Snap-on Diagnostics

VERUS VERDICT™

MODIS SOLUSPRO™ SOLUS™

KEY CODING AND BCM LINKING FULL INSTRUCTIONS

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HOLDEN

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Holden
Rodeo RA, Frontera MX, Astra TS, Barina XC, Combo XC, Vectra JR/JS/JSII, Zafira TT
Key Erasing and Coding information

Check Procedure

Be aware that these vehicles have two ECU's related to the Keys and Remote Keys:

1) An Immobiliser ECU for the ignition keys and anti-theft function.
2) An ECU for the Remote Key or Fob to unlock and lock the doors remotely.

These instructions are for the coding of ignition keys only to the Immobiliser and not for programming of Remote Keys or Fobs.

Rodeo & Frontera vehicles use a separate Key Fob.

Astra TS, Barina XC, Combo XC, Vectra JR/JS/JSII and Zafira TT the Remote Key is integrated with the Ignition Key.

(Remote key coding is not supported for Rodeo RA, Frontera MX, Astra TS, Barina XC, Combo XC, Vectra JR/JS/JSII and Zafira TT).

Where to locate the Key Coding Function

Rodeo RA & Frontera MX Key Coding is located under Functional Tests of the Immobiliser system, in the Holden > Holden Not Astra selection.

Astra TS, Barina XC, Combo XC, Vectra JR/JS/JSII and Zafira TT Key Coding is located under Functional Tests of the Immobiliser system, in the Holden>Astra, Barina, Vectra etc. selection.

ECU replacement is not supported, **DO NOT** attempt to remove an inoperative Immobiliser - consult a Holden Dealer first.

!! Important Tips – Please Read !!

- **A Security Number is required to erase and program keys.** This is either supplied with the vehicle at delivery on a card (usually kept with the service books) or can be obtained from a Holden dealer using the VIN from the vehicle.
- When erasing keys **all** programmed keys will be erased.
- When programming keys this is done one at a time.
  (For example, if a vehicle does not have all keys present the absent key/s will be erased and will no longer be able start the vehicle.)
- Only a maximum of 5 keys can be programmed to the Immobiliser at any time.
- Keys do not need to be erased before any are added (unless 5 are already coded).
- The same keys can be erased and then programmed back again.
- The vehicle only requires one key to be coded to start the vehicle.
- The Data list of the Immobiliser system displays how many keys are coded to the vehicle. This data list can be viewed when no keys are coded and also with the ignition OFF. Use this data list to confirm keys have been coded to the system.

Coding Procedures

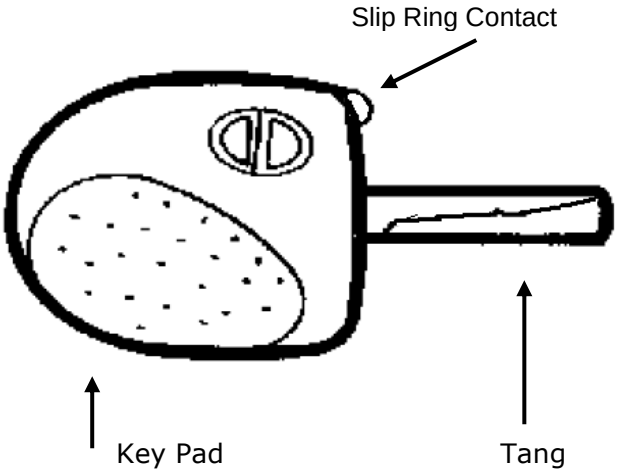
The Immobiliser systems on these vehicles allow for keys to be erased and programmed to the Immobiliser ECU. The same keys can be erased and then programmed back again.

1) When Erasing or Coding keys start with the ignition OFF and turn it ON when instructed by the Scan Tool.
2) Enter the Security Code when prompted and follow the on-screen prompts exactly to ensure proper erasing or coding of keys.
3) Once coded use the Immobiliser data list to confirm how many keys are coded to the system.

Commodore/Statesman etc series Key Coding
Introduction to Key Coding and BCM Linking

To ensure vehicle security the Theft Deterrent System on 1993 and later Commodore, Statesman, Monaro, Crewman, Adventra and One-Tonner series vehicles use electronic keys.
These keys are "coded" to the vehicle's Theft Deterrent System. Without a valid coded key the vehicle cannot be started.

How it Works
When a key button is pressed the Theft Deterrent System "recognises" the signal from the key and the Theft Deterrent is "disarmed".
When the key is placed in the ignition the Theft Deterrent System also recognises the key and the Theft Deterrent are "disarmed". This is done via a "slip ring" around the ignition key barrel.
A key that is recognised by the Theft Deterrent System is called a "valid" key.
The Theft Deterrent System is part of the Body Control Module (BCM).



The electronic key on Commodores forms part of the ignition key. The ignition key has a "mechanical" part and an "electronic" part. The mechanical part is known as the "tang". The electronic part is known as the "Key Pad". These two are held together by screws and can be separated to enable replacement of either. (Refer to Holden vehicle workshop manuals for vehicle specific information and system details.)

New or Replacement Keys
A new Key Pad will not be recognised by the Theft Deterrent System.
The Theft Deterrent System must be taught to recognise the new Key Pad.
This is called "Key Coding".
When replacing Key Pad's a scan tool is required to program (or code) the new Key Pad to the Body Control Module (BCM). This is so the Theft Deterrent System recognises the new Key Pad.
If a Key Pad is not programmed to the BCM then the vehicle cannot be started.
New Key Pads can only be programmed to one BCM and can be programmed once only. Once a Key Pad is coded to a BCM it cannot be coded to another BCM. A key coded to a vehicle is known as a "valid" key.
On VR, VS, VT and VX series Keys are added in one of two ways:
1) "KEY CODE (EXTRA KEY)" adds a new key when there is a valid key existing
2) "KEY CODE (NEW KEY)" is used when there are no keys programmed to the BCM. (For example all keys have been lost or a new BCM has been fitted.)
   EXTRA KEY requires a valid key to disarm the Theft Deterrent to allow the new key to be programmed.

On VY and VZ models there is only one method of adding a key to the BCM > KEY CODE (NEW KEY).

Important Note for VT, VX, VY and VZ:
The BCM Security Code is required for "KEY CODE (NEW KEY)". . This Security number can be retrieved by selecting the "DISPLAY SECURITY NUMBER" test found under the Key Code Test Menu.

BCM Linking

The Theft Deterrent System needs to be able to disable the engine and prevent it from being started.
This is achieved by allowing the BCM (which incorporates the Theft Deterrent System) to communicate with the PCM. VT series and later models require the BCM to be linked to the PCM (Powertrain Control Module 3.8L & 5.0L) or PIM (Powertrain Interface Module 3.6L & 5.7L).

What is Linking?
The BCM and the PCM must "recognise" each other; this is called being "linked".
If either one is replaced they must be "linked" together.
If they are not linked then the vehicle cannot be started.
This linking procedure must be performed using a scan tool.

Important Note for VT and VX:
For VT and VX Series a valid key is required to link the BCM to the PCM/PIM

Important For VY and VZ:
The BCM Security code is required to link the BCM to the PCM/PIM. This Security number can be retrieved by selecting the "DISPLAY SECURITY NUMBER" test found under the Key Code Test Menu.

Security Data

Security Data is information that is kept in the BCM relevant to vehicle security.
It can include:
a) Radio Pin Numbers
b) Ignition (mechanical) Key Numbers
c) Glove Box Key Numbers

(Note that some vehicles may not display all of this data.)
To view this data on **VS, VT, VX, VU, V2, & WH** series models requires a valid ignition key and the ignition switched on.
To view this data on **VY, VZ, WK & WL** series vehicles requires the BCM Security number.

Before replacing a BCM, record the old security data information. Use it to program the new information or pass it on to the vehicle owner.

Important information:

The BCM communicates with the Key Pad when it is inserted into the ignition barrel. This is how it programs the key and determines if a key is valid or not.

There is a "slip ring" contact surrounding the ignition key position that contacts a small metal stub on the Key Pad. If this "slip ring" is damaged or is not connected to the BCM, key coding and BCM linking operations cannot be performed.

Before attempting to code keys, check the slip ring is operational using the following procedure:

1. Remove any key from ignition.
2. Wait for the Security LED to start flashing.
3. Insert a known good key into the ignition and turn the ignition to ON.
4. The Security LED will stop flashing if the slip ring is operational.

If key coding cannot be performed:

a) **Check BCM Module for any codes** relevant to slip ring failure.
b) Check that there is **continuity in the circuit** between the slip ring and the BCM.

BCM to Slip Ring terminal	
VR BCM/TDM	B27
VS BCM Low	B27
VS BCM Hi	C7
VT / VX BCM Low	D12
VT / VX BCM Hi	E1
VY BCM All	X2-7

!ATTENTION!
Note: Waiting times stated on screen while performing Key Code, BCM Linking or Security Information programming *must be* followed.
Failing to adhere to these times can result in failure of selected procedure.

"Extra Key" Coding Procedure
For: VR, VS, VT, VX, VU, V2 & WH Series

Important:
To add an extra key an existing valid key must be present.
(A valid key is a key that is already coded to the BCM.)

Remove the old mechanical key tang by unscrewing it from the old keypad and fitting it to the new un-coded keypad.
If a totally new key assembly is required (tang and key pad), then the new tang must be cut by a locksmith to suit the ignition.
Once the keypad is coded to a BCM it cannot be coded to another BCM.

Quick Instructions:

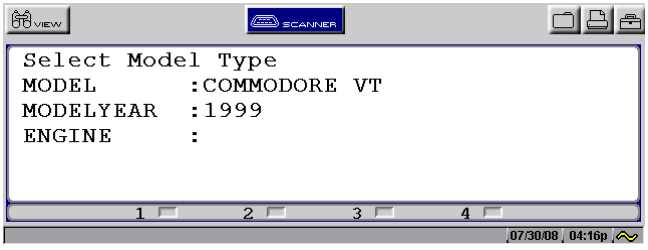
1. Ensure a valid key is available as well as old Key Pad to be replaced.
2. Replace old Key Pad.
3. Put valid key into ignition and switch to ON.
4. Enter vehicle details and connect to vehicle.
5. Select Key Code (Extra Key)
6. Follow on-screen prompts.

The following is an example from a VT Commodore

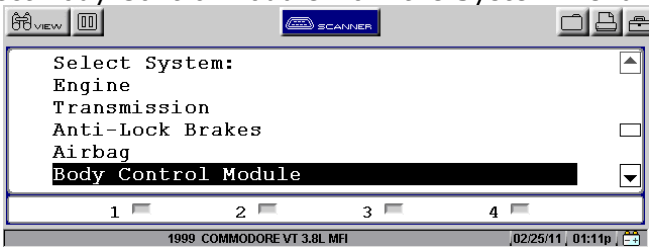
Screens will appear similar to the following. Example shown using a Solus Pro.

1) Place a current valid key into ignition and switch the ignition ON.

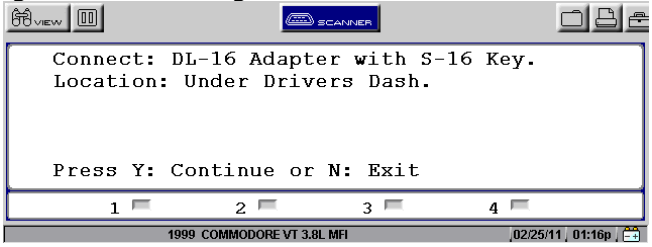
2) Select the Australian>Holden>Holden Not Astra selection. Select the correct make year, model, and engine type on the Verus, Verdict, Modis, Solus Pro or Solus .



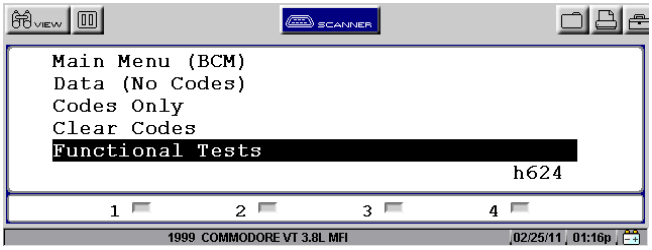
3) Select Body Control Module from the System Menu



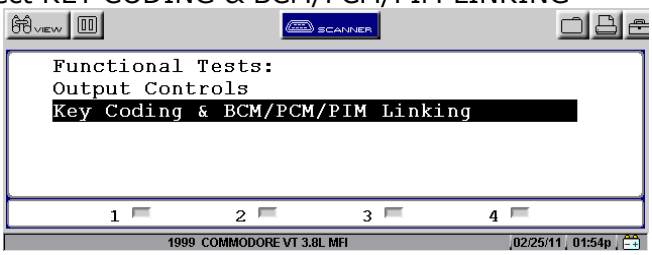
4) Connect Verus, Verdict, Modis, Solus Pro or Solus as directed. Ensure a valid key is in the ignition and the ignition is switched ON.



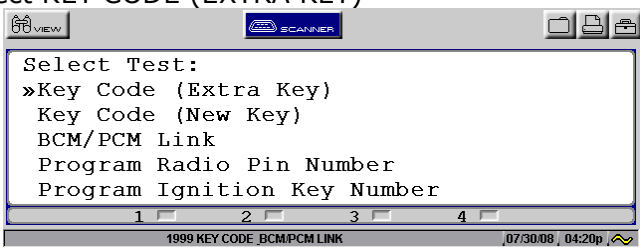
5) Select FUNCTIONAL TESTS from the BCM MAIN MENU.



6) Select KEY CODING & BCM/PCM/PIM LINKING

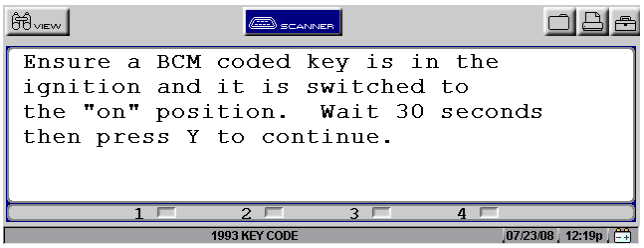


7) Select KEY CODE (EXTRA KEY)

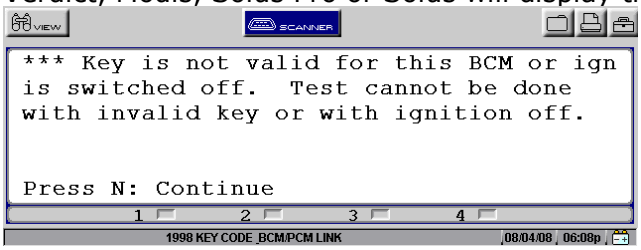


8) Follow the on-screen prompts as directed. Ensure key in ignition is a valid key (already coded to BCM). Turn ignition ON, wait 30 seconds and then press "Y" (Modis, Solus Pro & Solus) or select "Continue" (Verus & Verdict) to proceed.

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to proceed to the next menu.

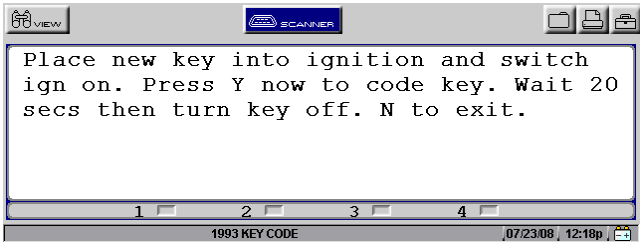


a) If a key that is not valid is used or if the ignition is not switched ON, the Verus, Verdict, Modis, Solus Pro or Solus will display the following message:



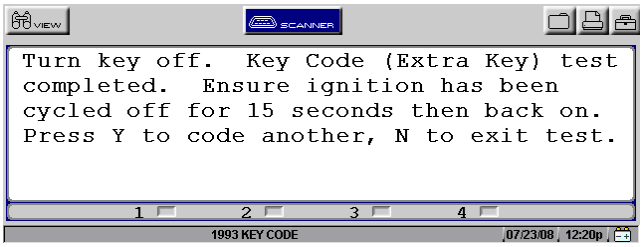
1. Make sure the ignition is switched ON
2. If the ignition is switched ON, make sure a valid key is being used.
3. Keys cannot be coded to the vehicle unless a valid key is present in the ignition and the ignition is ON.

b) If a valid is key is used the next screen will appear.
   1. Remove the valid key and place the new key into the ignition and switch it ON.
   2. With the new key in the ignition press "Y" (Modis, Solus Pro & Solus) or select "Continue" (Verus & Verdict) once to code the key.
   3. Wait for 20 seconds and then turn the ignition OFF.
   4. Press "N" (Modis, Solus Pro & Solus) or select "Exit" (Verus & Verdict) to exit.



NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to code the key.

9) The next screen will appear when exiting.
Ensure the key is turned OFF for 5 seconds then ON and then press N/select "Exit".



!! Important note !!
Wait approximately 30 seconds after turning the ignition switch off and monitor the vehicle security light.
VR & VS – near stereo
VT & VX – LHS of Instrument cluster near mode buttons
VY & VZ – Flashing padlock in instrument cluster
Once the vehicle security light is flashing, turn the new key on and attempt to start the engine. The security light should have stopped flashing at this point.

If it does not start and the security light is still flashing (with ignition switch on) turn ignition OFF – ON – OFF – ON – OFF with new key.
This will synchronise the rolling security codes between the BCM and the key.

This procedure may require two attempts to be completed successfully.

