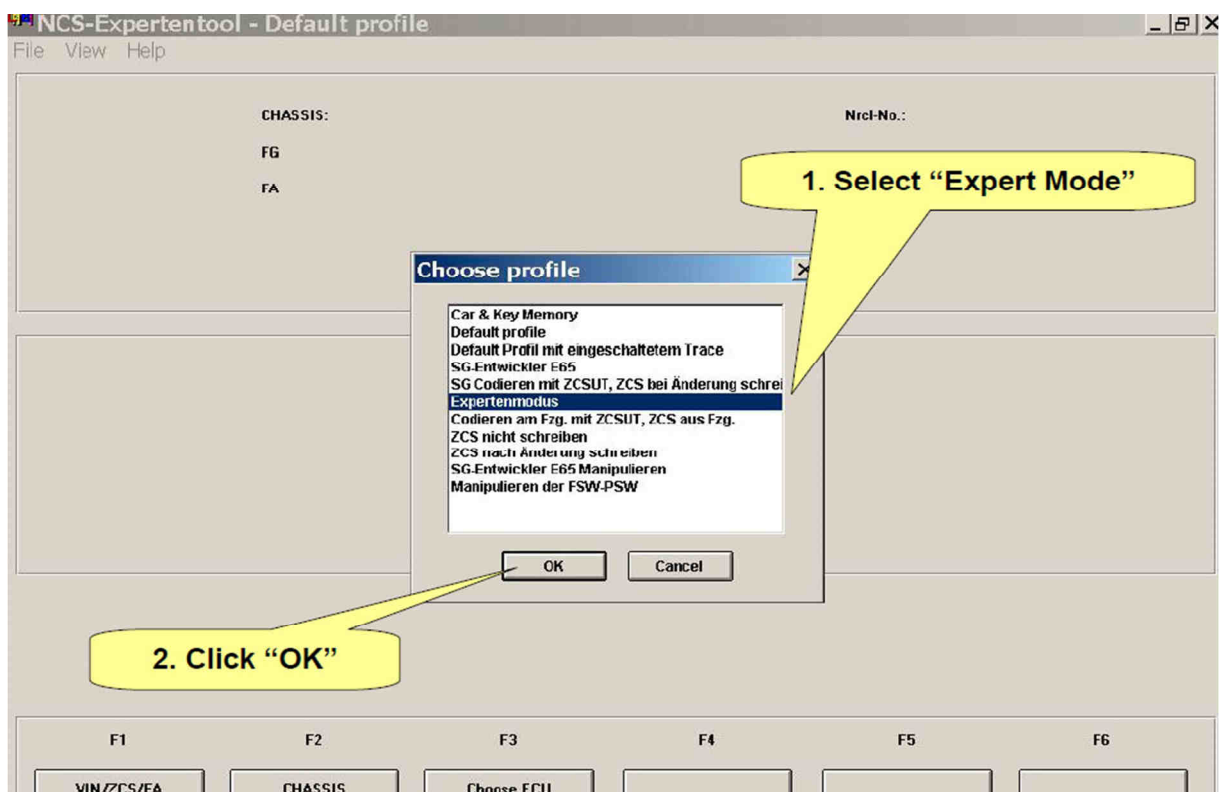
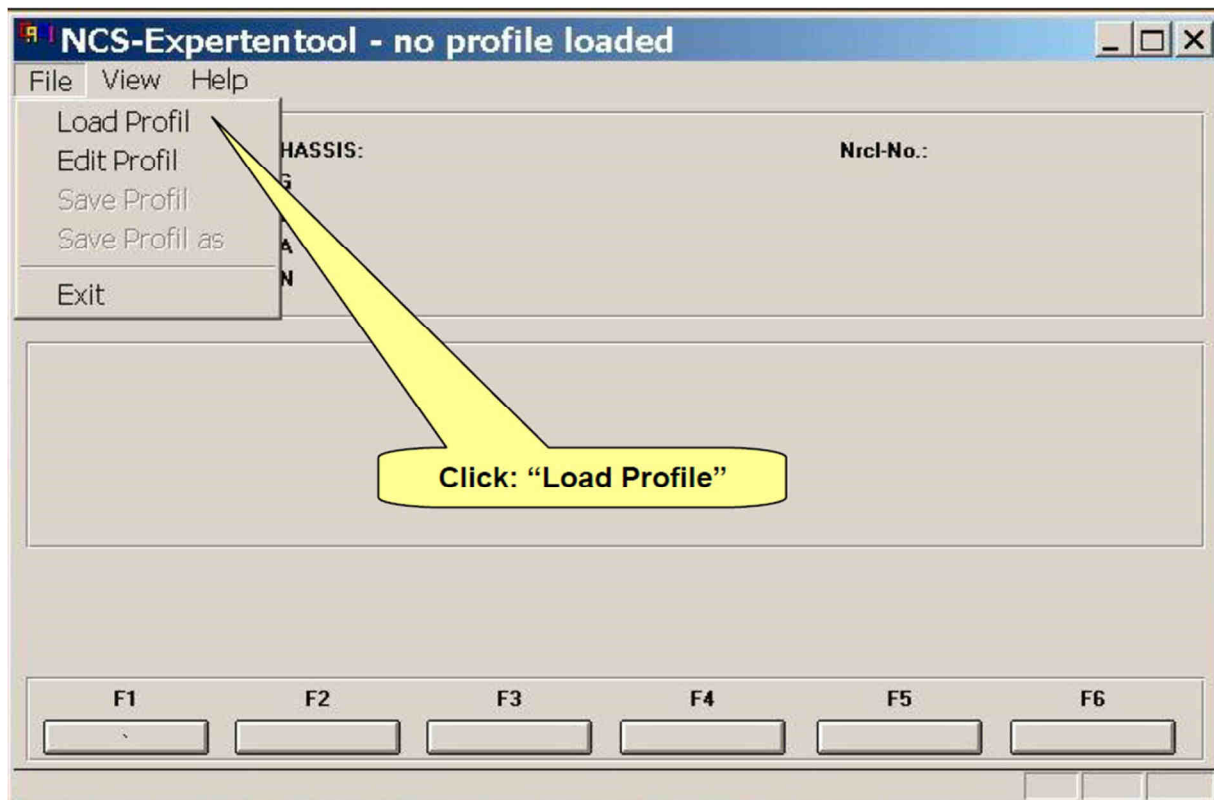
Now put all removed parts back together.

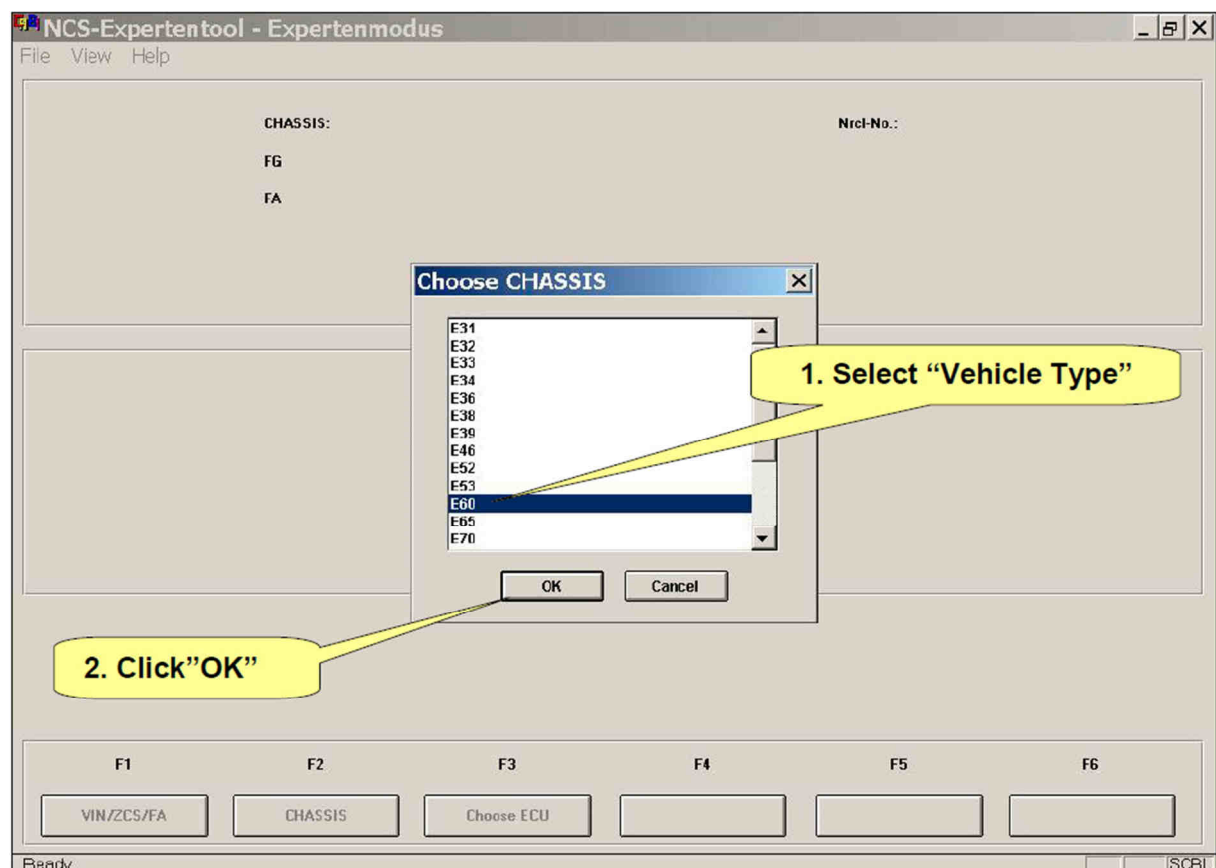
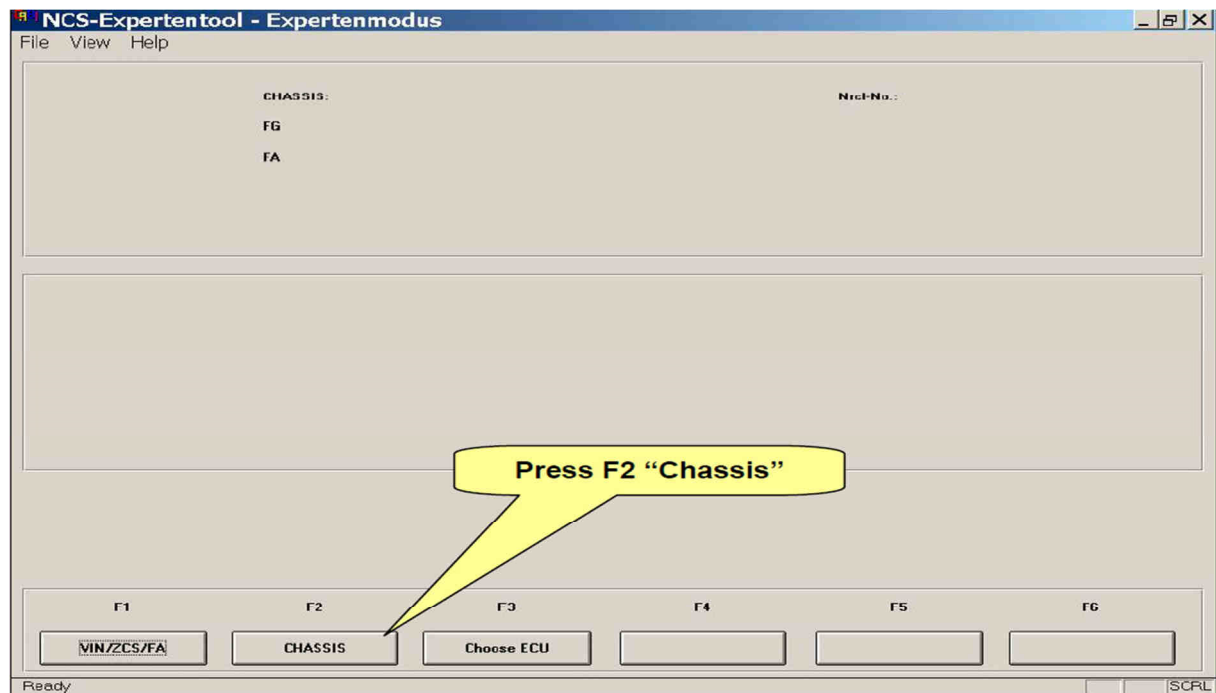
Coding