NOTE: If any failure messages appear then refer to Failure Messages section at the end of this Key Coding & BCM Linking section in this manual

"New Key" Coding Procedure
For: VR, VS, VT, VX, VU, V2, VY, VZ, WH, WK & WL Series

Remove the old mechanical key tang by unscrewing it from the old keypad and fitting it to the new un-coded keypad.
If a totally new key assembly is required (tang and key pad), then the new tang must be cut by a locksmith to suit the ignition.
Once the keypad is coded to a BCM it cannot be coded to another BCM.

Important:
VR & VS Series: Ensure ignition is OFF.
VT, VX, VU, V2, WH Series: Place the new key into ignition and switch the ignition ON.
VY, VZ, WK, WL Series: Place the new key into ignition and switch the ignition ON.

Quick Instructions VR & VS:

1. Select DISPLAY SECURITY NUMBER test & document number.
2. Replace old Key Pad.
3. Enter vehicle details and connect to vehicle.
4. Select KEY CODE (NEW KEY)
5. Enter Security Code with NO key in ignition.
6. Follow on-screen prompts.

Quick Instructions VT to VZ:

1. Select DISPLAY SECURITY NUMBER test & document number.
2. Replace old Key Pad.
3. Put new key into ignition and switch to ON.
4. Enter vehicle details and connect to vehicle.
5. Select KEY CODE (NEW KEY)
7. Enter Security Code with key in ignition.
6. Follow on-screen prompts.

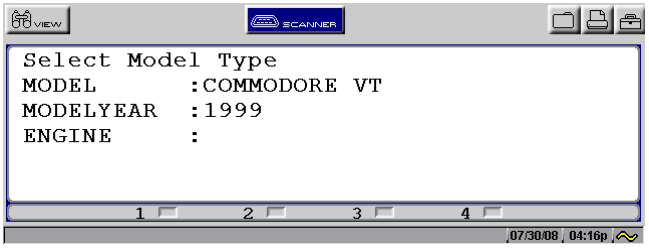
Detailed Instructions start next page:

The following is an example from a VT Commodore

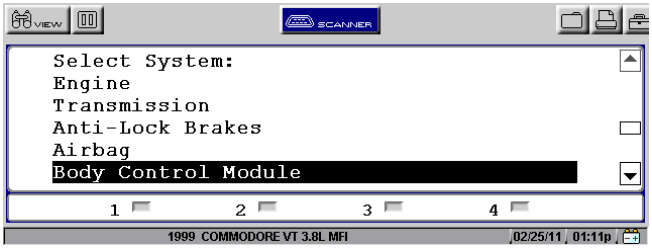
Screens will appear similar to the following. Example below is using a Solus Pro unless specified.

Important:
VR & VS Series: Ensure ignition is OFF.
VT, VX, VU, V2, WH Series: Place the new key into ignition and switch the ignition ON.
VY, VZ, WK, WL Series: Place the new key into ignition and switch the ignition ON.

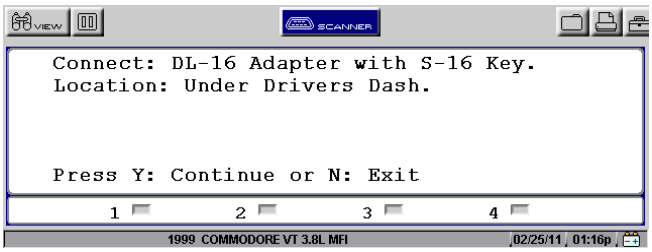
1) Select the Australian>Holden>Holden Not Astra selection. Select the correct make year, model and engine type on the Verus, Verdict, Modis, Solus Pro, or Solus.



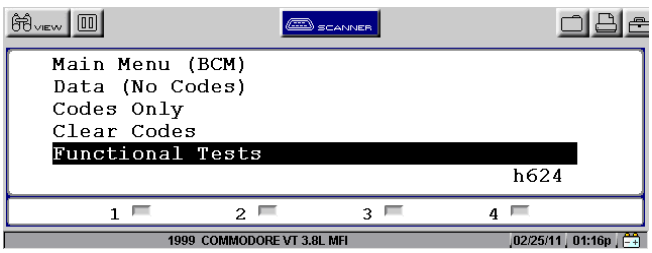
2) Select Body Control Module from the System Menu



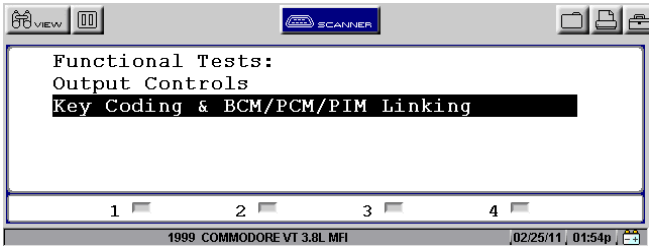
3) Connect Verus, Verdict, Modis, Solus Pro or Solus as directed



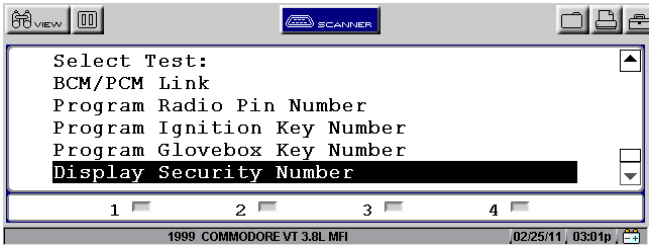
4) Select FUNCTIONAL TESTS from the BCM MAIN MENU



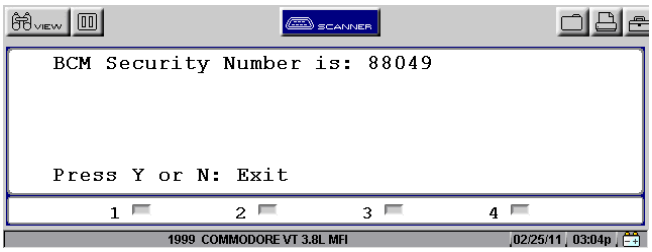
5) Select KEY CODING & BCM/PCM/PIM LINKING



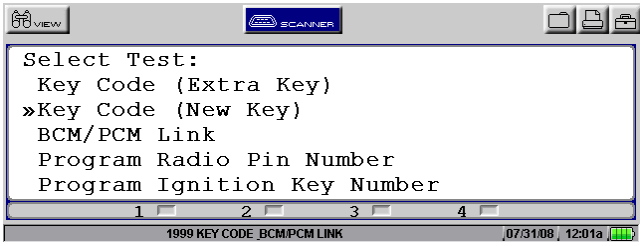
6) Select DISPLAY SECURITY NUMBER



7) Document displayed BCM Security Number

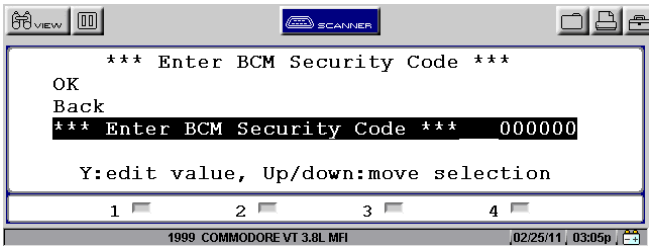


8) Exit, then Select KEY CODE (NEW KEY)



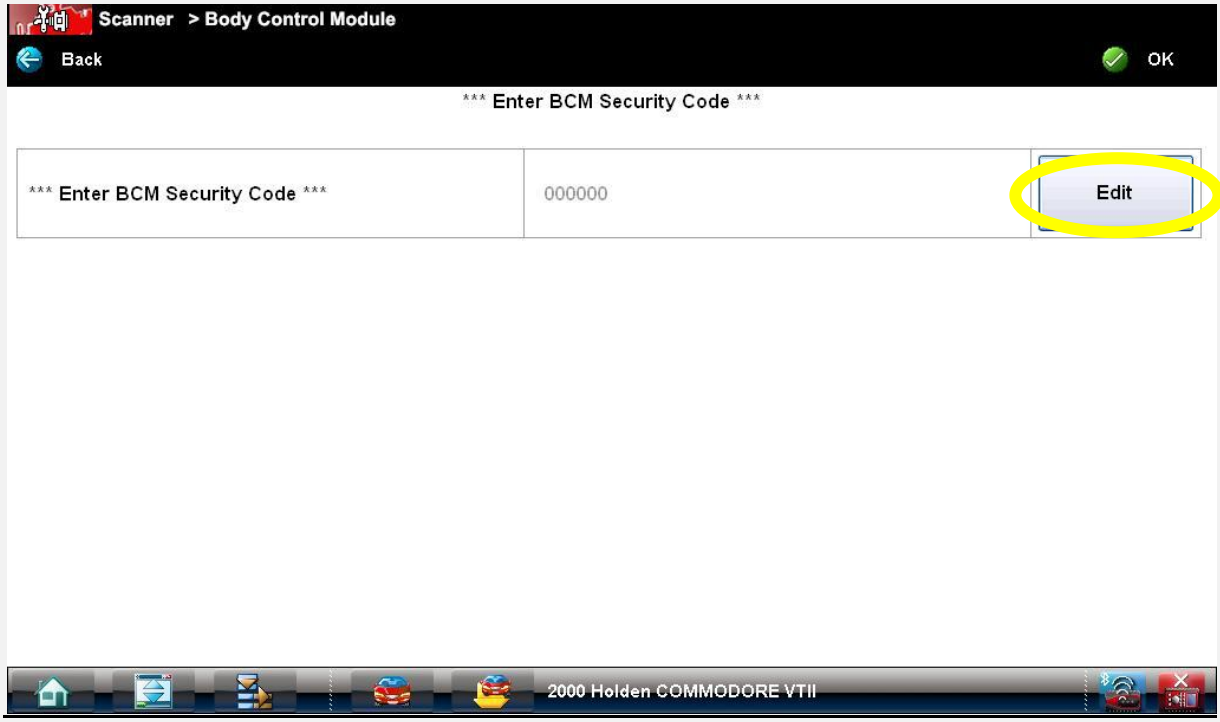
9) ***Modis, Solus Pro & Solus*** ***(Verus & Verdict see over)***

Arrow Down to Highlight "Enter BCM Security Code" & Press Y



9) ***Verus & Verdict***

Select "Edit" icon on screen.



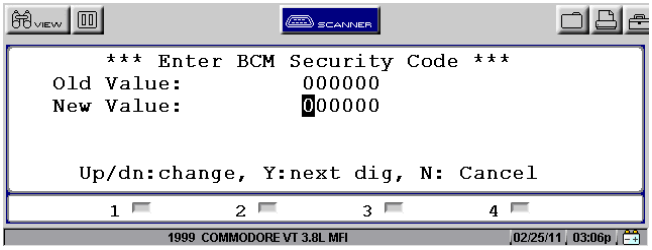
After selecting edit, a "New value" input option should appear, as shown below

10) Enter the BCM security number

NOTE: The BCM security number will be entered on a line indicating "New Value". Enter the BCM security number as retrieved from the "Display Security Number" test.

Modis, Solus Pro & Solus ***(Verus and Verdict users see next page)***

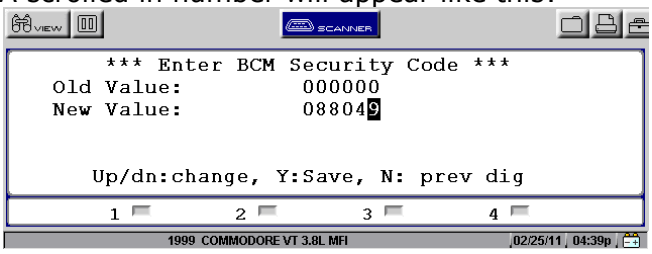
Disregard the "Old Value" line. The BCM security number will not be changed in this test.



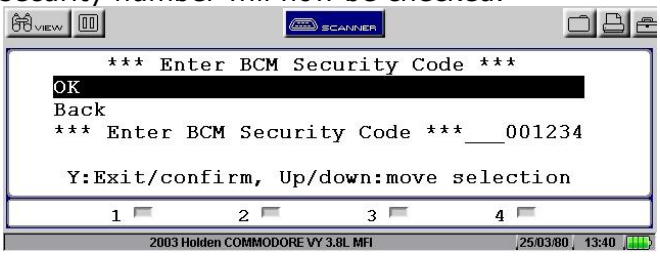
a) Use the up/down arrow to change the number to the desired digit, then press Y to lock in the digit.
b) If an incorrect digit is entered, press N to go back to that digit and re-enter the correct digit.
c) If the security number is less than 6 digits enter "0" first as necessary to "pad out" the number. For example if the security number is 88049 then enter "088049".
d) Once all 6 digits are locked in the security number will be checked.

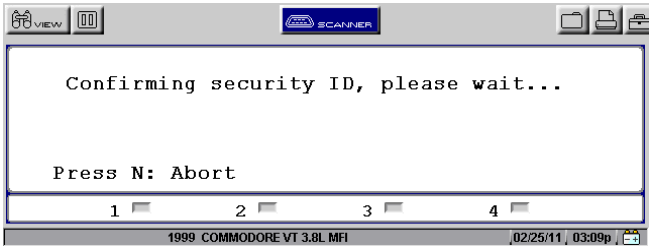
!! Remember for VR & VS models make sure the ignition is OFF !!
!! For all other models make sure the ignition is ON !!

A scrolled in number will appear like this:



e) Once the correct BCM security number has been entered, press Y on the final digit and scroll up to OK. Press Y to proceed and follow the on-screen prompts. The security number will now be checked.





Verus & Verdict

Disregard the "Current Value" line. The BCM security number <u>will not</u> be changed in this test.

a) Select anywhere within the New Value text input box and the virtual keyboard will appear on screen

b) Use the buttons on the virtual keyboard to input the correct security number

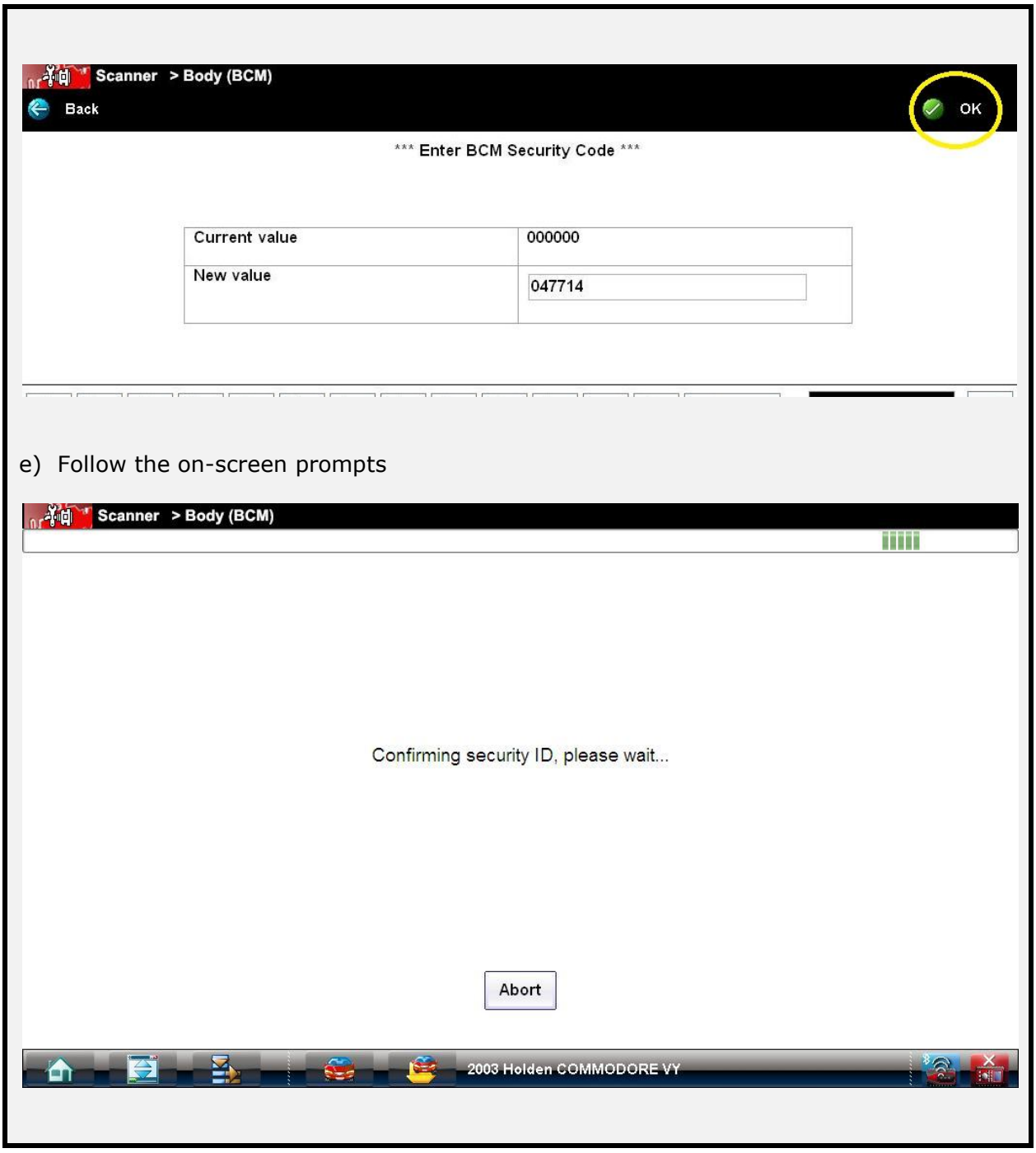
<u>NOTE:</u> The BCM security number <u>must</u> have a total of 6 digits. If the security number for the vehicle has less than 6 digits, you must "pad out" as necessary at the beginning of the number.