First you have to add \$644 option to your Vehicle Order. There are many step-by-step manuals how to do it with NCS Expert. I have coded into CAS and NFRM. Following part is copied from BMW Expert Tools manual.

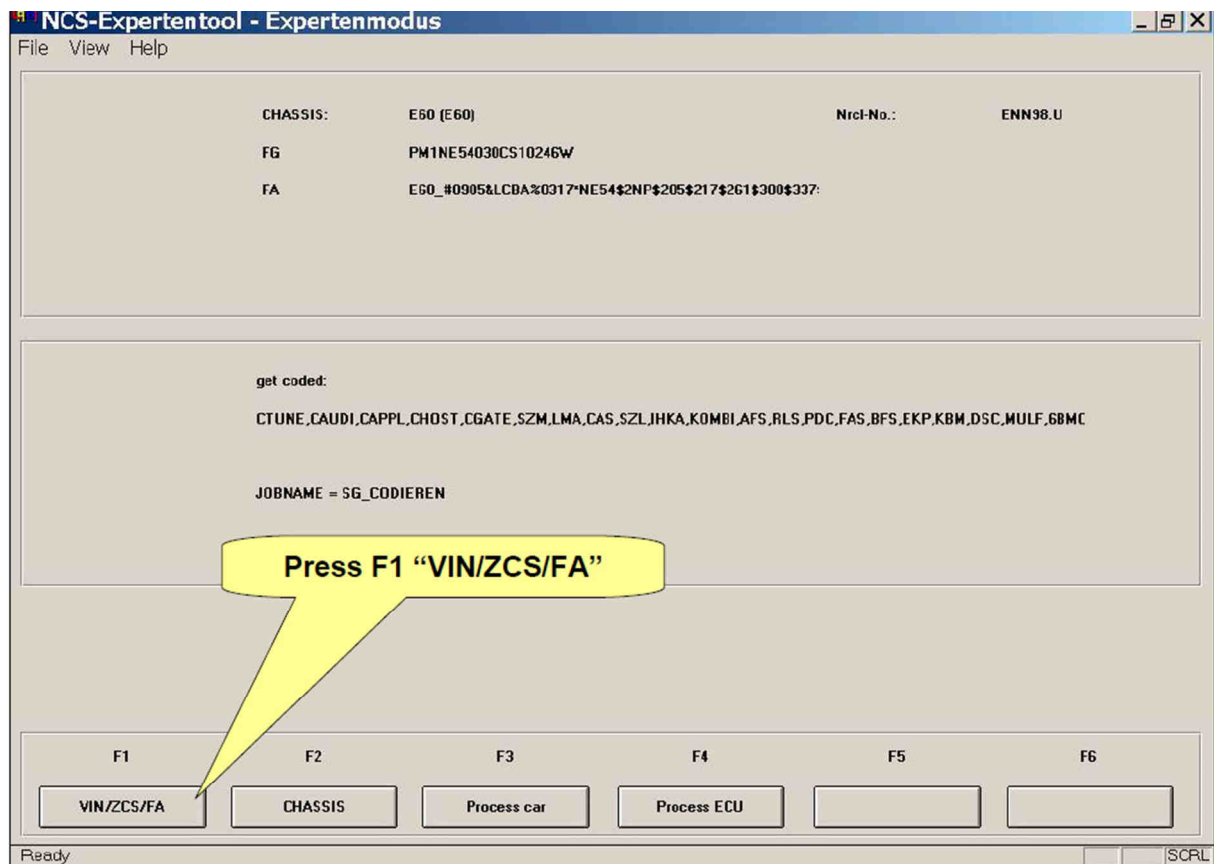
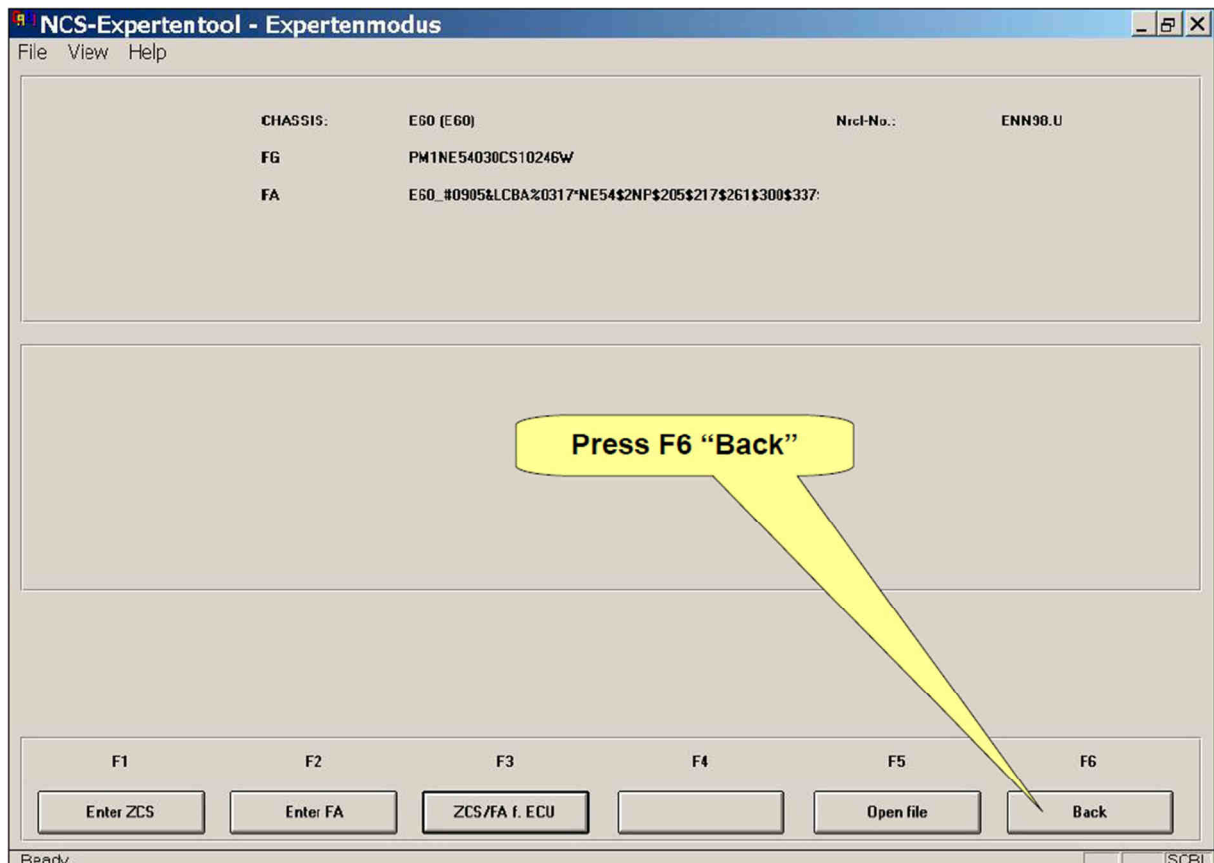
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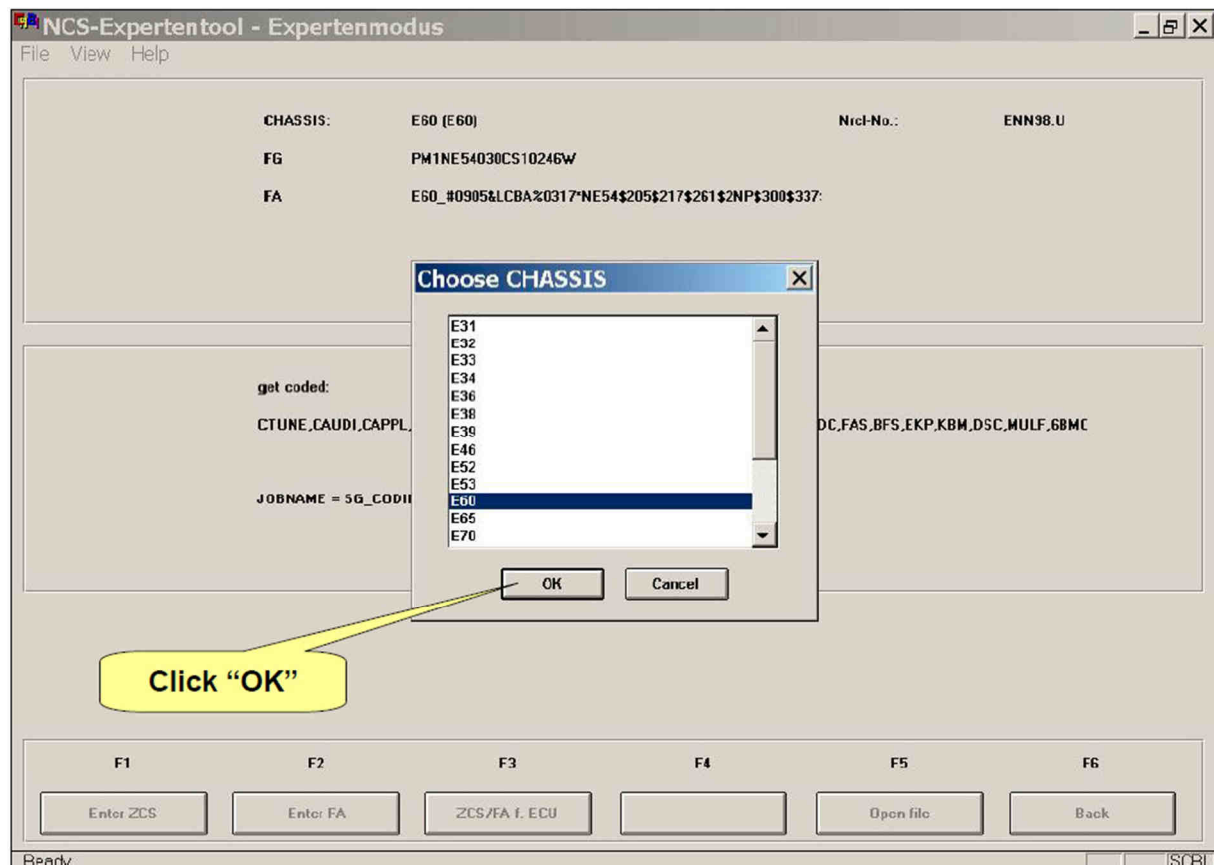
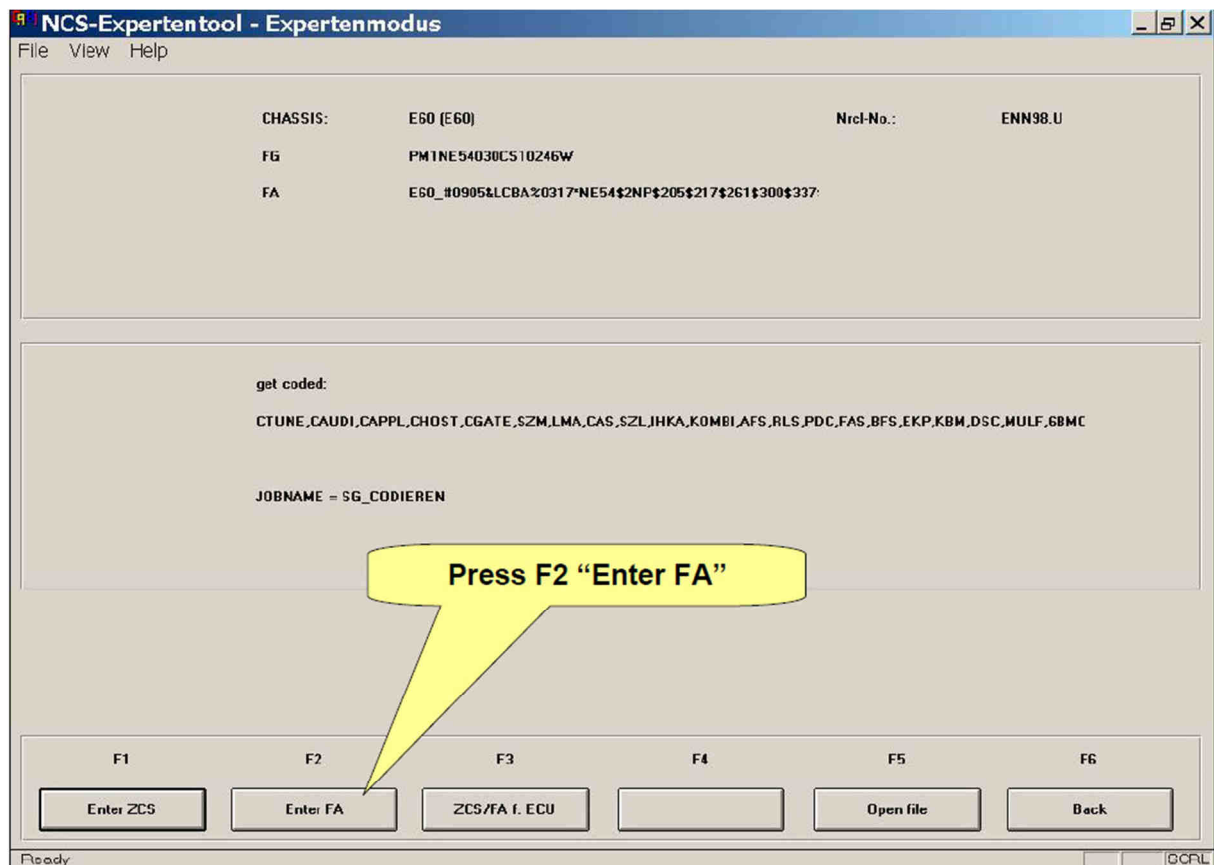


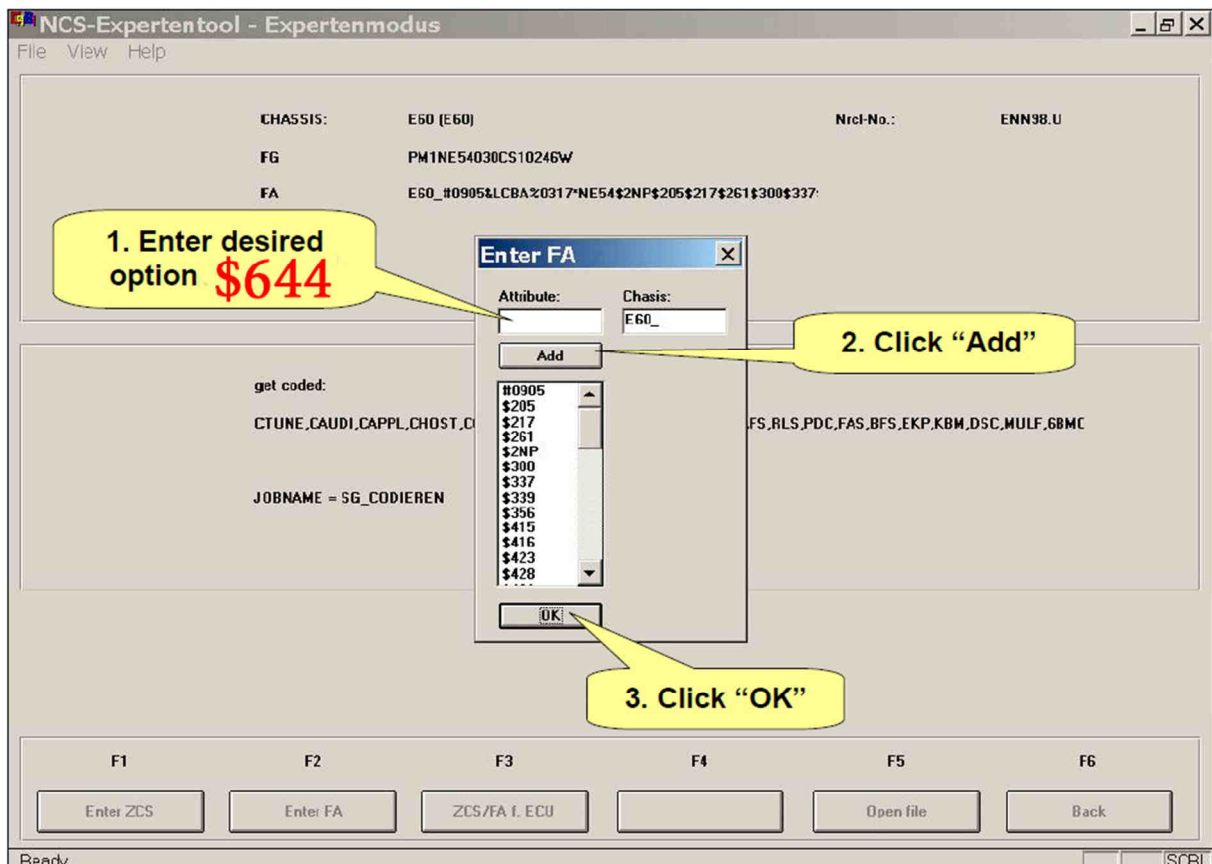
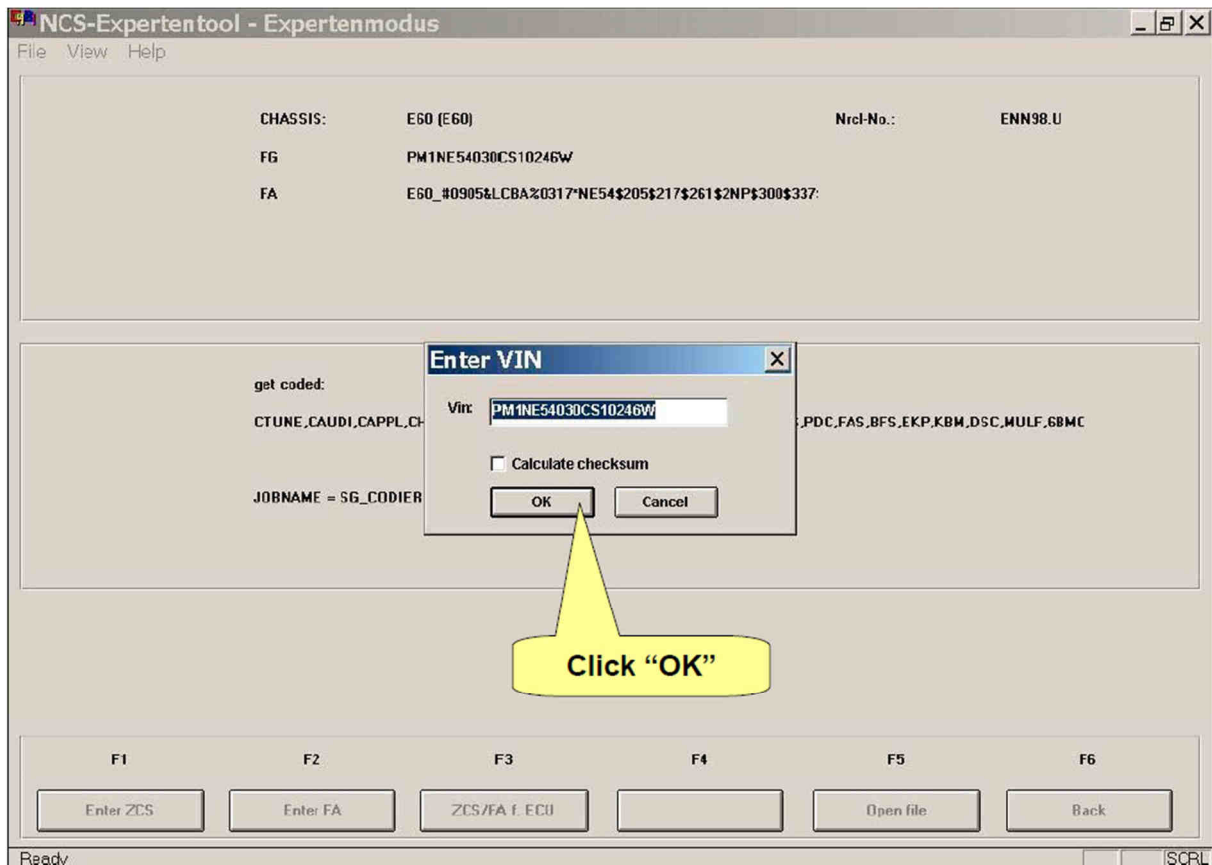