Eg: Security number 47714 must be entered as "047714"

c) If an incorrect digit is selected, simply select the backspace button as necessary

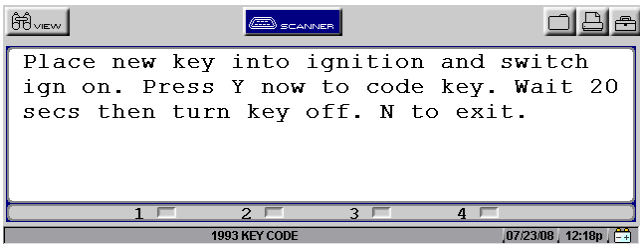
d) Once all 6 digits are entered correctly, select "ok" as circled as shown on the following page. The security number will now be checked

!! Remember for VR & VS models make sure the ignition is OFF !!
!! For all other models make sure the ignition is ON !!



e) Follow the on-screen prompts

11) If the security code is correct, the message on the next screen will appear:



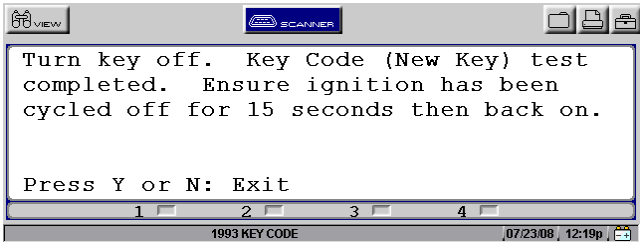
a) With the new key in the ignition press Y once (Modis, Solus Pro & Solus) or select "Continue" (Verus & Verdict) to code the key.

b) Wait for 20 seconds and then turn the ignition OFF.

c) Press N (Modis, Solus Pro & Solus) or select "Exit"(Verus & Verdict) to exit.

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to code the key.

12) The next screen will appear when exiting.
Ensure the key is turned OFF for 5 seconds then ON and then press N/select "Exit".



!! Important note !!
Wait approximately 30 seconds after turning the ignition switch off and monitor the vehicle security light.
VR & VS – near stereo
VT & VX – LHS of Instrument cluster near mode buttons
VY & VZ – Flashing padlock in instrument cluster
Once the vehicle security light is flashing, turn the new key on and attempt to start the engine. The security light should have stopped flashing at this point.

If it does not start and the security light is still flashing(with ignition switch on) turn ignition OFF – ON – OFF – ON – OFF with new key.
This will synchronise the rolling security codes between the BCM and the key.

This procedure may require two attempts to be completed successfully.

NOTE: If any failure messages appear then refer to Failure Messages section at the end of this Key Coding & BCM Linking section in this manual

BCM LINK Procedure
For: VT, VX & WH Series

To link the BCM to the PCM an existing valid key must be present. (A valid key is already coded to the BCM.)
After fitting the replacement BCM or PCM use the following procedure to link the modules.

IMPORTANT
If a BCM is being replaced: BEFORE removing the old BCM, record the Radio Pin Number using the slip provided. Keep this number in a safe place and also give a copy to the owner of the vehicle. Photocopy the below forms to record the information and also give a copy to the vehicle owner.

Workshop Copy

Vehicle Pin Number Information

Owner Name:

Vehicle Registration Number:

Vehicle VIN number:

Radio Pin Number:

Vehicle Owner Copy

Vehicle Pin Number Information

Owner Name:

Vehicle Registration Number:

Vehicle VIN number:

Radio Pin Number:

Quick Instructions VT, VX, VU, V2 & WH:

1. Ensure the valid key is present.
2. Put valid key into ignition and switch to ON.
3. Enter vehicle details and connect to vehicle.
4. Select BCM/PCM Link
5. Follow the on-screen prompts.

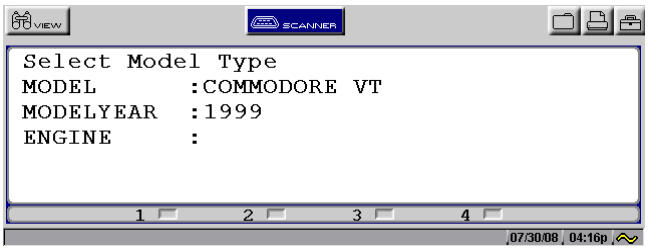
Detailed Instructions start next page:

BCM LINK Procedure
For: VT, VX, VU, V2 & WH Series

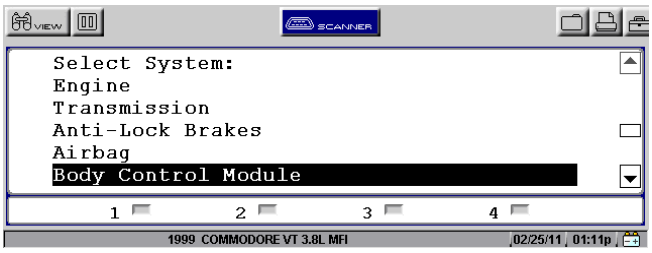
Screens will appear similar to the following. Example below uses a Solus Pro.

1) Place a current valid key into ignition and switch the ignition ON

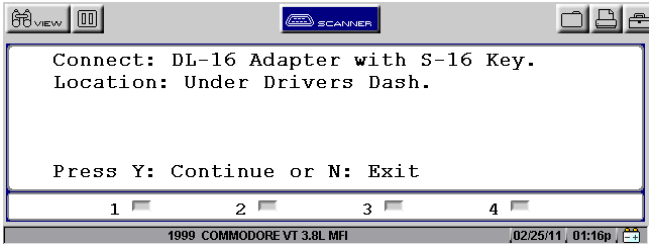
2) Select the Australian>Holden>Holden Not Astra selection. Select the correct make year, model, and engine type on the Verus, Verdict, Modis, Solus Pro or Solus.



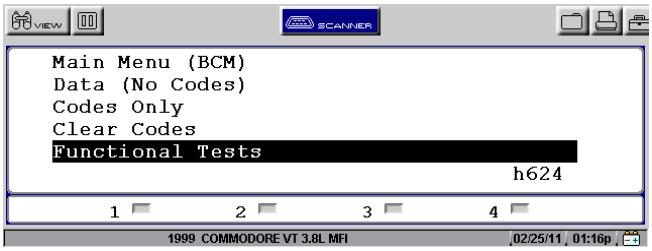
3) Select Body Control Module from the System Menu



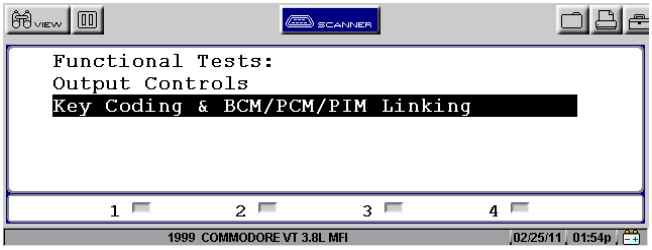
4) Connect Verus, Verdict, Modis, Solus Pro or Solus as directed.



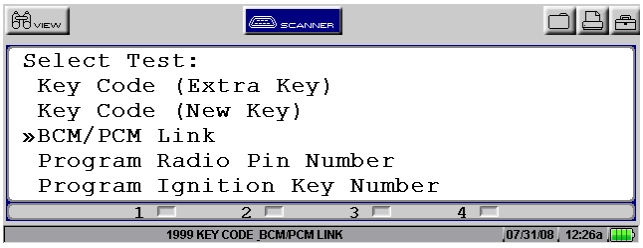
5) Select FUNCTIONAL TESTS from the BCM MAIN MENU



6) Select KEY CODING & BCM/PCM/PIM LINKING

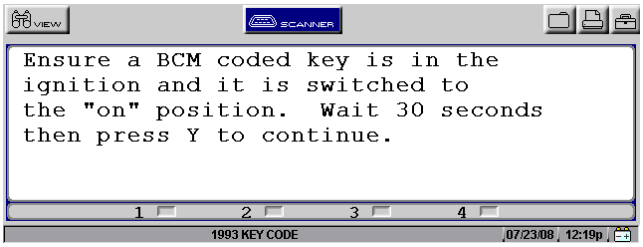


7) Select BCM/PCM LINK

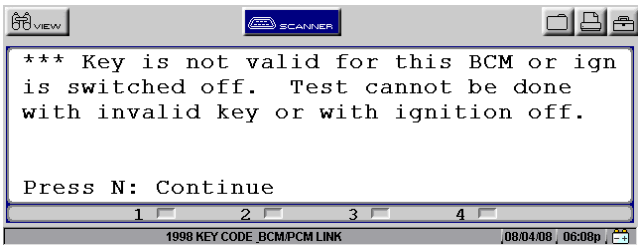


8) Follow the on-screen prompts. Ensure key in ignition is a valid key (already coded to BCM). Turn ignition ON, wait 30 seconds and then press Y (Modis, Solus Pro & Solus) or select "Continue" (Verus & Verdict) to proceed

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to proceed to the next menu.



9) If a key that is not valid is used or if the ignition is not switched ON, the Verus, Verdict, Modis, Solus Pro or Solus will display the following message:

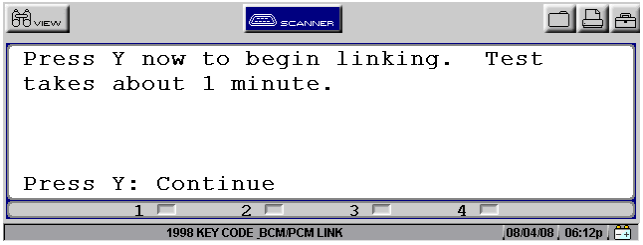


a) Make sure the ignition is switched ON.

b) If the ignition is switched ON, make sure a valid key is being used.

c) Modules cannot be linked unless a valid key is present in the ignition and the ignition is ON.

10) If a valid key is used, a screen with the following message will appear:

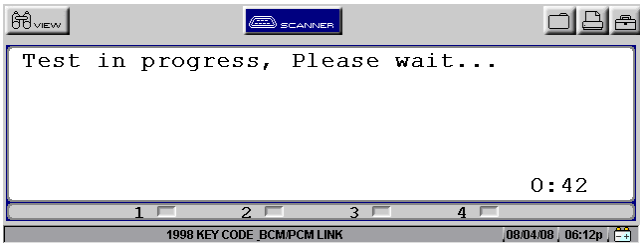


a) Press Y/select "Continue" to begin the modules linking.

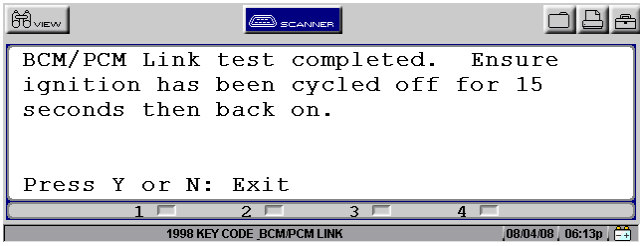
b) Wait for 1 minute while the modules are linking. Press N to exit.

NOTE: Solus Pro & Solus users may need to press N once to switch the back light back on and then N again to proceed to the next menu.

11) While the modules are linking the message on the next screen will appear with a countdown timer



12) Turn Key OFF and wait for 15 seconds and then turn key back ON for at least 10 seconds.



13) The modules are now linked. To confirm modules are linked start the vehicle and ensure it runs.

NOTE: If any failure messages appear then refer to Failure Messages section at the end of this Key Coding & BCM Linking section in this manual

BCM LINK Procedure
For: VY, VZ, WK & WL Series

After fitting the replacement BCM or PCM use the following procedure to link the modules. The following example shown is using a Solus Pro unless specified.

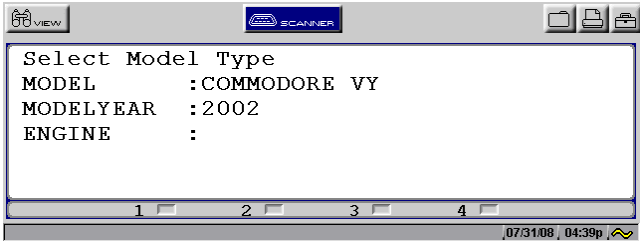
Quick Instructions VY, VZ, WK & WL:

1. Select DISPLAY SECURITY NUMBER test & document number.
2. Put valid key into ignition and switch to ON.
3. Enter vehicle details and connect to vehicle.
4. Select BCM/PCM Link.
5. Enter Security Code with key in ignition.
6. Follow on-screen prompts.

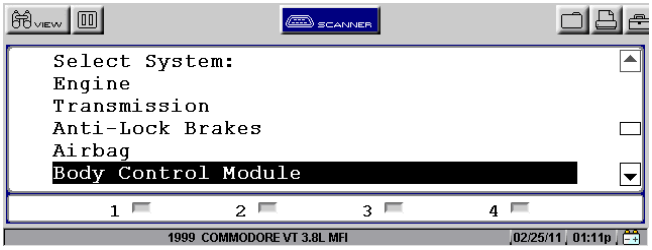
Detailed Instructions:

1) Place a current valid key into ignition and switch the ignition ON.

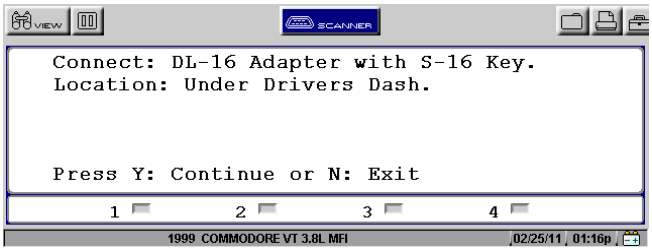
2) Select the correct make year, and model on the Verus, Verdict, Modis, Solus Pro or Solus.



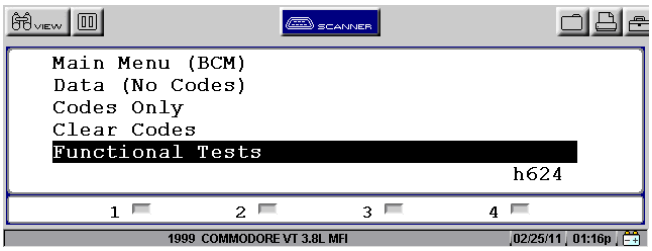
3) Select Body Control Module from the System Menu



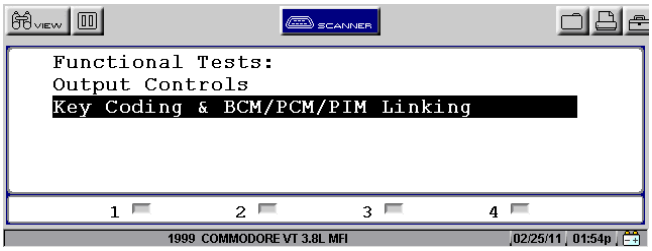
4) Connect Verus, Verdict, Solus Pro, Modis, or Solus as directed.



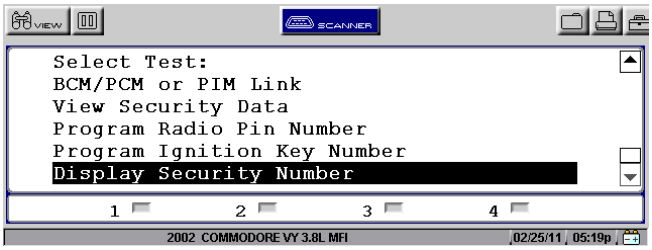
5) Select FUNCTIONAL TESTS from the BCM MAIN MENU



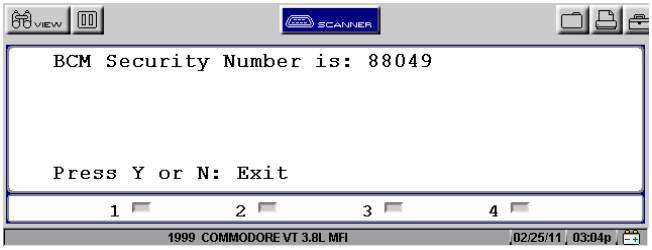
6) Select KEY CODING & BCM/PCM/PIM LINKING



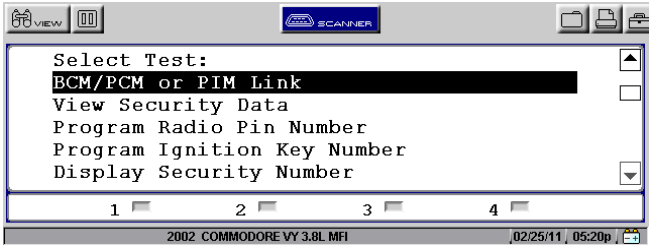
7) Select DISPLAY SECURITY NUMBER



8) Document displayed BCM Security Number

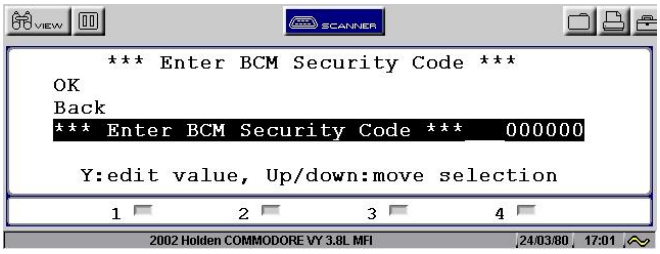


9) Exit, then Select BCM/PCM or PIM LINK



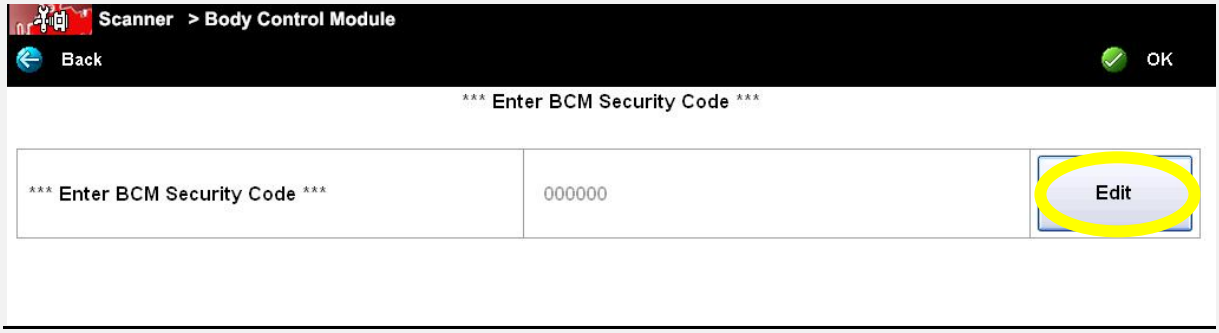
10) ***Modis, Solus Pro & Solus*** ***(Verus & Verdict see below)***

Arrow Down to Highlight "Enter BCM Security Code" & Press Y.