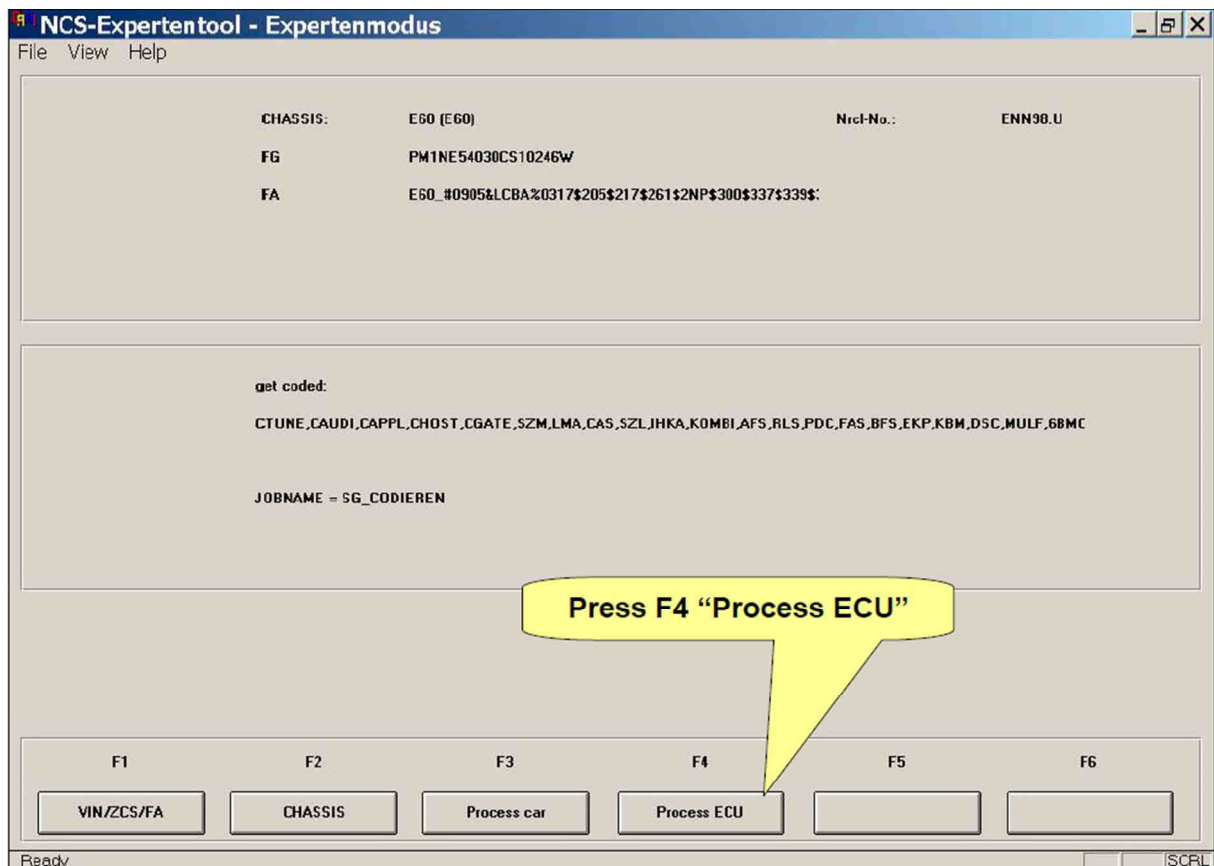
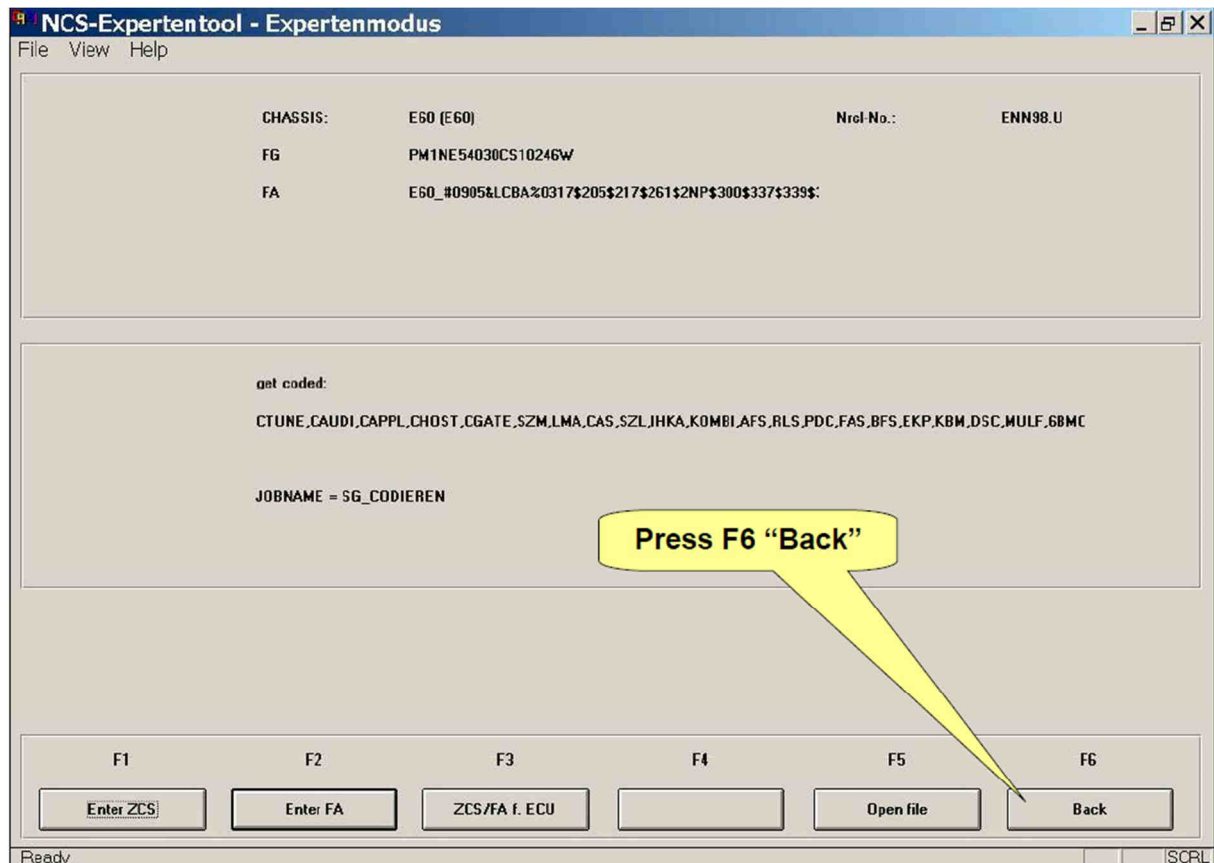


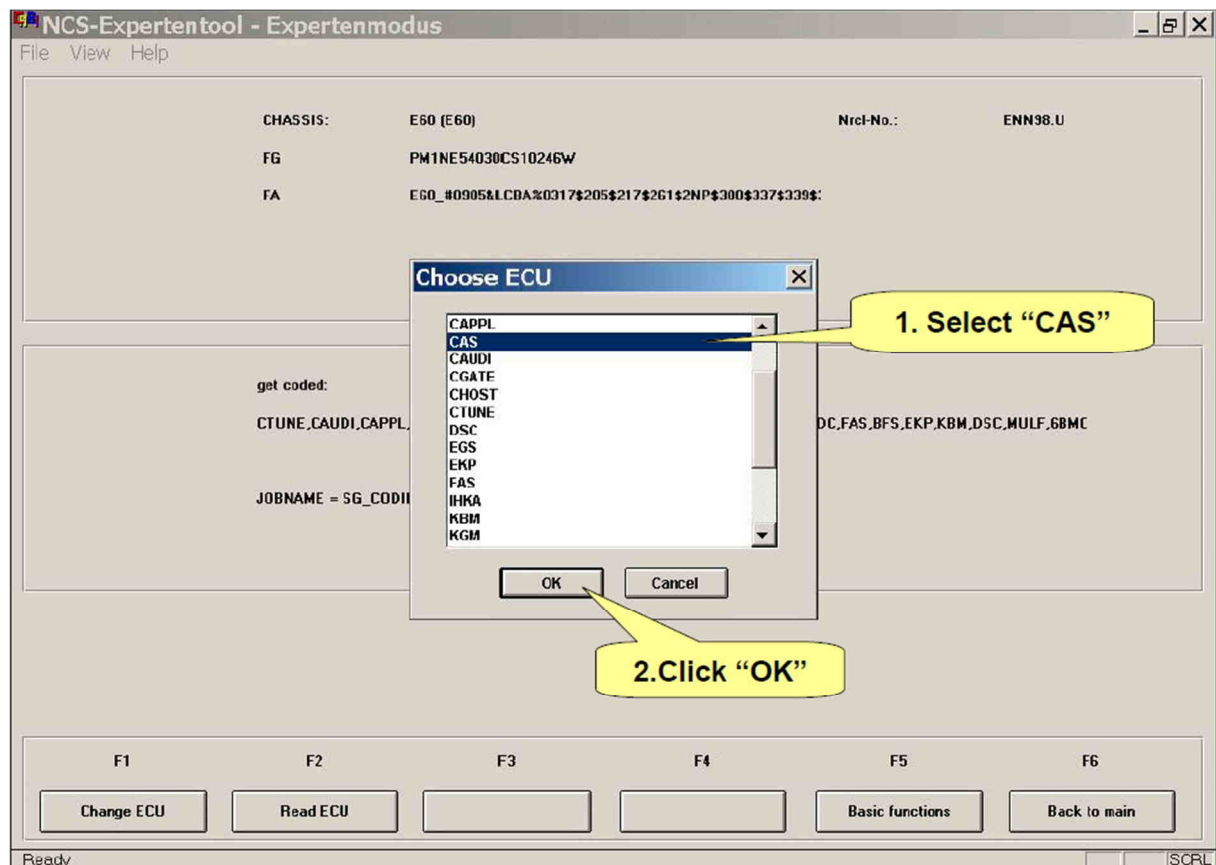
Choose E90!!!



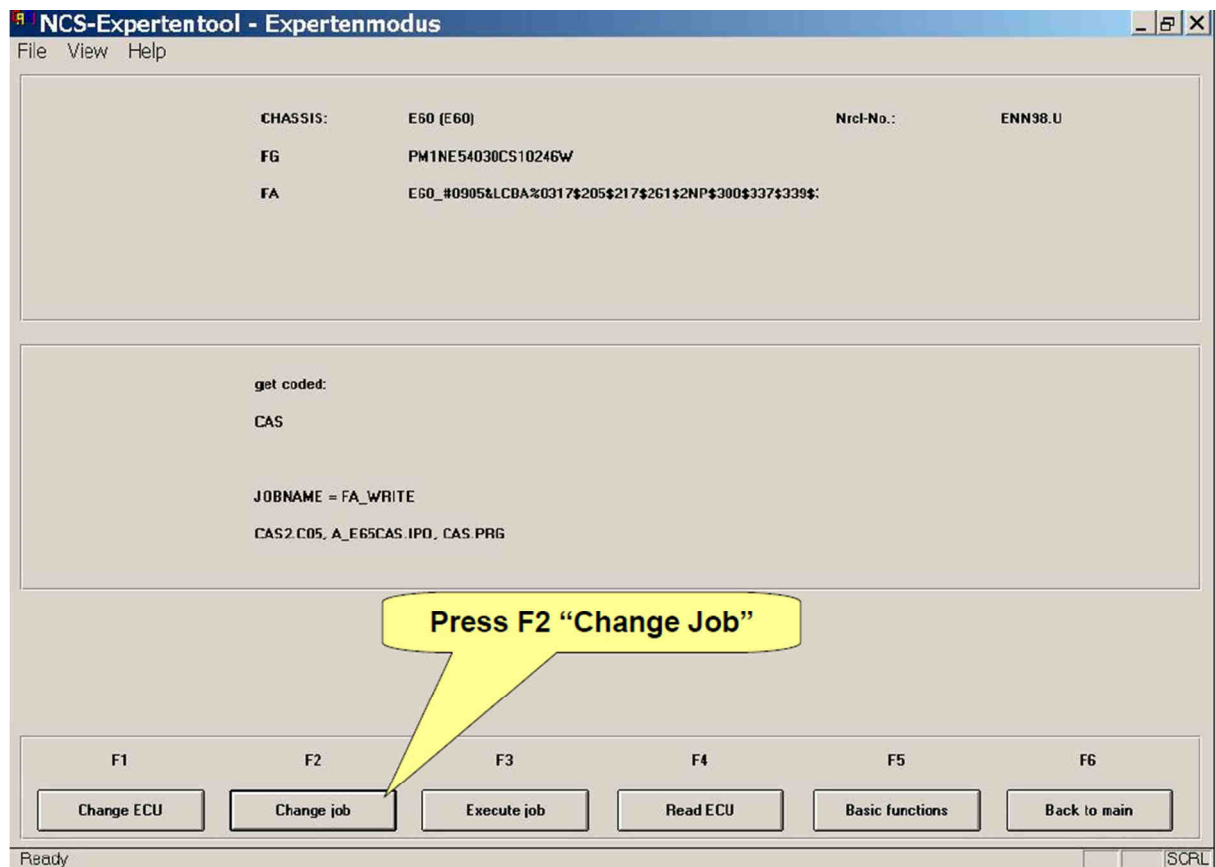


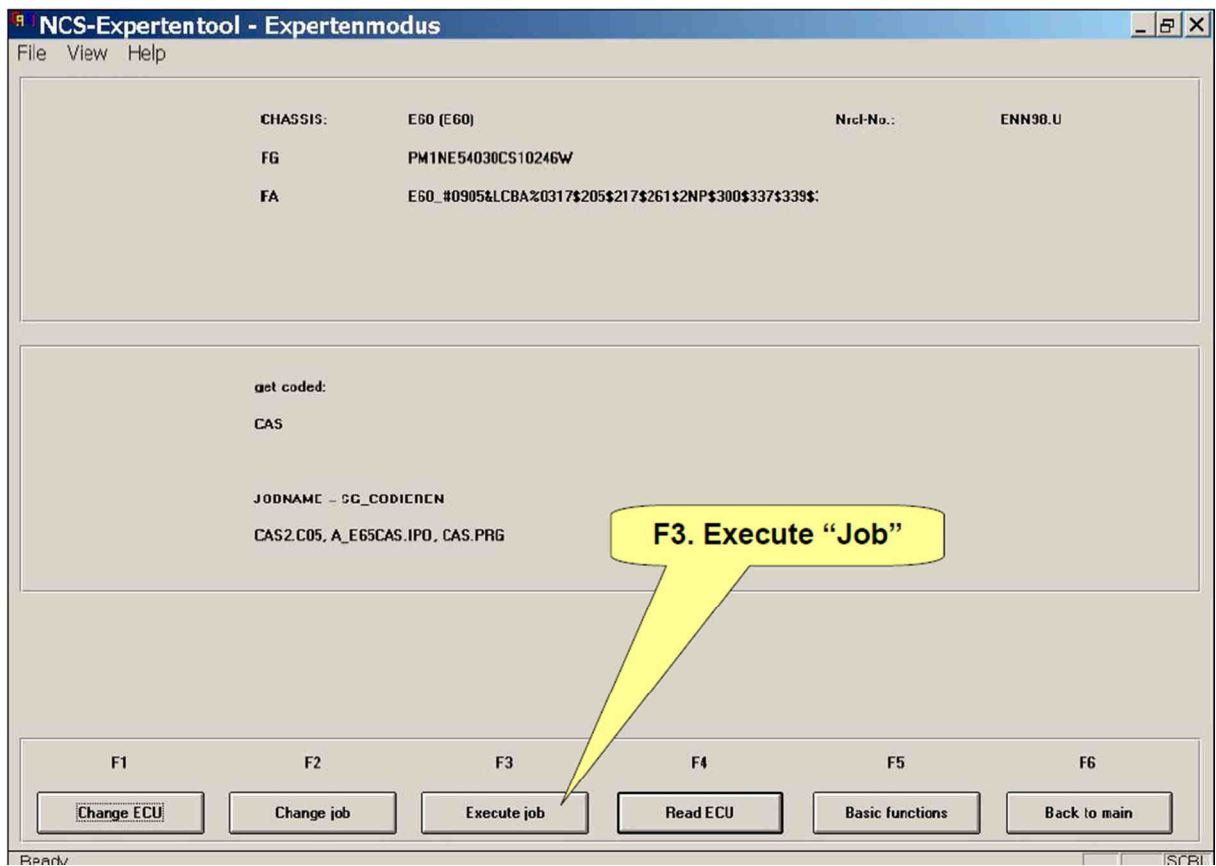
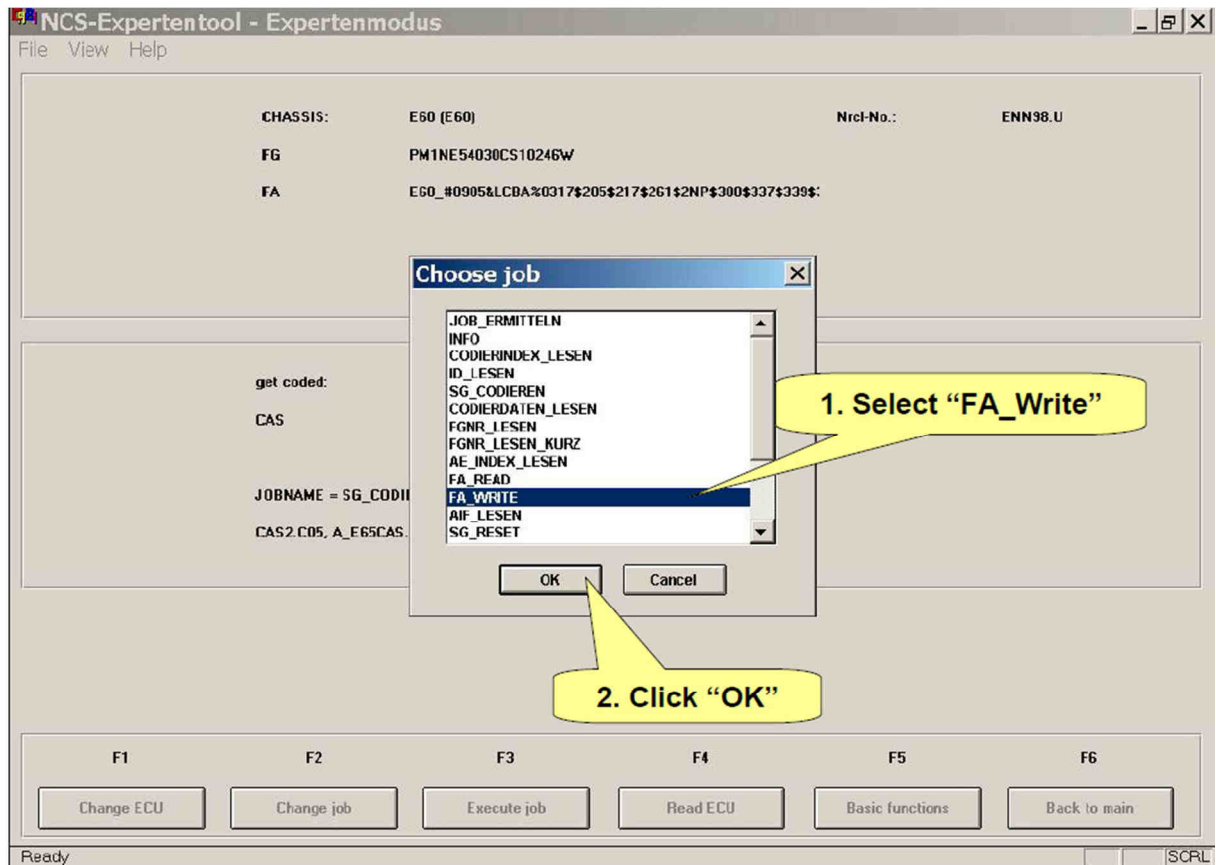