10) ***Verus & Verdict***

Select "Edit" icon on screen as circled below.



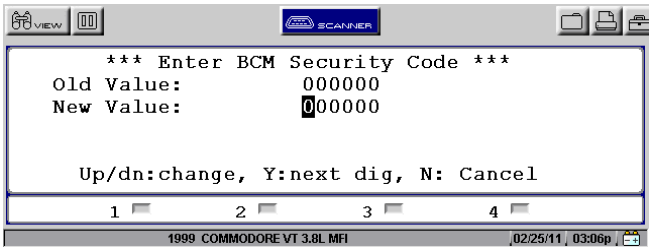
After selecting edit, a "New value" input option should appear, as shown below.

11) Enter the BCM security number.

NOTE: The BCM security number will be entered on a line indicating "New Value".
Enter the BCM security number as retrieved from the "Display Security Number" test.

Modis, Solus Pro, Solus ***(Verus & Verdict see next page)***

Disregard the "Old Value" line. The BCM security number <u>will not</u> be changed in this test.

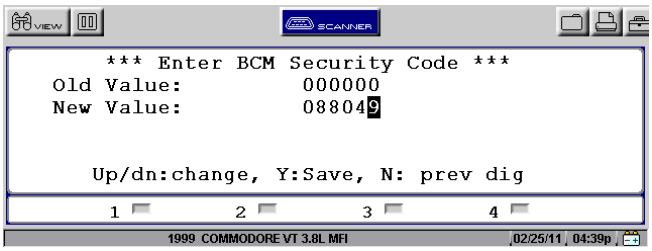


a) Use the up/down arrow to change the number to the desired digit then press Y to lock in the digit.

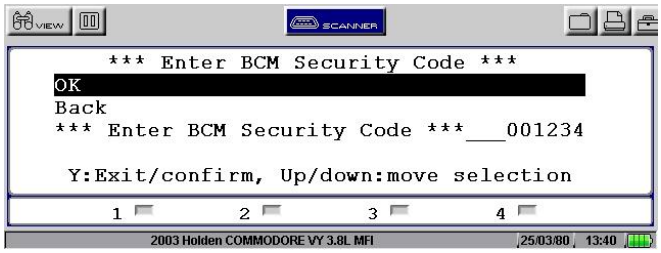
b) If an incorrect digit is entered, press N to go back to that digit and re-enter the correct digit.

c) If the security number is less than 6 digits, enter "0" first as necessary to "pad out" the number. Eg: if the security number is 88049 then enter "088049".

d) A scrolled in number will appear like this:



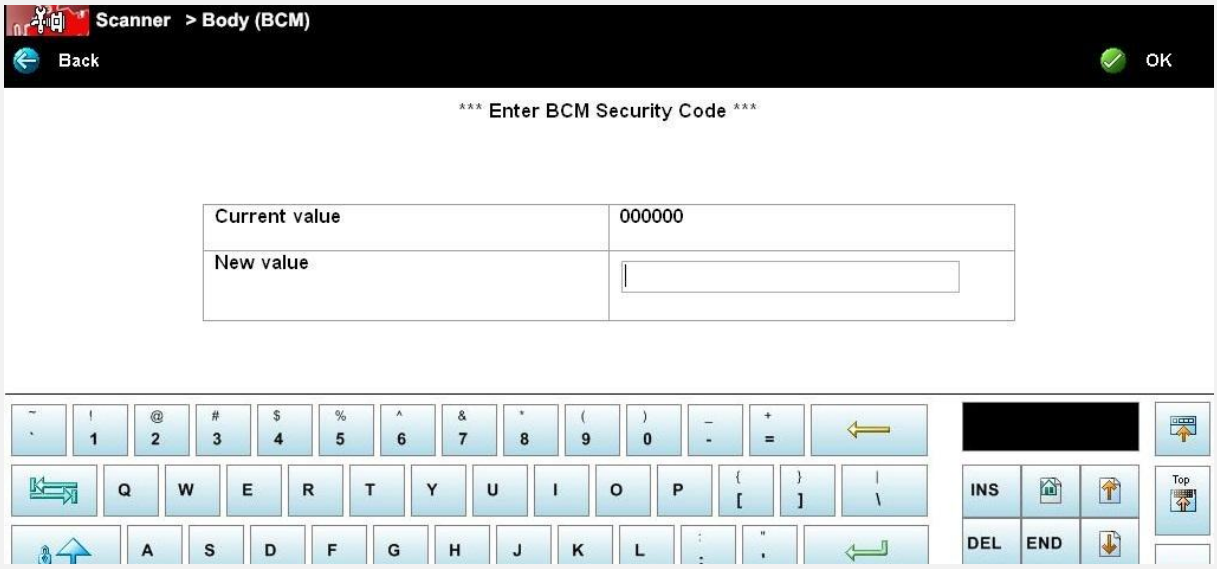
e) Once the correct BCM security number has been entered, press Y on the final digit and scroll up to OK. Press Y to proceed. The security number will now be checked.



Verus & Verdict

Disregard the "Current Value" line. The BCM security number will not be changed in this test.

a) Select anywhere within the New Value text input box and the virtual keyboard will appear on screen.



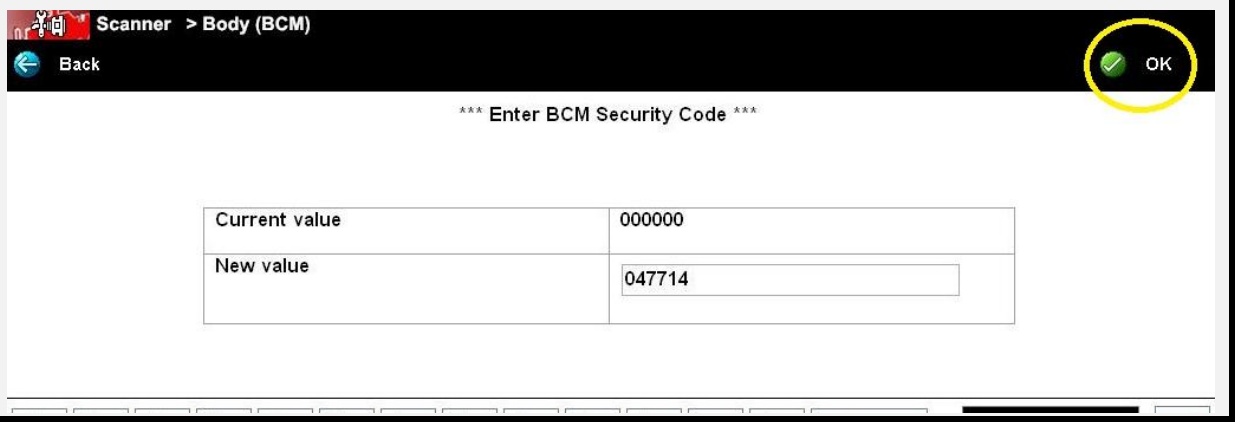
b) Use the buttons on the virtual keyboard to input the correct security number.

NOTE: The BCM security number must have a total of 6 digits. If the security number for the vehicle has less than 6 digits, you must "pad out" as necessary at the beginning of the number.

Eg: Security number 47714 must be entered as "047714".

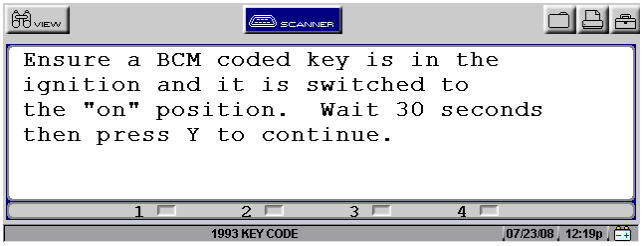
c) If an incorrect digit is selected, simply select the backspace button as necessary.

d) Once all 6 digits are entered correctly, select "ok" as circled below. The security number will now be checked.

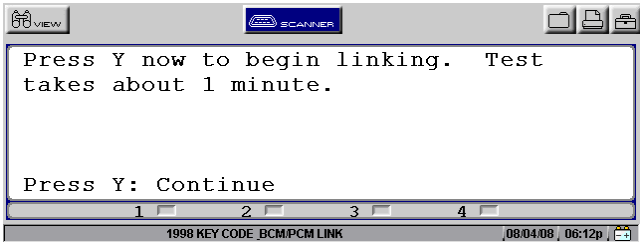


12) Follow the on-screen prompts. Ensure key in ignition is a valid key (already coded to BCM). Turn ignition ON (if not already), wait 30 seconds and then press Y (Modis, Solus Pro, Solus) or select "Continue" (Verus & Verdict).

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to proceed to the next menu.



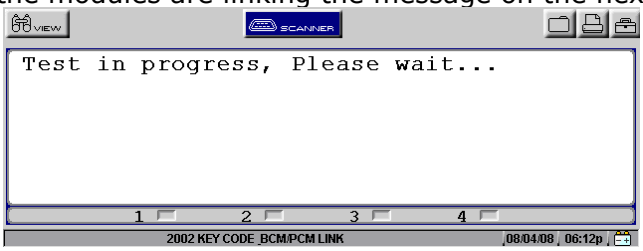
13) If a valid is key is used and the correct BCM Security number has been entered the message on the following screen will appear:



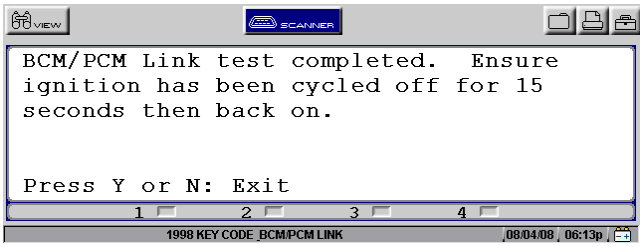
a) Press Y/select "Continue" to begin the modules linking.
b) Wait for 1 minute while the modules are linking. Press N (Modis, Solus Pro, Solus) or select "Exit"(Verus & Verdict) to exit.

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to begin linking.

While the modules are linking the message on the next screen will appear:



14) Turn Key OFF and wait for 15 seconds and then turn key back ON for at least 10 seconds.



15) The modules are now linked. To confirm modules are linked start the vehicle and ensure it runs.

NOTE: If any failure messages appear then refer to Failure Messages section at the end of this Key Coding & BCM Linking section in this manual

Viewing Security Data
For: VS, VT, VX, VU, V2, & WH Series

To view Security Data on these vehicles a valid key must be in the ignition and the ignition switched ON. This Security Data information is important and may require recording before proceeding with certain BCM functions.

Before replacing a BCM record these numbers and supply them to the owner of the vehicle. In some instances these numbers can be programmed into a new BCM. If these numbers cannot be programmed then supply them to the vehicle owner. Ensure these numbers are kept in a safe place by the vehicle owner and **not** kept in the vehicle.

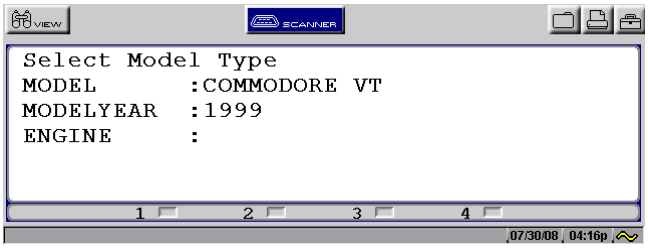
Quick Instructions VS, VT, VX, VU, V2 & WH:

1. Ensure a valid key is present.
2. Put valid key into ignition and switch to ON.
3. Enter vehicle details and connect to vehicle.
4. Select Security Data
5. Follow the on-screen prompts.

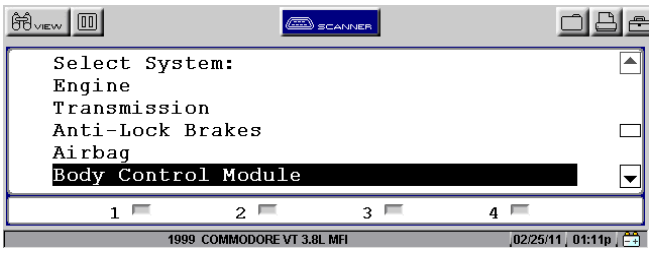
Detailed Instructions:

1) Place a current valid key into ignition and switch the ignition ON.

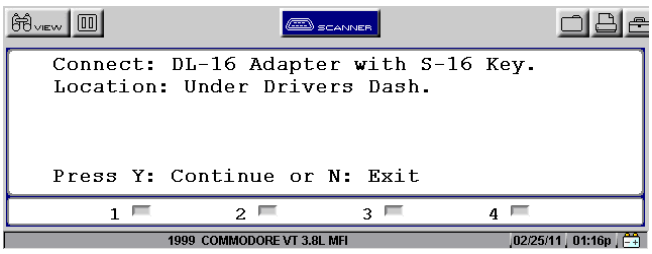
2) Select the Australian>Holden>Holden Not Astra selection. Select the correct make year, model, and engine type on the Verus, Verdict, Modis, Solus Pro or Solus.



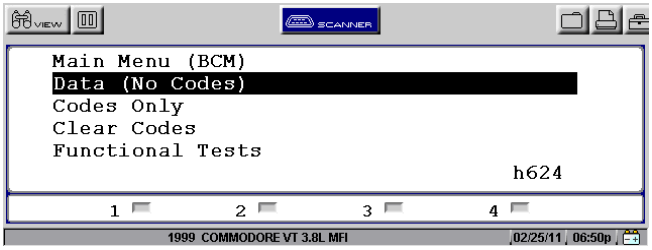
3) Select Body Control Module from the System Menu.



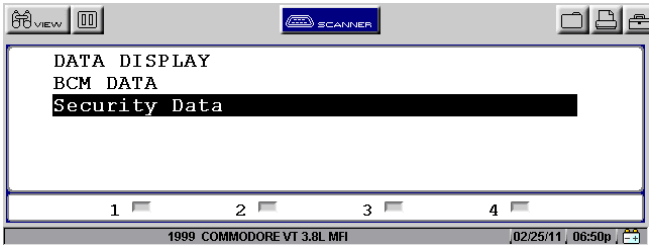
4) Connect Verus, Verdict, Modis, Solus Pro or Solus as directed.



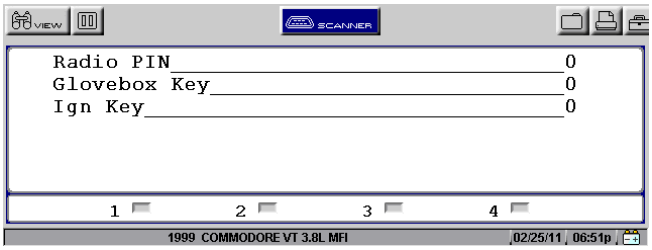
5) Select DATA (NO CODES) from the BCM MAIN MENU



6) Select SECURITY DATA from the DATA MENU



7) Security Data is then displayed. Below is an example of what may be displayed:



NOTE: If any failure messages appear then refer to Failure Messages section at the end of this Key Coding & BCM Linking section in this manual

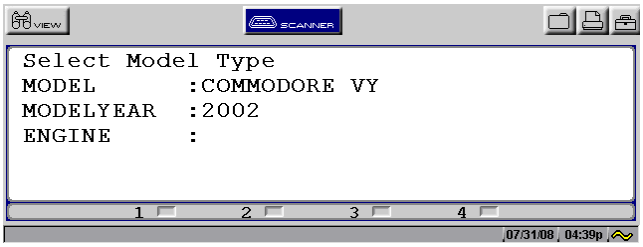
Viewing Security Data
For: VY, VZ, WK & WL Series

To view Security Data on these vehicles the BCM Security number is required as well a valid key must be in the ignition and the ignition switched ON.