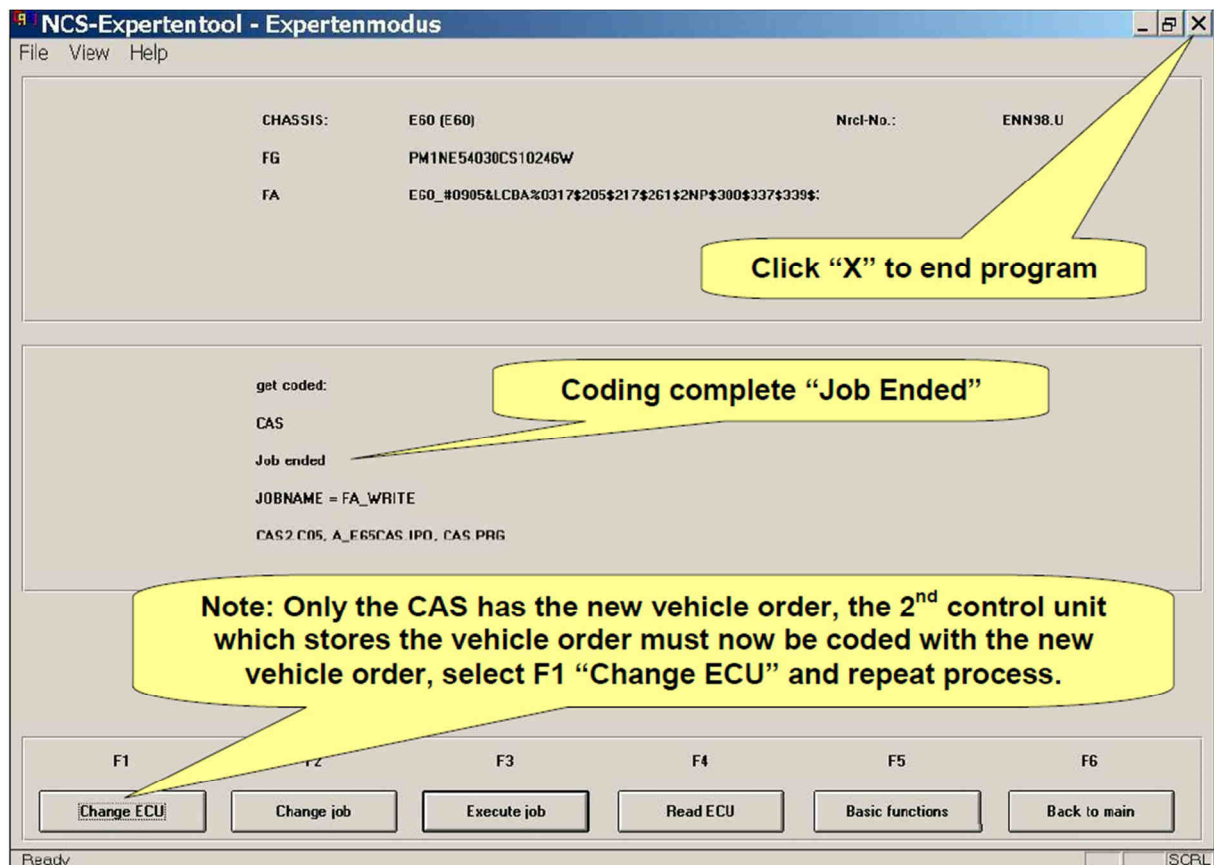




Repeat for NFRM.