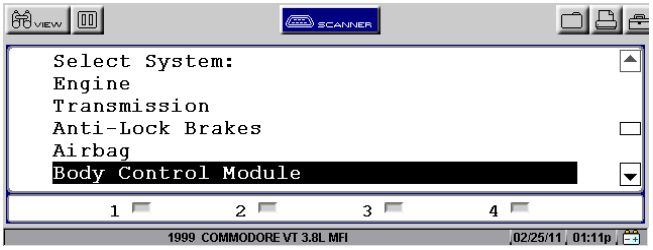
Quick Instructions VY, VZ, WK & WL:

1. Select DISPLAY SECURITY NUMBER test & document number.
2. Put valid key into ignition and switch to ON.
3. Enter vehicle details and connect to vehicle.
4. Select VIEW SECURITY DATA.
5. Enter Security Code with key in ignition.
6. Follow the on-screen prompts.

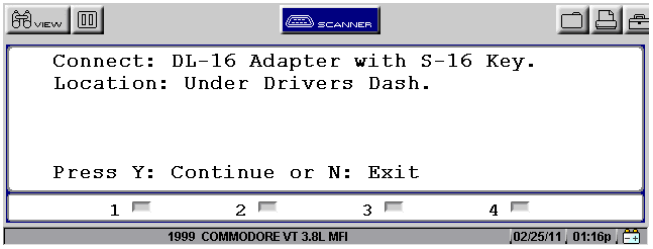
1) Select the Australian>Holden>Holden Not Astra selection. Select the correct make year, model and engine type on the Verus, Verdict, Modis, Solus Pro or Solus.



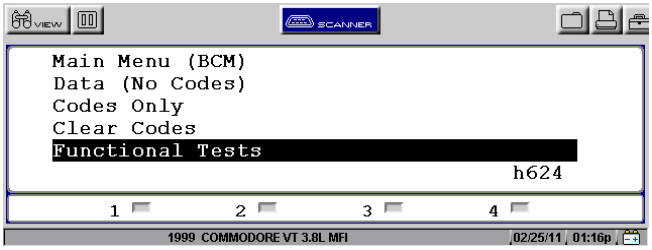
2) Select Body Control Module from the System Menu



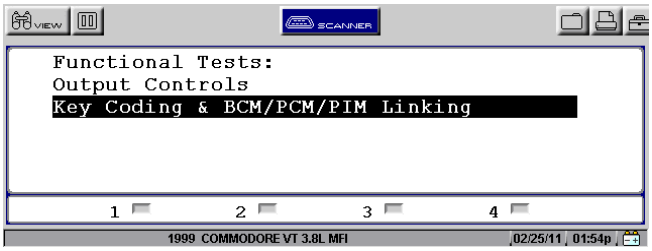
3) Connect Verus, Verdict, Modis, Solus Pro or Solus as directed.



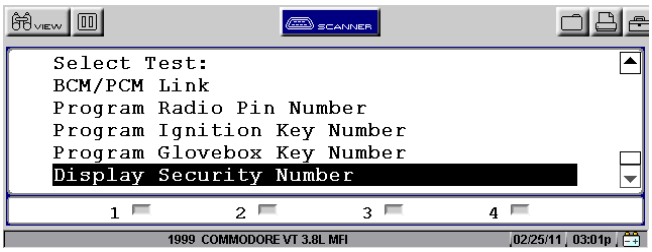
4) Select FUNCTIONAL TESTS from the BCM MAIN MENU



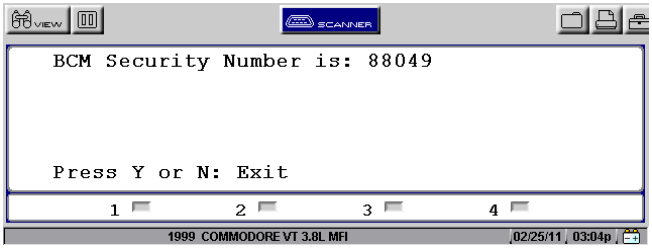
5) Select KEY CODING & BCM/PCM/PIM LINKING



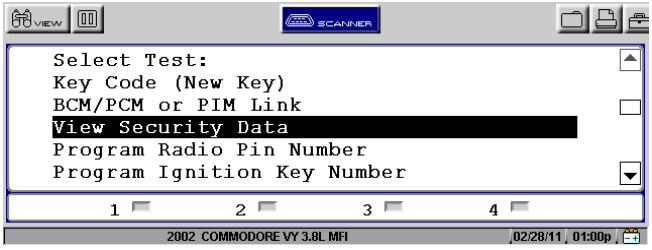
6) Select DISPLAY SECURITY NUMBER



7) Document displayed BCM Security Number



8) Exit, then Select VIEW SECURITY DATA

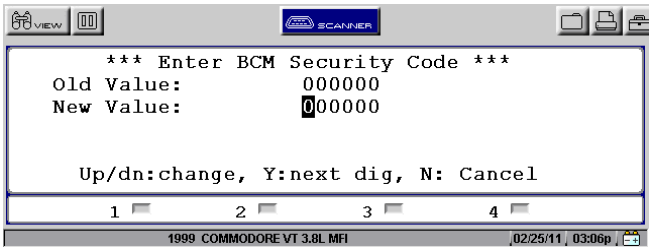


9) Enter the BCM security number

NOTE: The BCM security number will be entered on a line indicating "New Value".
Enter the BCM security number as retrieved from the "Display Security Number" test.

Modis, Solus Pro, Solus ***(Verus and Verdict users see next page)***

Disregard the "Old Value" line. The BCM security number will not be changed in this test.

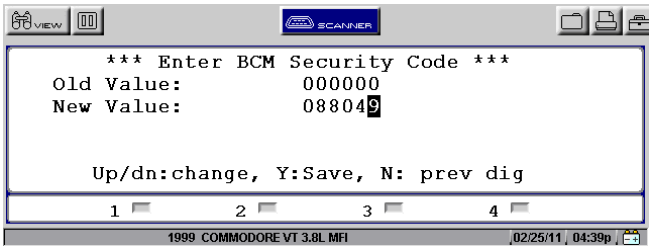


a) Use the up/down arrow to change the number to the desired digit then press Y to lock in the digit.

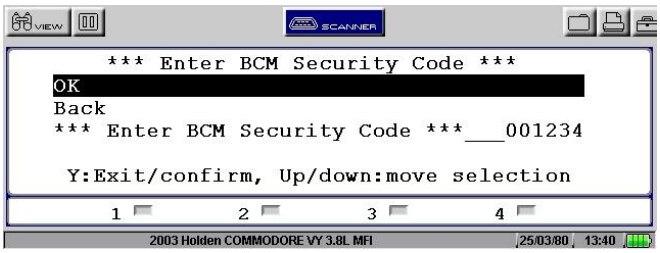
b) If an incorrect digit is entered, press N to go back to that digit and re-enter the correct digit.

c) If the security number is less than 6 digits enter "0" first as necessary to "pad out" the number. For example if the security number is 88049 then enter "088049".

d) A scrolled in number will appear like this:



e) Once the correct BCM security number has been entered, press Y on the final digit and scroll up to OK. Press Y to proceed. The security number will now be checked.



Verus, Verdict

Disregard the "New Value" line. The BCM security number <u>will not</u> be changed during this test.

a) Select anywhere within the New Value text input box and the virtual keyboard will appear on screen.

b) Use the buttons on the virtual keyboard to input the correct security number.

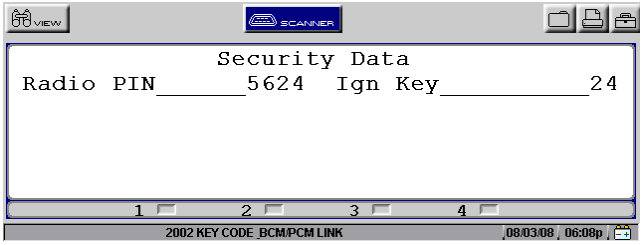
<u>NOTE:</u> The BCM security number <u>must</u> have a total of 6 digits. If the security number for the vehicle has less than 6 digits, you must "pad out" as necessary at the beginning of the number.

Eg: Security number 47714 must be entered as "047714".

c) If an incorrect digit is selected, simply select the backspace button as necessary.

d) Once all 6 digits are entered correctly, select "ok" as circled below. The security number will now be checked.

10) Security Data is then displayed. Below is an example of what may be displayed.



NOTE: If any failure messages appear then refer to Failure Messages section at the end of this Key Coding & BCM Linking section in this manual

Reprogramming Security Data
For: VS, VT, VX, VU, V2 & WH

The Security Data on some vehicles may require changing. For example if a new or replacement BCM has been fitted to the vehicle.
The replacement BCM will have no numbers programmed or incorrect numbers programmed within it.
On some vehicles these numbers can be reprogrammed.

The following is an example from a VT Commodore

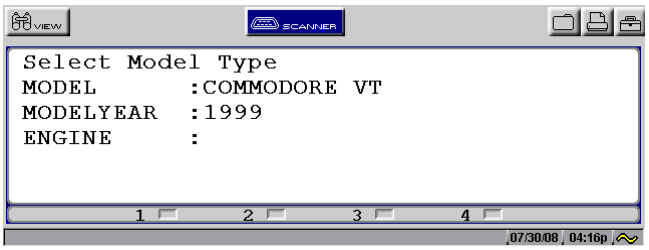
Quick Instructions VS, VT, VX, VU, V2 & WH:

1. Ensure a valid key is present.
2. Put valid key into ignition and switch to ON.
3. Enter vehicle details and connect to vehicle.
4. Select Functional tests, and then select the number to reprogram.
5. Follow the on-screen prompts.

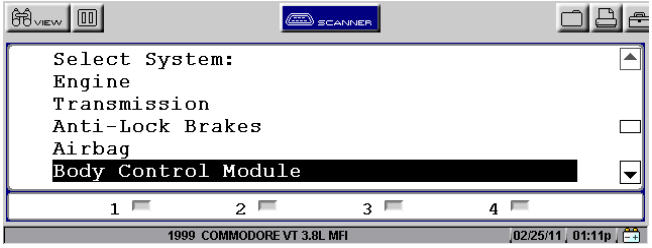
Detailed Instructions:

1) Place a current valid key into ignition and switch the ignition ON.

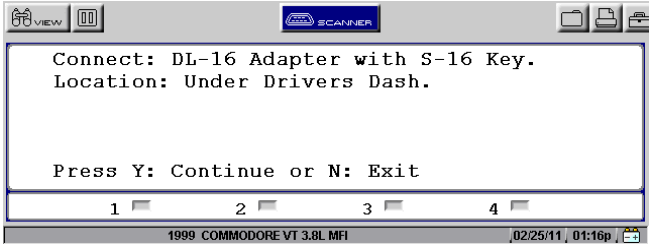
2) Select the Australian>Holden>Holden Not Astra selection. Select the correct make year, model and engine type on the Verus, Verdict, Modis, Solus Pro, or Solus.



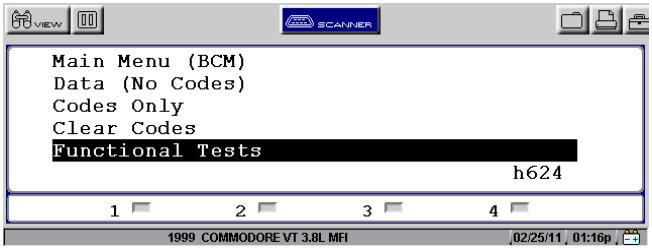
3) Select Body Control Module from the System Menu



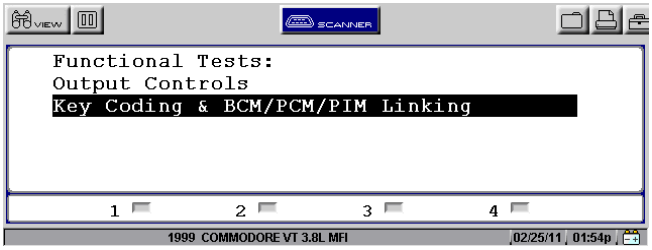
4) Connect Verus, Verdict, Modis, Solus Pro or Solus as directed.



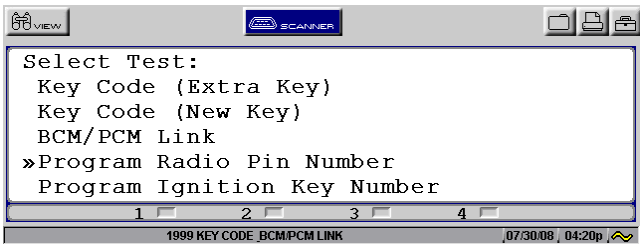
5) Select FUNCTIONAL TESTS from the BCM MAIN MENU



6) Select KEY CODING & BCM/PCM/PIM LINKING

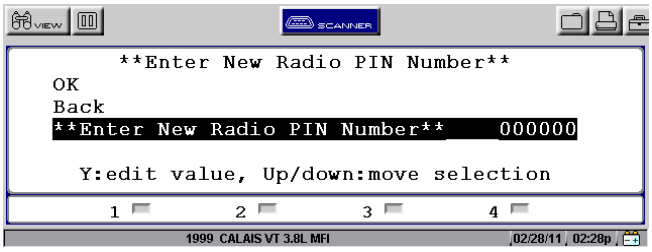


7) Select Number to be Reprogrammed, example: PROGRAM RADIO PIN NUMBER

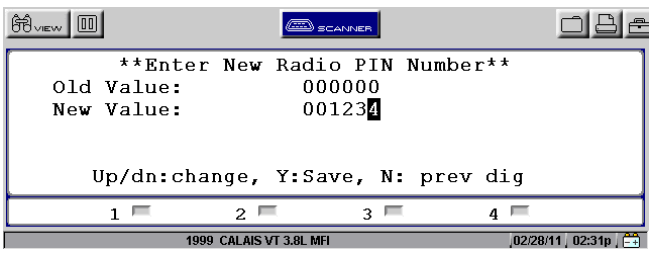


8) ***Modis, Solus Pro, Solus*** ***(Verus & Verdict users see next page)***

Arrow Down to Highlight "Enter New Radio PIN Number", & Press Y

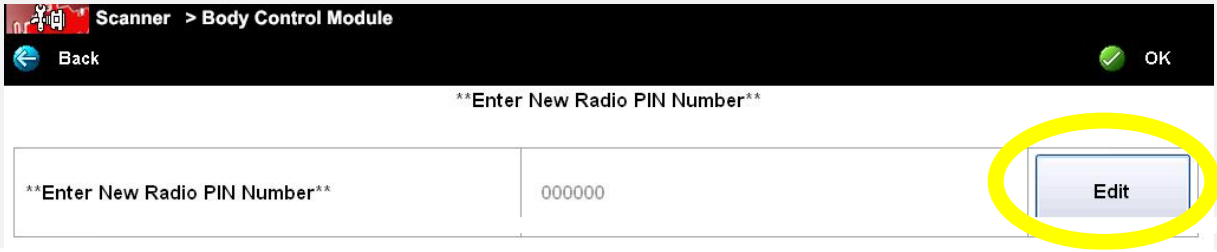


a) Use the up/down arrow to change the number to the desired digit then press Y to lock in the digit.
b) If an incorrect digit is entered, press N to go back to that digit and re-enter the correct digit.
c) If the number is less than 6 digits enter "0" first as necessary to "pad out" the number. For example if the Radio Pin number is 1234 then enter "001234". A scrolled in number will appear like this:

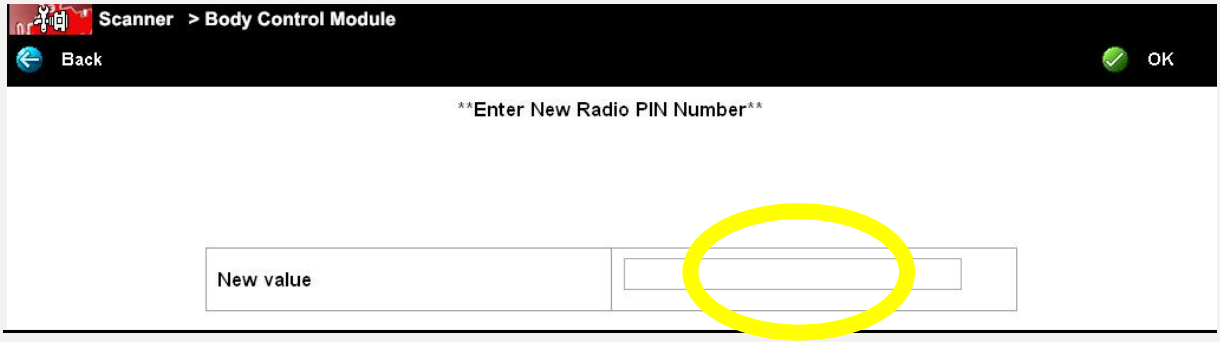


8) ***Verus & Verdict***

a) Select "Edit" icon on screen as circled below.



b) Select anywhere within the "new value" text box and the virtual keyboard will appear on the screen.