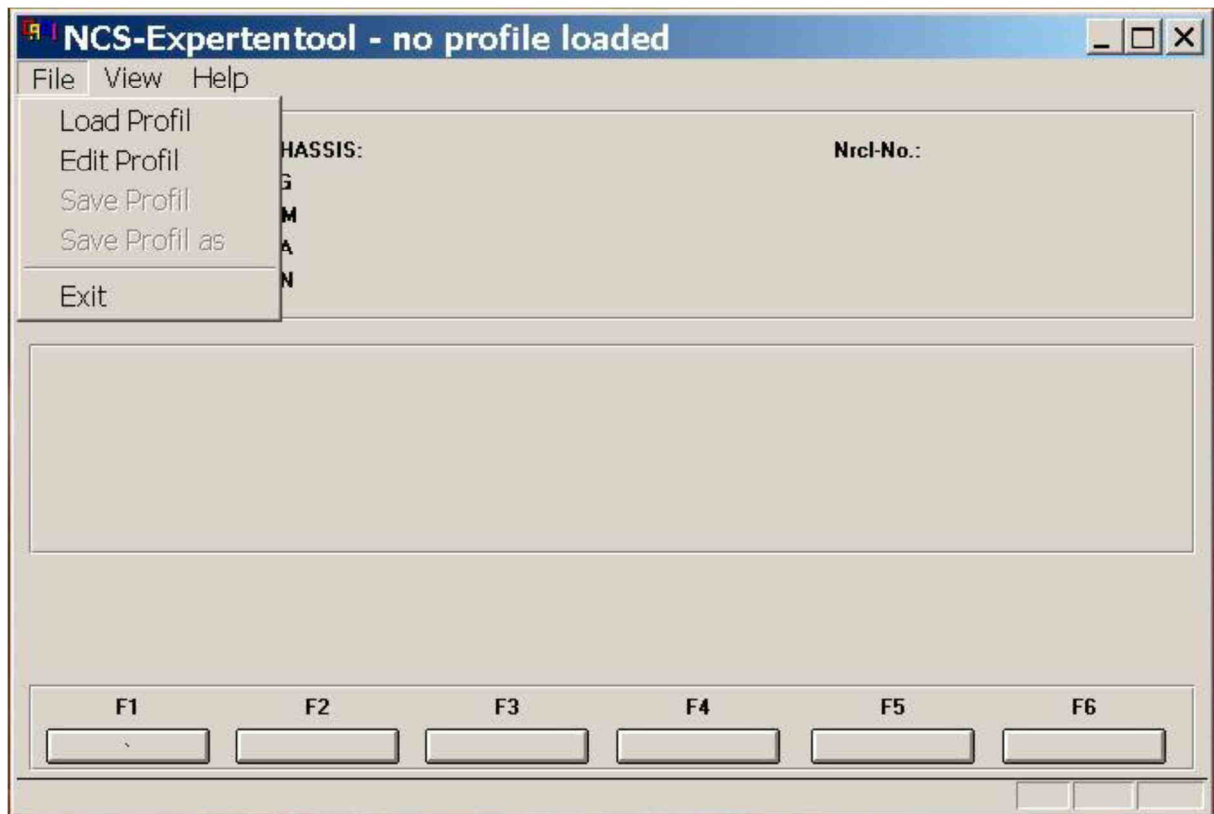




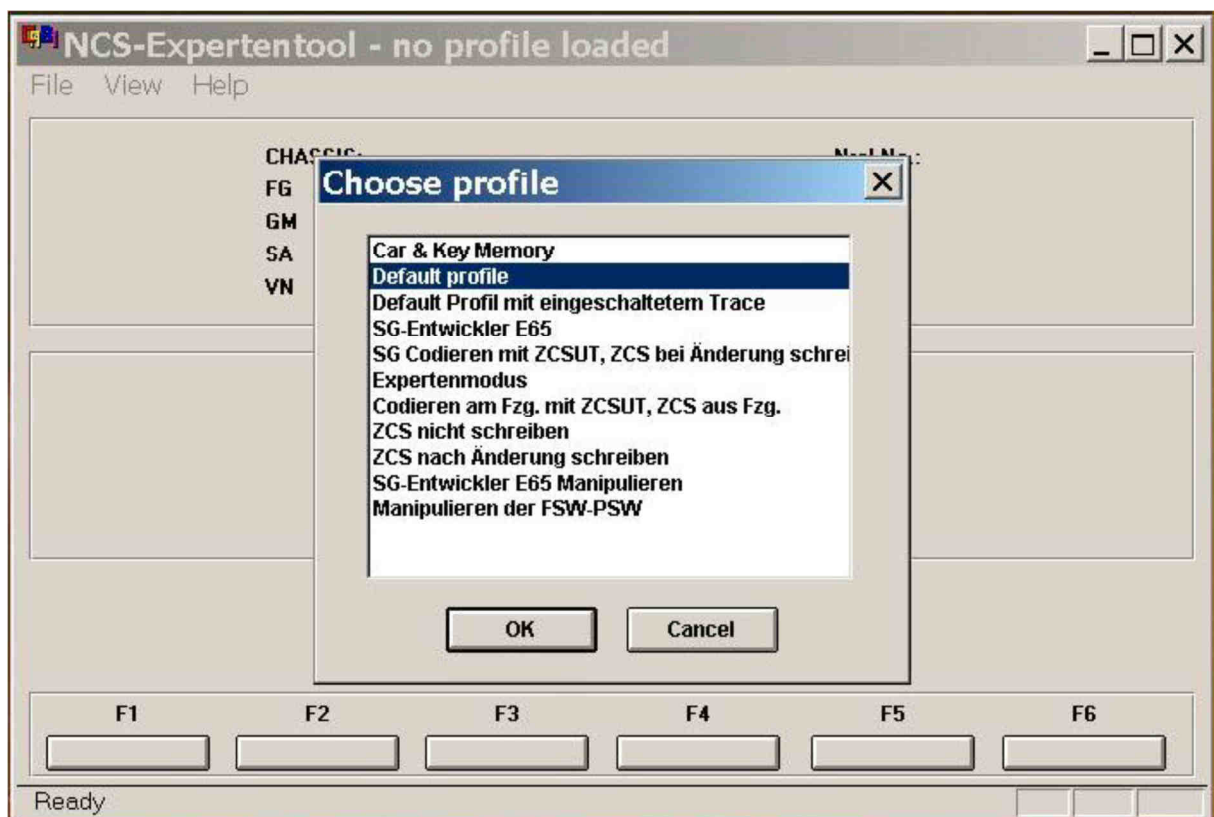


Repeat the steps for NFRM module.