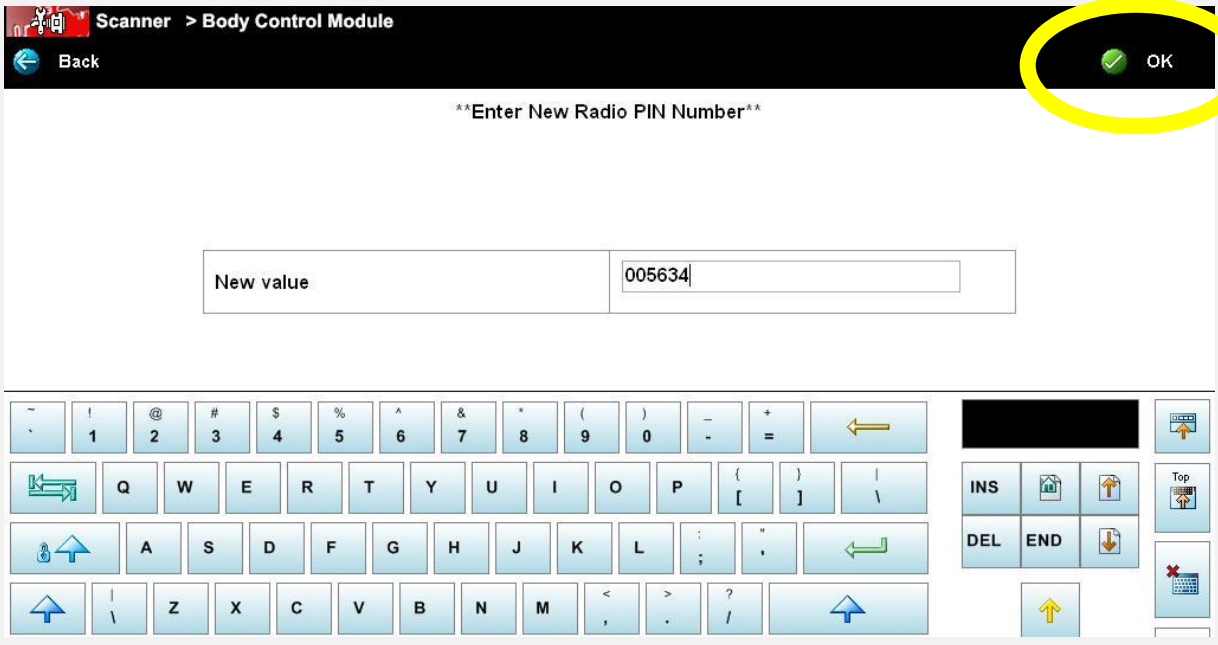
c) Use the buttons on the virtual keyboard to input the correct PIN number.

NOTE: The PIN number must have a total of 6 digits. For example, if the Radio Pin number for the vehicle has less than 6 digits, you must "pad out" as necessary at the beginning of the number.

Eg: PIN number 5634 must be entered as "005634".

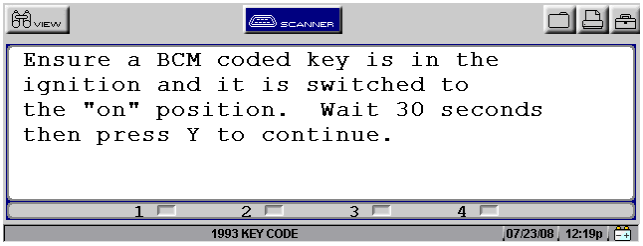
c) If an incorrect digit is selected, simply select the backspace button as necessary.

d) Once all 6 digits are entered correctly, select "ok" as circled below.



9) Follow the on-screen prompts. If the ignition is not already on then turn ignition ON, wait 20 seconds and then press Y/select "Continue" to proceed.

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to proceed to the next menu.

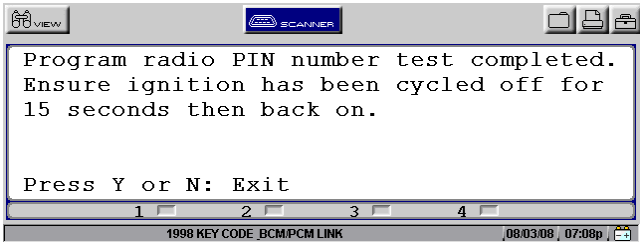


10) If conditions are correct, the message on the next screen will appear:

a) With the new key in the ignition press Y/select "Continue" once to program the new information to the BCM.
b) Wait for 20 seconds and then turn the ignition OFF.
c) Press N/select "Exit" to exit.

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to program the new information.

11) The next screen will appear when exiting. Ensure the key is OFF then press N/select "Exit".



NOTE: If any failure messages appear then refer to Failure Messages section at the end of this Key Coding & BCM Linking section in this manual

Reprogramming Security Data
For: VY, VZ, WK & WL

The Security Data on some vehicles may require changing. For example if a new or replacement BCM has been fitted to the vehicle.
The replacement BCM will no numbers programmed or incorrect numbers programmed within it. On some vehicles these numbers can be reprogrammed.

The following is an example from a VY Commodore

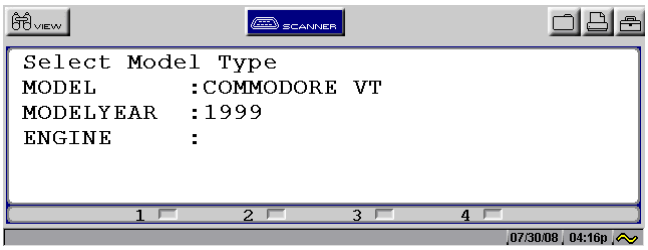
Quick Instructions VY, VZ, WK & WL:

1. Ensure a valid key is present.
2. Put valid key into ignition and switch to ON.
3. Enter vehicle details and connect to vehicle.
4. Select "Display Security Number" and document number
4. Return to main menu and then select the number to reprogram.
5. Enter valid BCM security number
6. Follow the on-screen prompts.

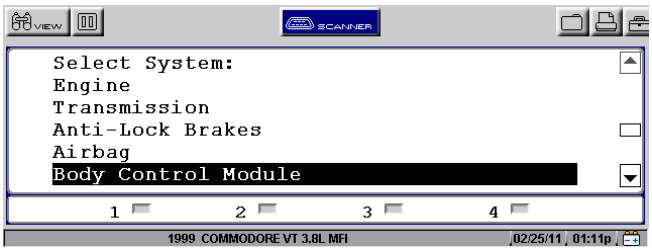
Detailed Instructions:

1) Place a current valid key into ignition and switch the ignition ON.

2) Select the Australian>Holden>Holden Not Astra selection. Select the correct make year, model and engine type on the Verus, Verdict, Modis, Solus Pro, or Solus.

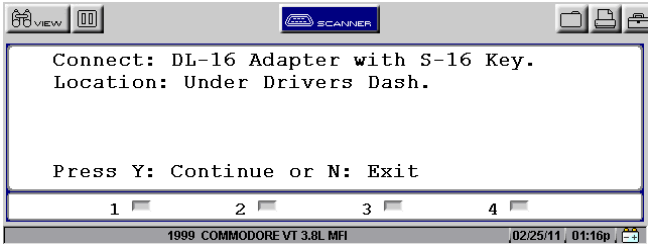


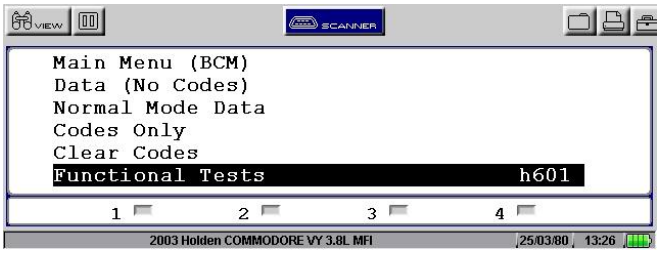
3) Select Body Control Module from the System Menu



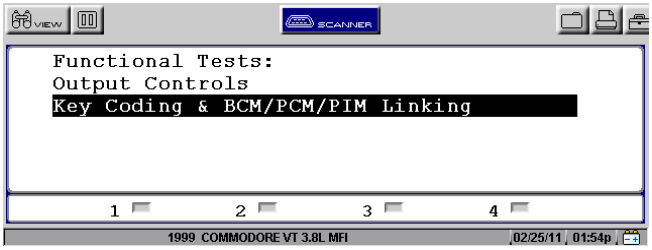
4) Connect Verus, Verdict, Modis, Solus Pro or Solus as directed.

5) Select FUNCTIONAL TESTS from the BCM MAIN MENU

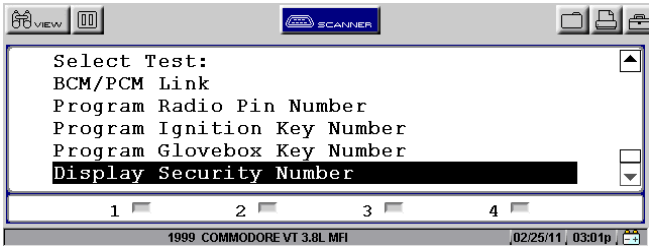




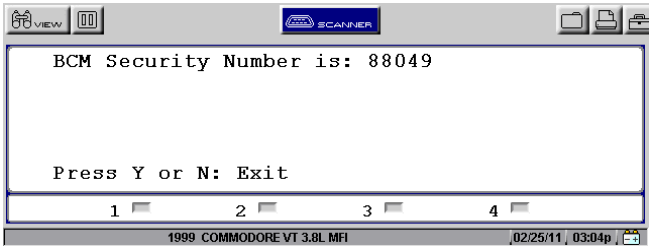
6) Select KEY CODING & BCM/PCM/PIM LINKING



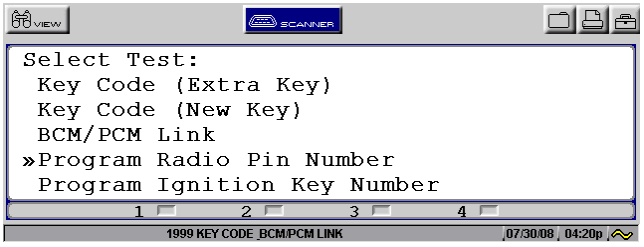
7) Select DISPLAY SECURITY NUMBER



8) Document displayed BCM Security Number

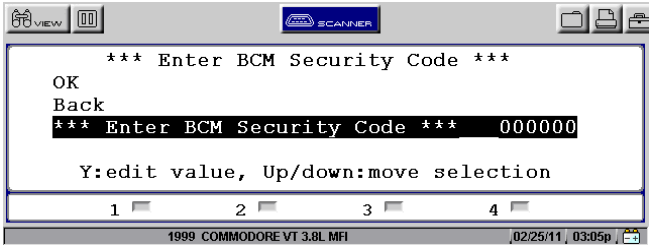


9) Select Number to be Reprogrammed, example: PROGRAM RADIO PIN NUMBER



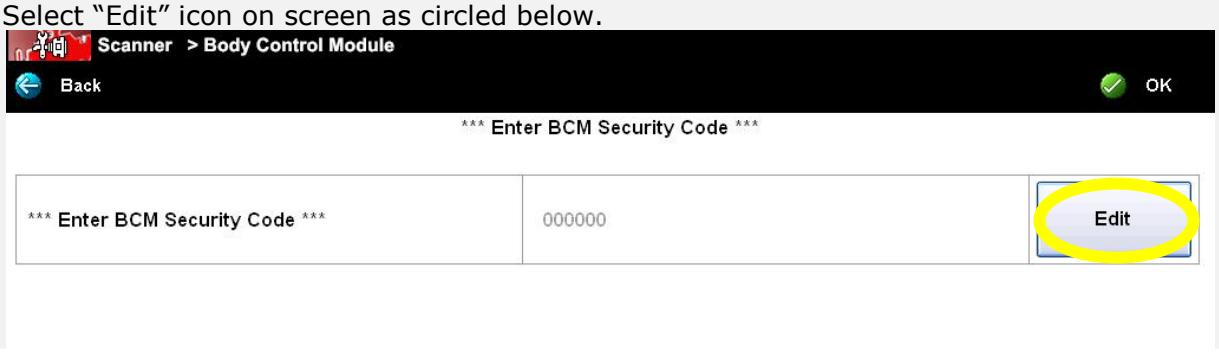
10) ***Modis, Solus Pro & Solus*** ***(Verus & Verdict users see next page)***

Arrow Down to Highlight "Enter BCM Security Code" & Press Y

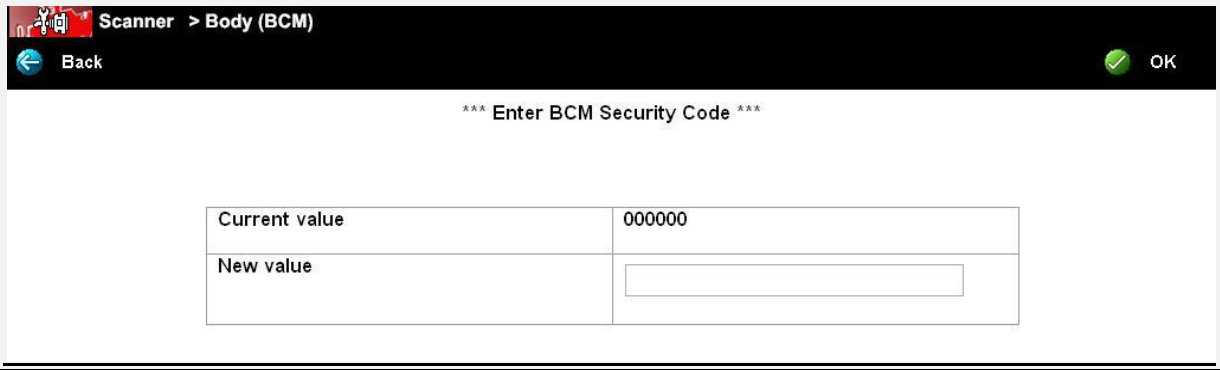


10) ***Verus & Verdict***

Select "Edit" icon on screen as circled below.



After selecting edit, a "New value" input option should appear, as shown below.



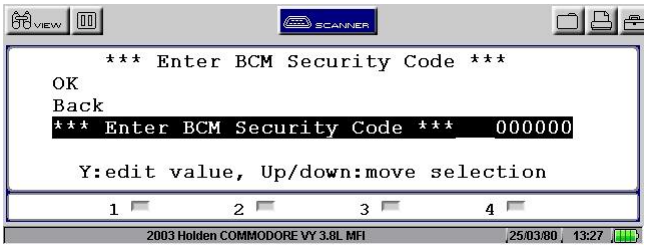
11) Enter the BCM security number.

NOTE: The BCM security number will be entered on a line indicating "New Value".
Enter the BCM security number as retrieved from the "Display Security Number" test.

Modis, Solus Pro, Solus ***(Verus & Verdict users see next page)***

Disregard the "Old Value" line. The BCM security number <u>will not</u> be changed in this test.

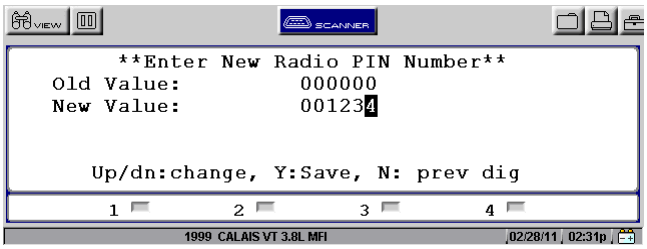
a) Arrow Down to Highlight "Enter BCM Security Code", & Press Y



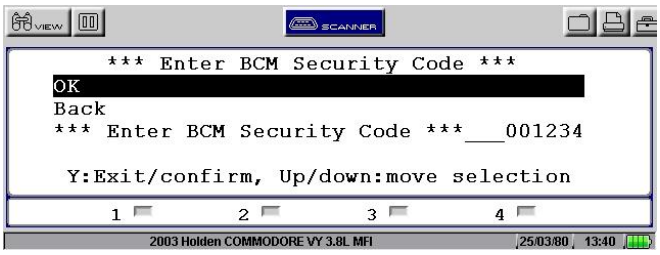
b) Use the up/down arrow to change the number to the desired digit then press Y to lock in the digit.

c) If an incorrect digit is entered, press N to go back to that digit and re-enter the correct digit.

d) If the number is less than 6 digits enter "0" first as necessary to "pad out" the number. For example if the BCM security number is 1234 then enter "001234". Below is an example of what a correctly entered BCM security number looks like.



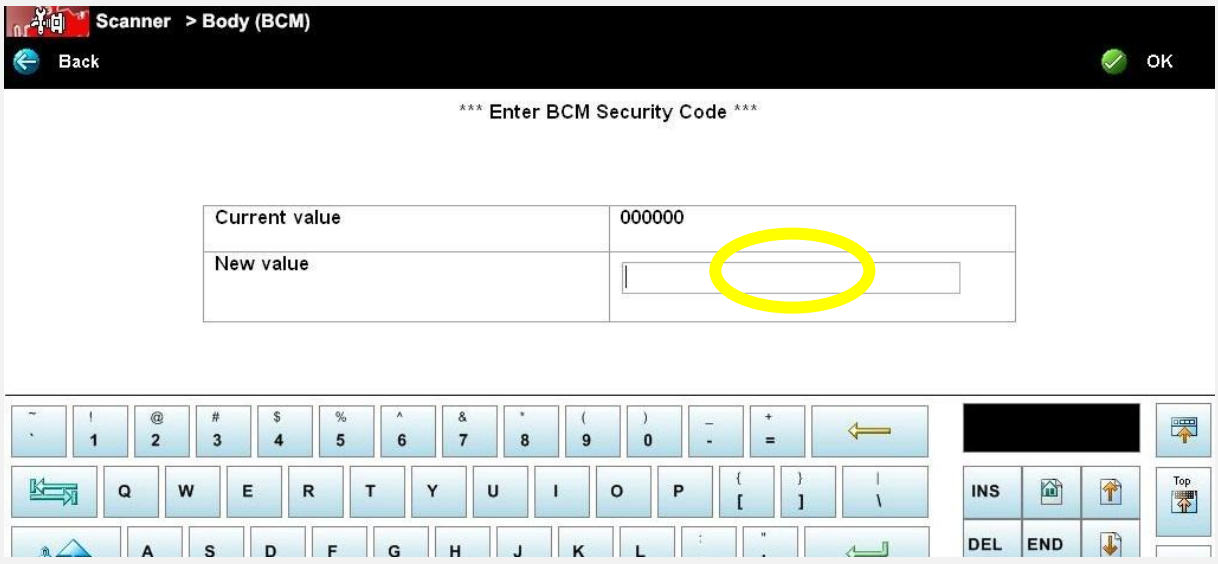
e) Once the correct BCM security number has been entered, press Y on the final digit and scroll up to OK. Press Y to proceed.



Verus & Verdict

Disregard the "Current Value" line. The BCM security number <u>will not</u> be changed in this test.

a) Select anywhere within the New Value text input box and the virtual keyboard will appear on screen



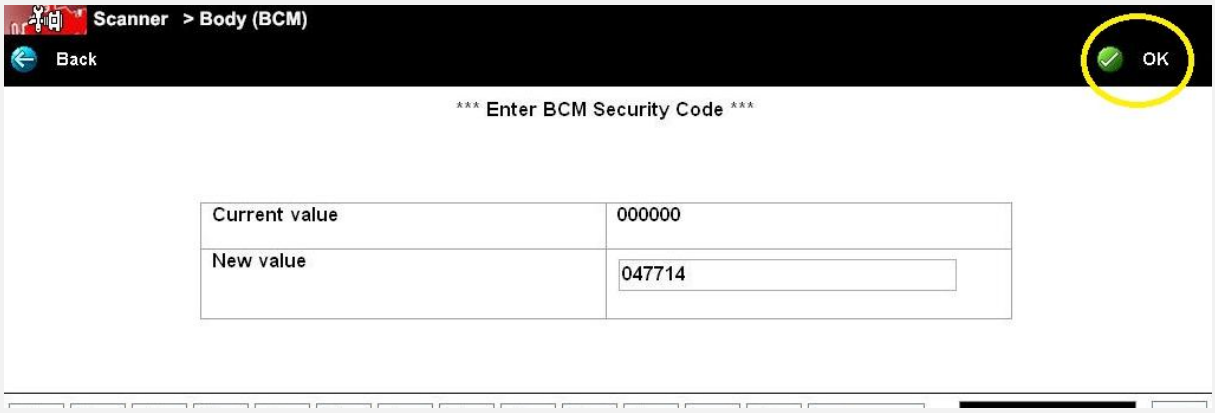
b) Use the buttons on the virtual keyboard to input the correct security number

NOTE: The BCM security number must have a total of 6 digits. If the security number for the vehicle has less than 6 digits, you must "pad out" as necessary at the beginning of the number.

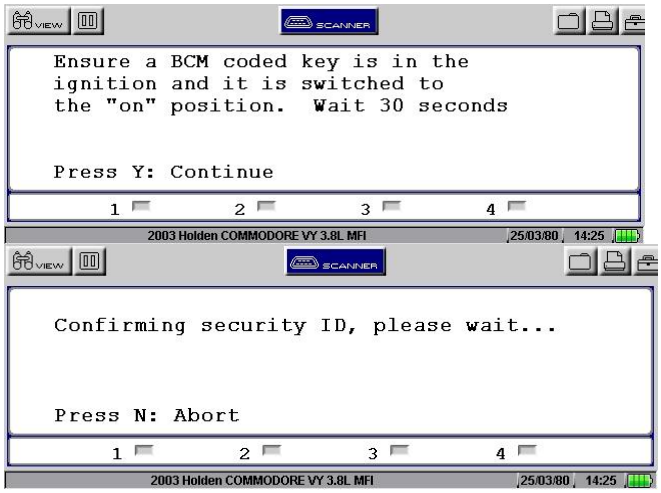
Eg: Security number 47714 must be entered as "047714"

c) If an incorrect digit is selected, simply select the backspace button as necessary

d) Once all 6 digits are entered correctly, select "ok" as circled below. The security number will now be checked



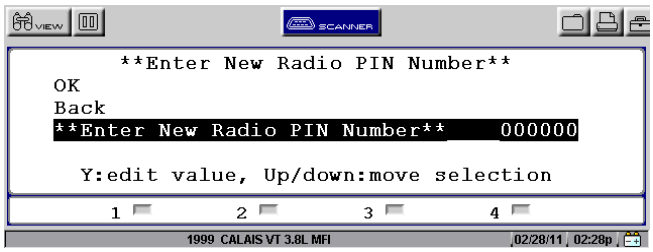
12) Follow the on-screen prompts. Ensure a valid key is in the ignition and it switched on.



13) Enter the new radio Pin number

Modis, Solus Pro, Solus ***(Verus & Verdict users see next page)***

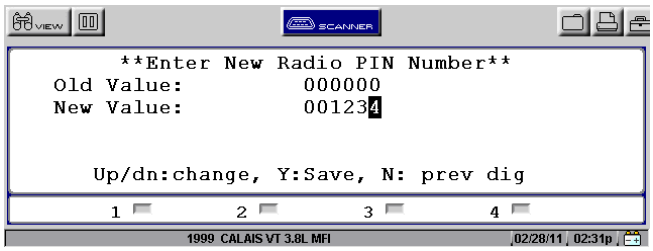
Arrow Down to Highlight "Enter New Radio PIN Number", & Press Y



a) Use the up/down arrow to change the number to the desired digit then press Y to lock in the digit.

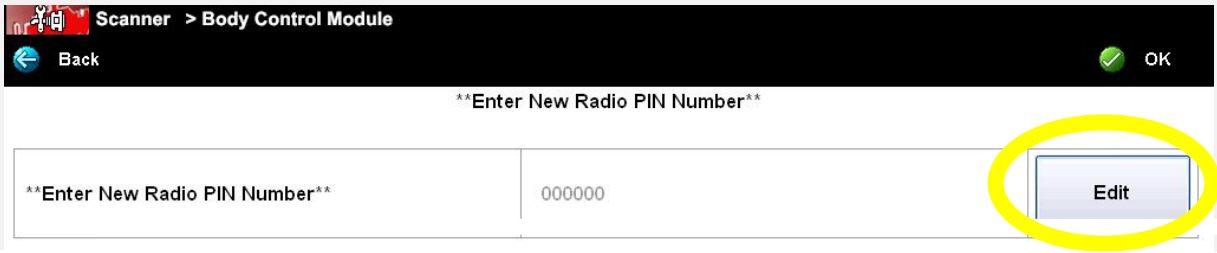
b) If an incorrect digit is entered, press N to go back to that digit and re-enter the correct digit.

c) If the PIN number is less than 6 digits enter "0" first as necessary to "pad out" the number. For example if the Radio Pin number is 1234 then enter "001234".
A scrolled in number will appear like this:



Verus & Verdict

a) Select "Edit" icon on screen as circled below.



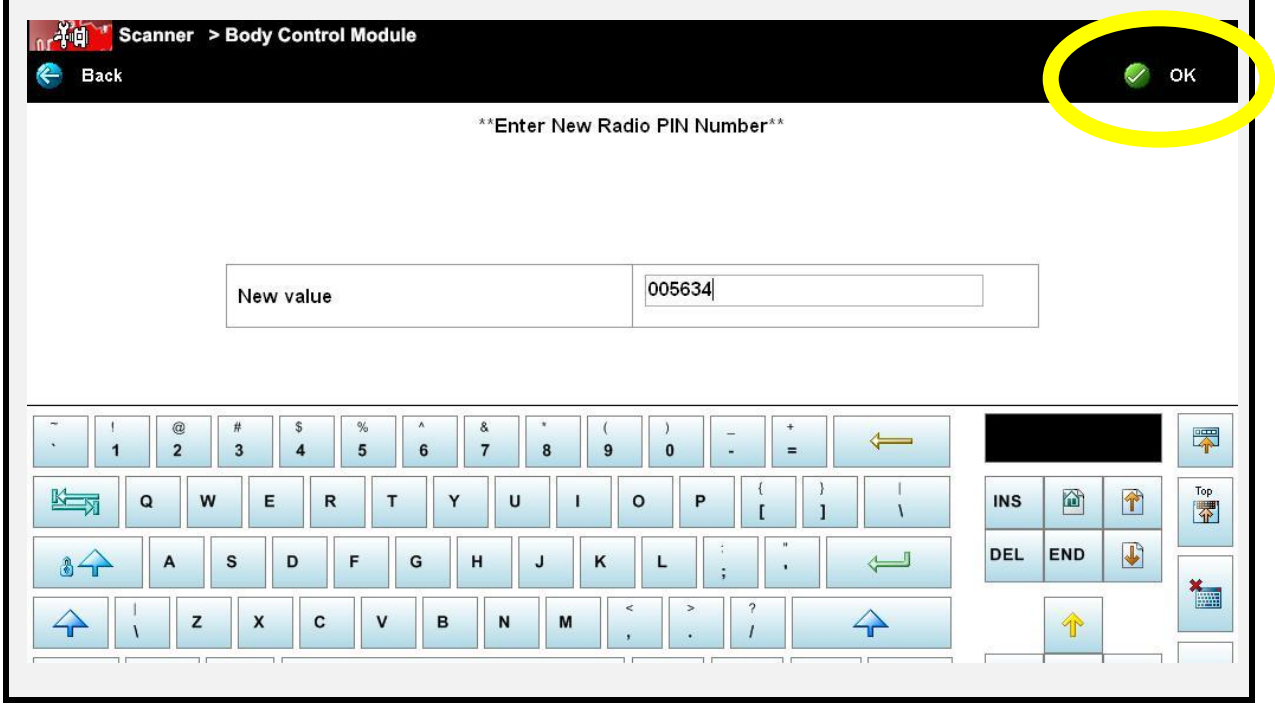
b) Select anywhere within the "new value" text box and the virtual keyboard will appear on the screen.

c) Use the buttons on the virtual keyboard to input the correct security number.

NOTE: The PIN number must have a total of 6 digits. For example, if the Radio Pin number for the vehicle has less than 6 digits, you must "pad out" as necessary at the beginning of the number.
Eg: Radio PIN number 5634 must be entered as "005634".

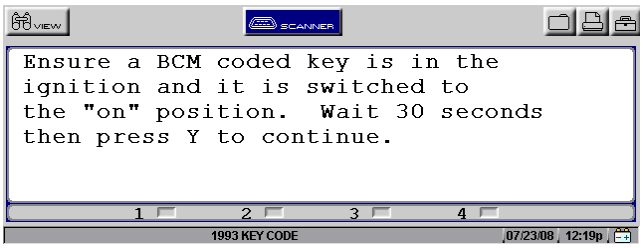
d) If an incorrect digit is selected, simply select the backspace button as necessary.

e) Once all 6 digits are entered correctly, select "ok" as circled below.



14) Follow the on-screen prompts. If the ignition is not already on then turn ignition ON, wait 20 seconds and then press Y/select "Continue" to proceed.

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to proceed to the next menu.



15) If the security code is correct the message on the next screen will appear:

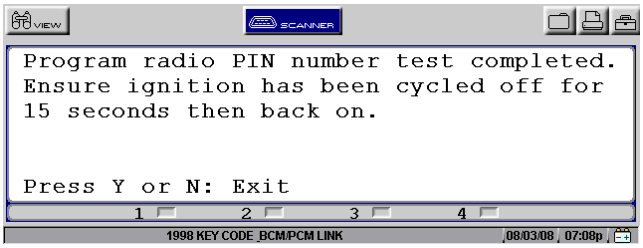
a) With a valid key in the ignition press Y/select "Continue" once to program the new information to the BCM.

b) Wait for 20 seconds and then turn the ignition OFF.

c) Press N/select "Exit" to exit.

NOTE: Solus Pro & Solus users may need to press Y once to switch the back light back on and then Y again to program the new information.

16) The message on the next screen will appear when exiting. Ensure the key is OFF then press N/select "Exit".

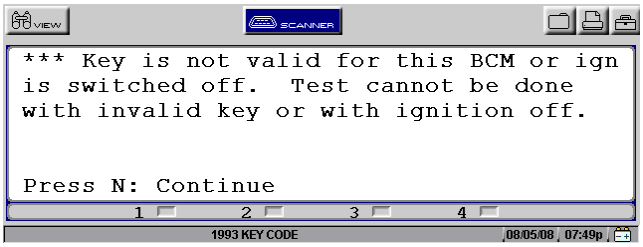


NOTE: If any failure messages appear then refer to Failure Messages section at the end of this Key Coding & BCM Linking section in this manual

Failure Messages during BCM Procedures

Any of the next three screens (or similar) may appear during Key Coding or BCM Linking procedure.

1)



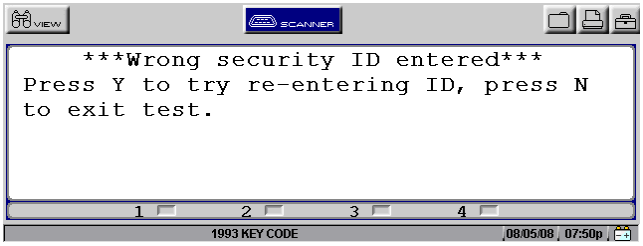
a) If an invalid key is used this message will appear
b) If the ignition is not switched on.
c) The key reader "slip ring" around the ignition key is faulty and not reading the key. This faulty slip ring will also prevent a new key from being coded.
d) The actual key "slip ring contact" which contacts the "slip ring" has an open circuit in the key.

Check the slip is operation using the following procedure:

1. Remove any key from ignition.
2. Wait for the Security LED to start flashing.
3. Using a known good key insert this into the ignition and turn the ignition to ON.
4. The Security LED will stop flashing if the slip ring is operational.

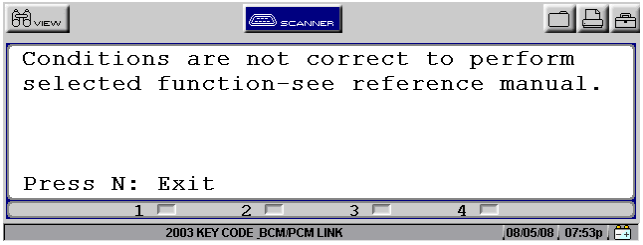
e) Check the slip ring circuit from the BCM to the slip ring itself.

2)



a) If an incorrect BCM Security number has been entered a screen similar to this will appear.
b) If this happens press N to exit.
c) Reselect the BCM Linking procedure or Key Coding procedure from the test menu and start the procedure again.
d) Ensure that security number being entered is in 6 digit format. If the security number is less than 6 digits enter "0" first as necessary to "pad out" the number. For example if the security number is 88049 then enter "088049".
e) Note that if a wrong BCM Security number is being used this message will always appear and BCM Linking and/or Key Coding will not be allowed.

3)



VY and VZ series models require specific conditions to enable the BCM Linking procedure to occur. The BCM uses a range of criteria to determine whether BCM Linking can occur.

These include checking for a coded ignition key, ensuring the Theft Deterrent is disabled or determining the vehicle has not been tampered with. If any of the criteria is not met the above message will be displayed.

If this message is observed ensure a **valid ignition key** is being used and the **ignition is switched on**.

If the message is observed again:

a) Turn the vehicle ignition off.
b) Disconnect the Verus, Verdict, Solus Pro, Modis or Solus.
c) Leave the vehicle with the key off for at least 10 minutes then re-attempt the BCM Linking procedure.

Ford

Falcon Series Security Systems

Including Key Coding Information and Procedures

Warning: DO NOT attempt these procedures on a BF or BFII series vehicle. It is for BA and BAII vehicles only.

Introduction

Ford Falcon/Fairmont and Fairlane/LTD vehicles use two types of security systems as follows:

1) "**SmartLock**" system – used on
   a) EBII/NC/DC Series (uses a SmartLock module)
   b) ED Series (uses a SmartLock module)
   c) EF/NF/DF Series (uses a BEM)
   d) EL/NL/DL Series (uses a BEM)
   e) AU Series 1 to June 1999 (uses BEM)

   These systems ***do not*** require the use of a scan tool to code keys or link the PCM (Powertrain Control Module) to the SmartLock module or BEM (Body Electronics Module).
   See the Ford Reference Manual for information on this system the key.

2) "**SmartShield**" system – used on
   a) Falcon/Fairmont, Fairlane & LTD AU series 1 from June 1999.
   b) Falcon/Fairmont, Fairlane & LTD AUII and AUIII series.
   c) Falcon/Fairmont, Fairlane & LTD BA series.

   These systems ***do*** require the use of a scan tool to code keys and link the PCM (Powertrain Control Module) to the BEM.
   This manual provides information to be used in conjunction with the VCI cartridge, Solus Pro, Modis or Solus units when performing these recoding procedures.
   The keys for these systems have a transponder ("chip") inbuilt in the key.

!! IMPORTANT INFORMATION !!
If coding new keys to the vehicle you **MUST HAVE TWO** keys that can be coded to the vehicle, coding only one key will result in failure and the vehicle will be immobilised.

!! IMPORTANT INFORMATION !!
To code a new key a **new key "blank"** must be purchased and then **cut by a locksmith** to suit the ignition barrel. Once this has been done the Solus Pro, Modis or Solus can be used to code the new key to the vehicle – see following procedures.

Refer to the following pages for specific information on the vehicle being tested.

Important: Ensure the correct AU vehicle ID is used. Check production date on vehicle compliance plates.
(Hint: some AU series vehicles have a label on one of the rear side windows specifying which system it has.)