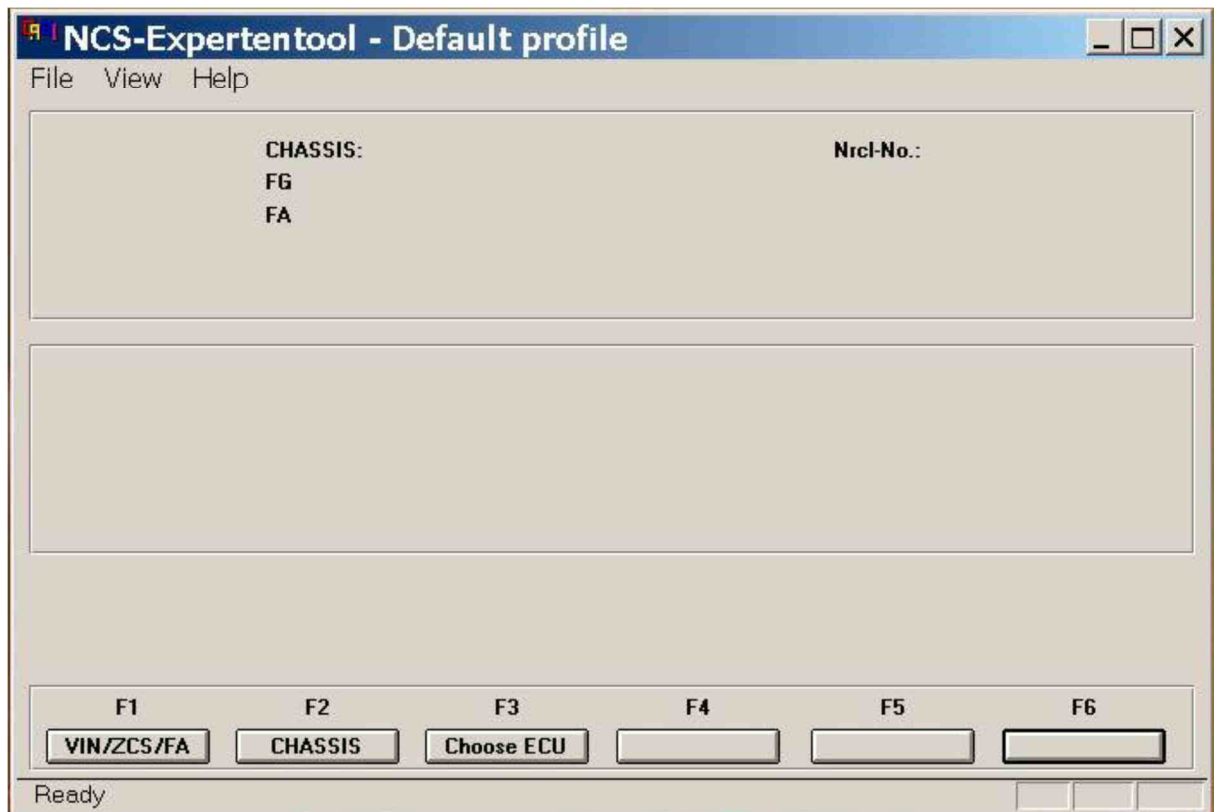
Reset the CAR



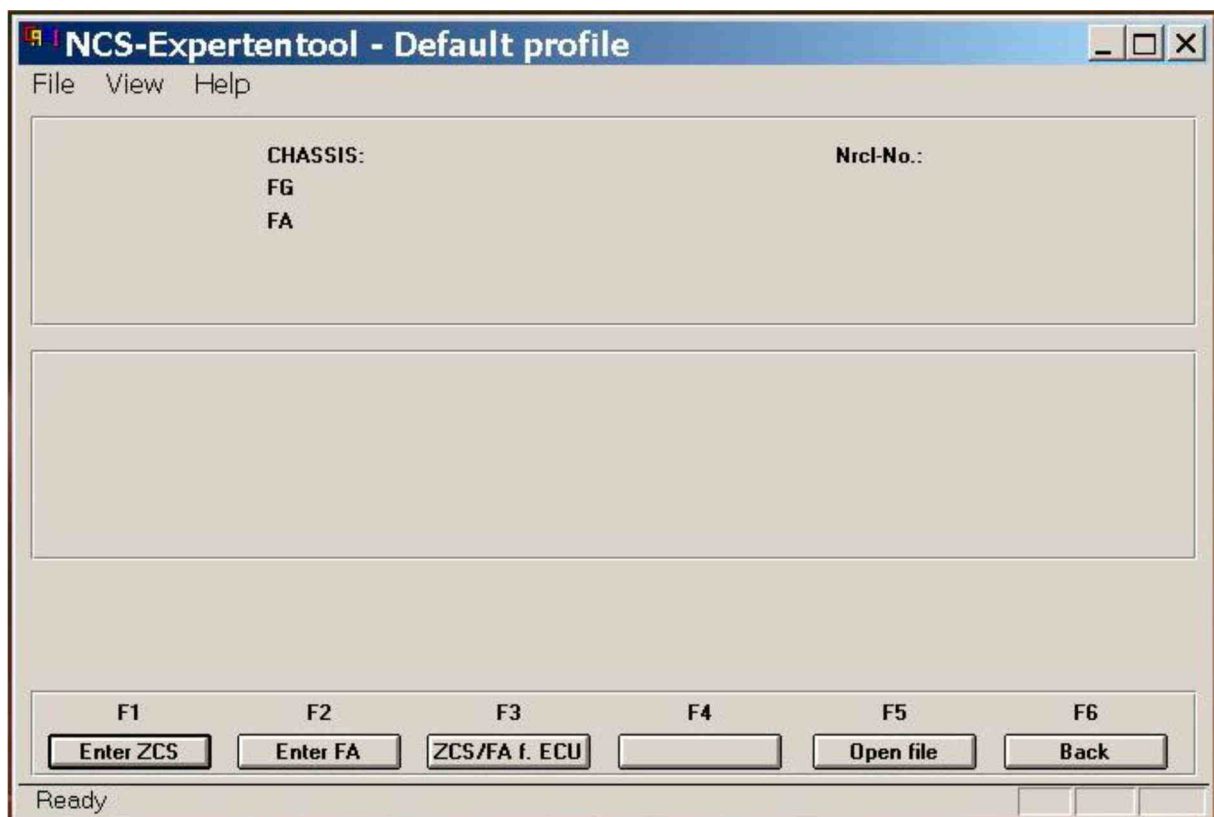
Load Profile



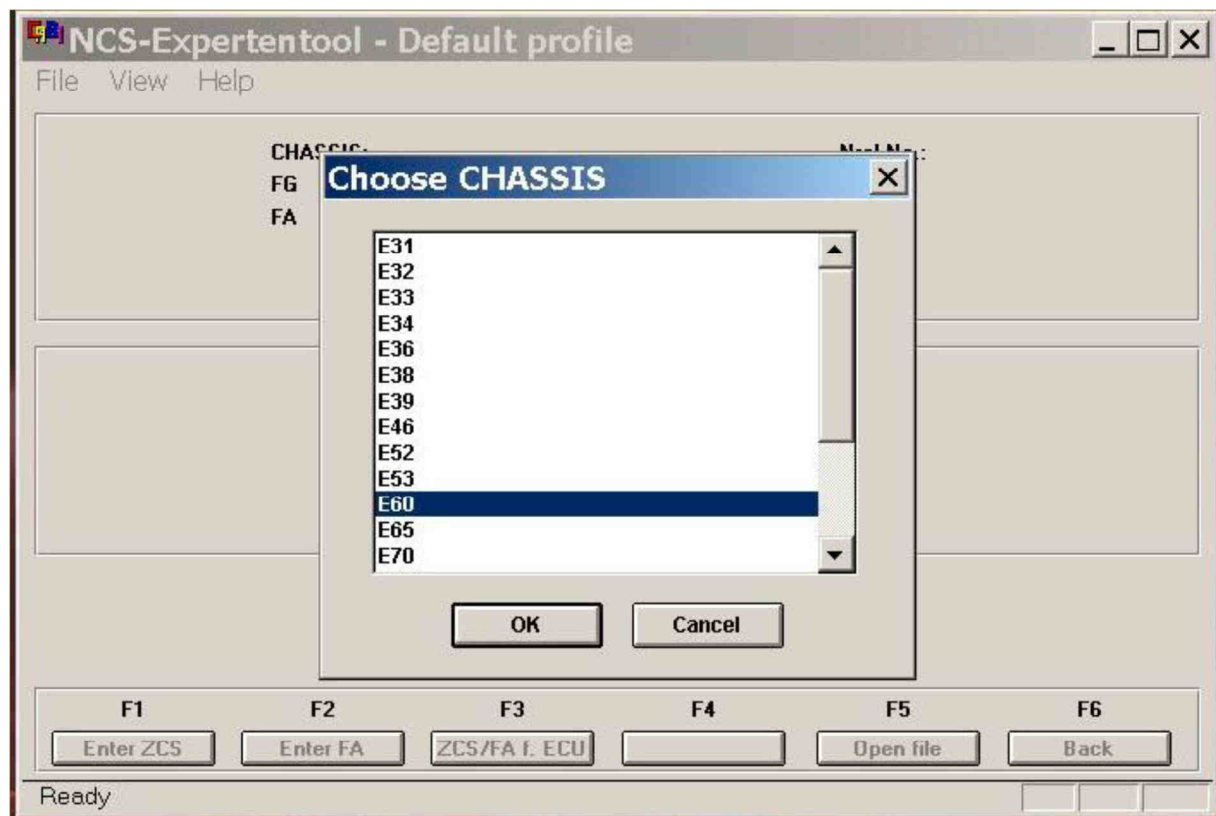
Choose "Default profile"



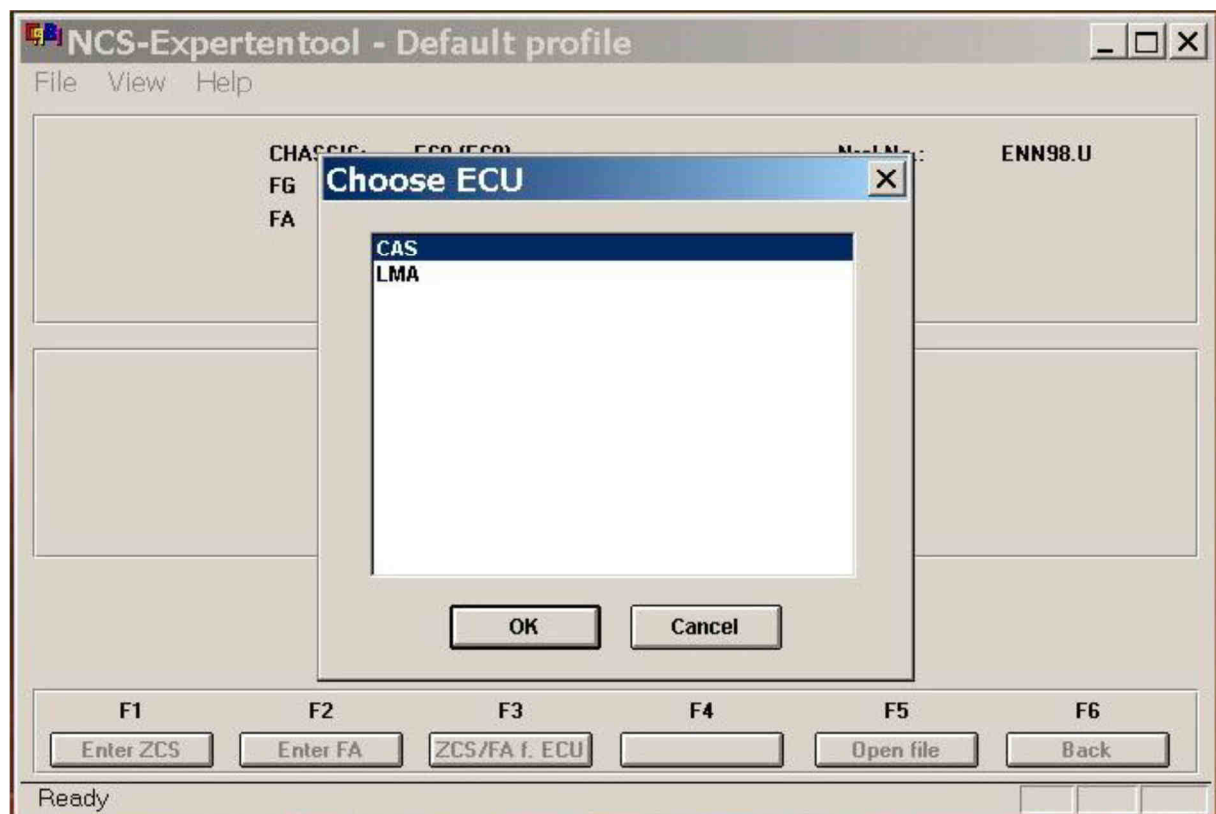
Click "F1 Vin/ZCS/FA" or Press "F1 key"



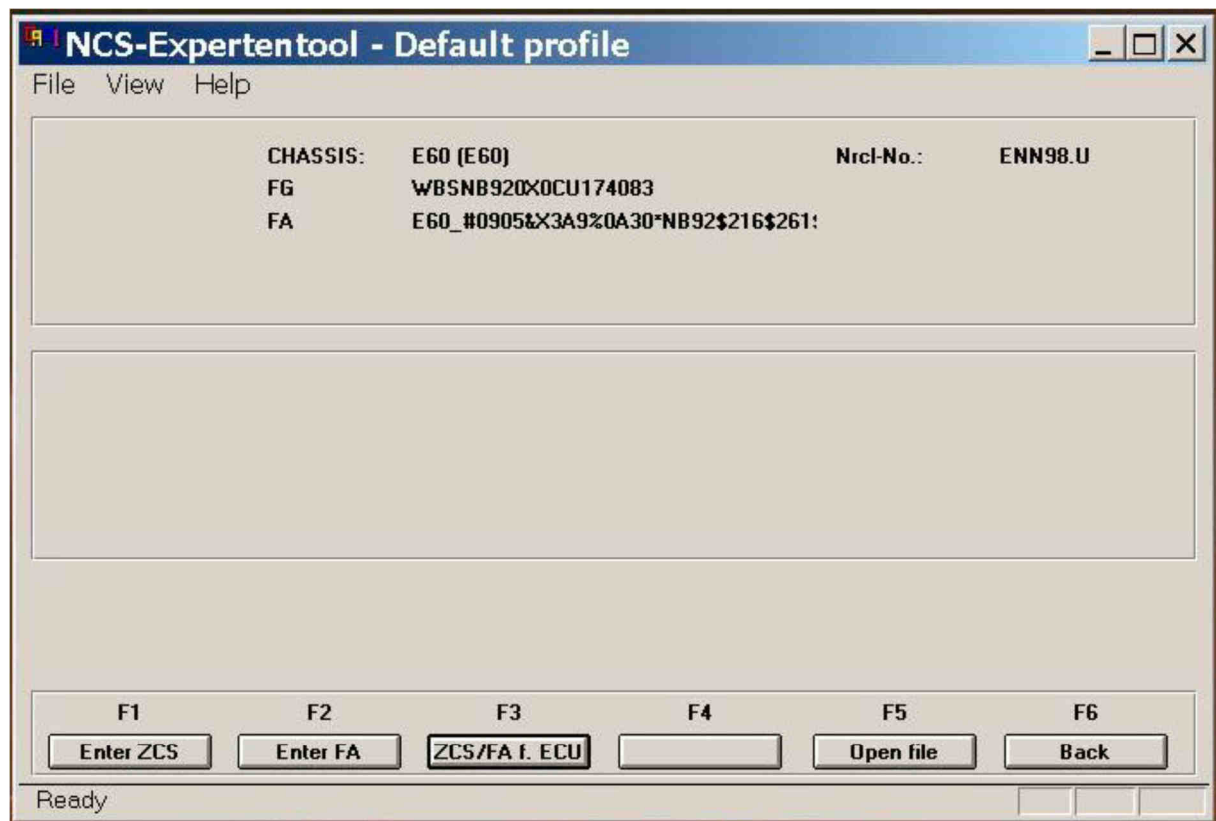
Click "F3 ZCS/FA f. ECU" or Press "F3 key"



Select chassis you are working on (**E90**) and click OK.



Choose ECU – CAS and click OK.



You should see your information. **Check vehicle Vin number is correct.**

Note: a check digit is added to the end of the Vin number

Then click Back of press F6 button.



Your next screen should look like this. In the middle part of screen is **get coded** and the list of ECU follows. Check if JOBNAME = SG_CODIEREN.

Check that in WORK directory of NFS Expert does NOT exist .MAN files or they are empty (0 bytes). For example in directory c:\NCSEXP\WORK\ exists only FSW_PSW.MAN (we care only about .MAN files).

And click "Process car" or press F3 and wait for coding end. There will be information that "Coding ended"



Something like this. Close NCS Expert.

Now you should see "Telephone menu" in your CIC main menu.