For SmartLock System Procedures

For vehicles after June 1999, see the SmartShield procedures in this document.
For all other vehicles, see the Ford Reference Manual.

SmartShield System Procedures
For: AU series 1 after June 1999, AU series 2 & 3, & BA series 1 & 2

The SmartShield system uses ignition keys that have been coded to the BEM (Body Electronics Module). The BEM and the PCM (Powertrain Control Module) are also coded to each other. If new keys are required or the BEM or PCM has been replaced then use the following procedures.
For AU & BA series vehicles that use the Ford SmartShield system the two following procedures can be performed using the VCI cartridge, Solus Pro, Modis or Solus units:

Diagnosing SmartShield
Diagnosis of the SmartShield system is incorporated with BEM (Body Electronics Module) diagnosis. See BEM section for further information.

SmartShield Key Coding and Replacement Procedures

1) **Coding keys to the Body Electronics Module.**
   This may need to be performed if
   a) New keys are required or
   b) The BEM has been replaced.

Note that if there are two existing keys that are already coded to the vehicle extra keys can be added using a manual procedure that does not require a scan tool.
This manual procedure does not require the BEM and PCM to be re-linked.
See below for the manual procedure and for the scan tool procedure.

2) **PARAMETER RESET - Linking the Powertrain Control Module (PCM) to the Body Electronics Module (BEM).**
   This will need to be performed if the BEM or PCM has been replaced or if keys have been coded to the BEM.
   This is called a "Parameter Reset" by Ford and can only be performed using a scan tool.

SmartShield Coding New or Replacement keys to a vehicle

This procedure **erases ALL keys and security information** from the BEM.
The PCM will need to be linked to the BEM using the Parameter Reset function.

IMPORTANT: AT LEAST TWO KEYS MUST BE CODED TO THE VEHICLE.

!!WARNING!!
Two keys minimum are required for this procedure to be successful.
Two keys minimum MUST be programmed to the BEM or the procedure will fail.
IF YOU ONLY PROGRAM ONE KEY THE VEHICLE WILL BE NOT BE ABLE TO BE STARTED.

!!ATTENTION!!
After programming two new keys to a vehicle a PARAMETER RESET must be performed to link the BEM to the PCM (Powertrain Control Module).
This function is performed from the Engine Actuator Test Menu.

Coding a Key to the BEM (Body Electronics Module)

Quick Instructions:

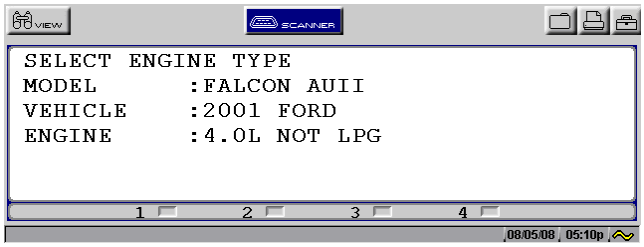
1. Ensure 2 keys are available to be coded (old keys can be recoded again)
2. Enter vehicle details and connect to vehicle.
3. Proceed to BEM Key Coding. **Make sure Key is OFF.**
4. Follow the on-screen prompts.
5. After coding keys proceed to Engine Parameter Reset.

Detailed Instructions:

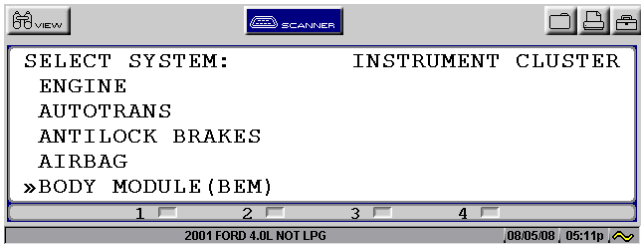
(Text on screen will be similar to this following example)

1. Ensure all keys to be coded are present for the vehicle.
   a) At least ***two keys must be present*** before proceeding with the key coding procedure.
   b) A maximum of four keys can be coded to the vehicle.
   c) Any keys previously coded will be lost unless they are present when keys are coded. **ALL KEYS to be coded must be present.**
   d) The two keys ***do not*** have to have been be previously coded to the vehicle.
   e) ***If they are new they must be cut by a locksmith to fit the ignition.***

2. If all keys are present proceed to ID the vehicle on the Verus, Verdict, Modis, Solus Pro or Solus in the Australia>Ford selection. Enter the correct year, model, and engine type.

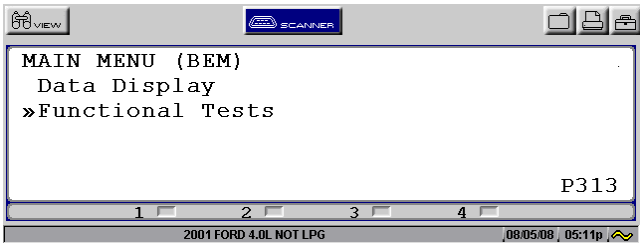


3. Select BODY MODULE (BEM) from System Menu



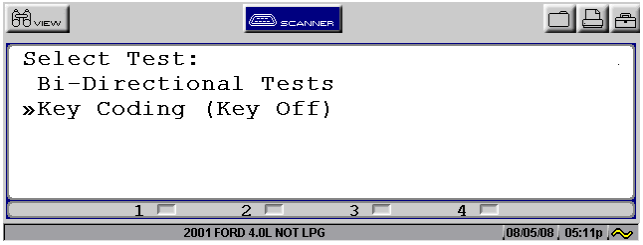
4. Connect Verus, Verdict, Modis, Solus Pro or Solus as per screen.

5. From the BEM Main Menu select Functional Tests.

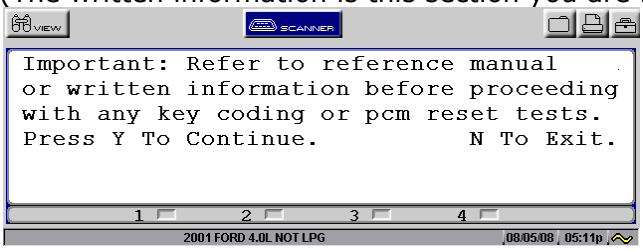


6. Select Key Coding (Key Off)

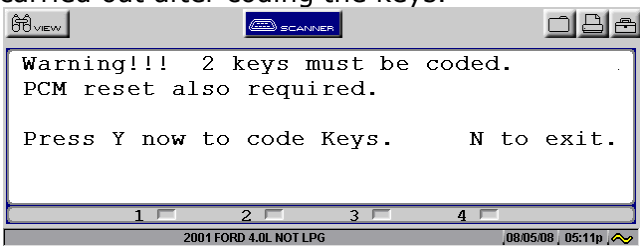
Important: Ensure the ignition is switched OFF at this point.



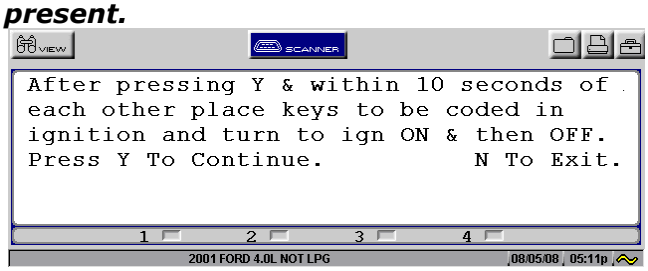
7. After selecting key coding ***carefully read and follow*** the on-screen instructions. (The written information is this section you are now reading).



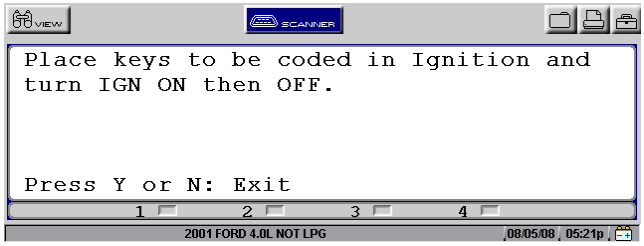
8. This screen warns that 2 keys must be present and both need to be coded AND the PCM to BEM link known as the PCM Reset (or Parameter reset) needs to be carried out after coding the keys.



9. This screen explains what to do ***in the next step*** once key coding has commenced. Once key coding has commenced each key in turn is to be placed in the ignition and the ignition switched ON. The door locks will cycle to indicate that the key has been coded to the BEM. ***All keys to be coded must be present.***



10. The following on-screen instruction instructs the user to now code the keys.



If at least two suitable keys are present then coding can be performed as follows:

a) When Y(Modis, Solus Pro, Solus) is pressed (Verus, Verdict users select "Continue") the door locks will cycle to indicate that ***all*** keys have been erased from the BEM and keys can now be coded.
b) Within 10 seconds of the door locks cycling place the 1st key to be coded into the ignition and switch the ignition ON. The door locks will cycle to indicate that the key has been coded to the BEM.
c) Within 10 seconds remove the 1st key and place the 2nd key into the ignition and switch it ON. Again the door locks will cycle to indicate the key has been coded to the BEM.
d) Within 10 seconds repeat with any other keys to be coded to the BEM (maximum of 4 keys).
e) 10 seconds after the last key is coded the door locks will cycle to indicate that the coding procedure has now ended.
f) Press N (Verus & Verdict select "Exit") to exit.

NOTE: Solus Pro & Solus users may need to press N once to switch the back light back on and then N again to exit.

11. Now that the keys have been coded to the BEM, the PCM must be linked to the BEM. Press N to EXIT/select "Exit" out from the BEM tests and then proceed to the Engine selection.

SmartShield Adding another Key to a Vehicle without Using a Scan Tool

The following procedure can be used to add another key to an AU series or BA series Falcon/Fairmont/Fairlane/LTD without using a scan tool.
Two existing coded keys are required to perform this procedure.
The BEM/PCM PARAMETER RESET linking procedure ***does not*** need to be performed after adding a key with this method.

Adding Key Procedure:

1. Ensure two code keys are present and any extra keys have been cut by a locksmith.
2. Insert one of the coded keys into the ignition and switch as follows: OFF > ACCESSORIES > OFF
3. Remove 1st key and insert 2nd coded key into the ignition and switch as follows: OFF > IGNITION ON. The door locks will cycle to indicate key training state has been entered.
4. Within 5 seconds remove the 2nd key and place then new key into the ignition and turn to the IGNITION ON position. The door locks will cycle to indicate the key has been coded.
5. Switch the IGNITION OFF to exit the training state.

SmartShield Parameter Reset – Linking the BEM to the PCM

The BEM (Body Electronics Module) must recognise the PCM (Powertrain Control Module) to enable the vehicle to be started.

1. A new BEM will not recognise the current PCM so they need to be 'linked'.
2. A new PCM will not be recognised by the BEM so they need to be 'linked'.
3. When keys are programmed to the BEM it loses its recognition of the PCM so they need to be 're-linked'.

Performing a **PARAMETER RESET** links the modules together to enable the vehicle to be started.

This procedure is used in three situations,

1. When a BEM has been replaced.
2. When a PCM has been replaced.
3. When keys have been coded to the BEM using a scan tool.

Parameter Reset Procedure for AU/AUII/AUIII & BA/BAII Series vehicles

Ensure the vehicle has a fully charged battery, as the vehicle's ignition must be left on uninterrupted for 10 minutes during this procedure.

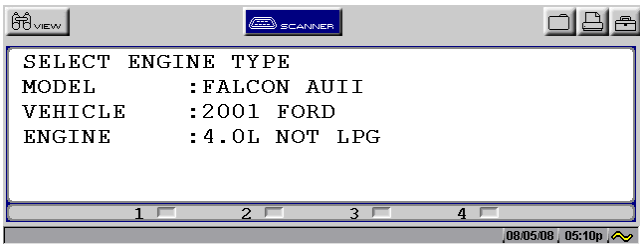
Quick Instructions:

1. Ensure vehicle battery is fully charged.
2. Enter vehicle details and connect to vehicle.
3. Proceed to Engine Parameter Reset.
4. Follow the on-screen prompts.
5. Ensure vehicle starts and runs.

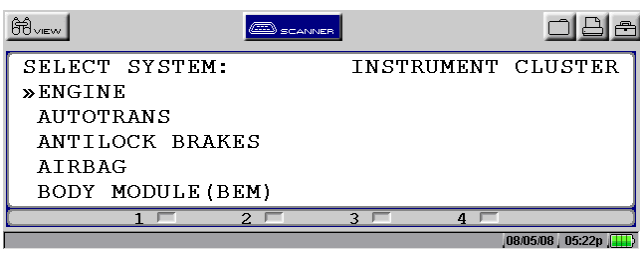
Detailed Instructions:

(Text on screen will be similar to this following example)

1. Make sure the vehicle battery is fully charged.
2. Proceed to ID the vehicle on the Verus, Verdict, Solus Pro, Modis or Solus in the Australia>Ford selection. Enter the correct year, model, and engine type.

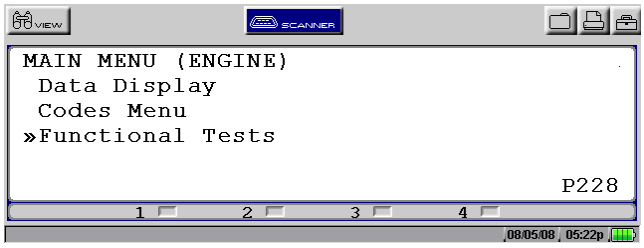


3. Select Engine



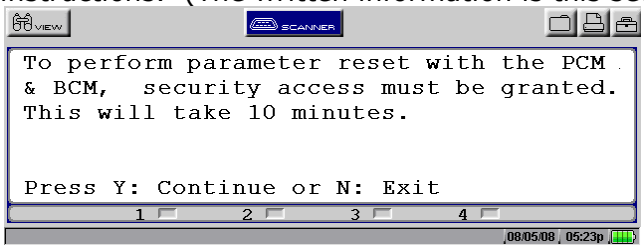
4. Connect Verus, Verdict, Modis, Solus Pro Solus as per screen.

5. Select Functional Tests.

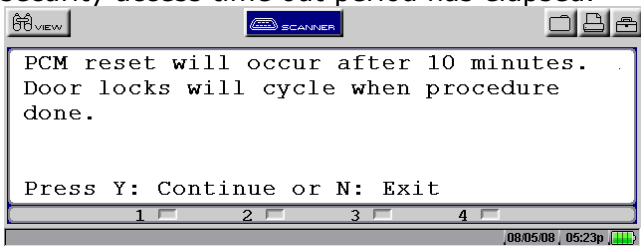


6. Select Parameter Reset.

7. After selecting PARAMETER RESET ***carefully read and follow*** the on-screen instructions. (The written information is this section you are now reading).



8. The PCM will not allow a PARAMETER RESET to be performed until a 10-minute security access time out period has elapsed.



   a) Press Y/select "Continue" to start the 10-minute time out.
   b) The Solus Pro, Modis or Solus will automatically perform the RESET once the 10-minute security access time out has elapsed.
   c) If the RESET is successful the door locks will cycle to indicate the BEM has recognised the PCM Reset. A Test Complete screen message will also be displayed.
   d) Press N/select "Exit" to exit the test.
   e) Turn the ignition off and disconnect the Verus, Verdict, Solus Pro, Modis or Solus.
   f) The vehicle is now ready for use.

Key Coding FAQ's

HOLDEN

What vehicles can I code keys and link modules on?

- Always refer to the application sheets at the back of this document or to the applicable Application Sheets for specific vehicle coverage.

What do I do if a key does not code the first time?

- Re-try coding the key making sure a valid key is available and the ignition is switched ON.
- Ensure all on-screen instructions are carefully followed.
- Ensure the slip ring around the ignition key is not faulty. See the "Introduction to Key Coding and BCM Linking" section at beginning of these Key Coding Instructions.

Can I code a key pad more than once?

- No - A key pad can only be coded to a BCM once.
- That BCM can be put into another vehicle as long as the key pad that is coded to it is also used and the BCM is the same part number and type. (Only the key tang requires changing and the BCM will need to be linked.).

What happens to the Radio pin number if I change a BCM?

- Before replacing a BCM record the Radio Pin number. Keep this in a secure place (perhaps with the customer's vehicle details) and supply a copy of the Radio pin number to the vehicle owner.
- Recoding of the radio pin number is supported on some model vehicles. Refer to specific vehicle application sheets.

If a locksmith has coded a new key to a BCM can I then link the BCM to the PCM?

- Yes the Verus, Verdict, Modis, Solus Pro or Solus can be used to link the BCM to the PCM. (If this is not done then the vehicle cannot be started.)

Why do I need to enter a Security Number on some vehicles? Where do I get the Security Number from?

- The Security Number is a feature to prevent unauthorised tampering with a vehicle.
- The Security Number is supplied on a small card when a vehicle is brand new. This card also has the Radio PIN number and the Key numbers.
- Check for a DISPLAY SECURITY NUMBER option from within the BCM>Key coding menu. This will allow you to retrieve the security number directly from the BCM to use for other functions.
- If the card has been lost and the Security Number is unknown then a new BCM may need to be purchased. New BCM's are supplied with a Security Number. Ensure the new number is put in a known secure location.
- Security Numbers may be obtained from Holden's directly using the VIN from the vehicle.

Can I use non-genuine key pads with a vehicle?

- It is recommended that genuine Holden key pads are used with a vehicle.

I have tried coding an "All New" key but it will not code.

- Ensure the brand new key is used in the ignition for the whole coding process and not the existing coded key.

Key Coding FAQ's

FORD

What vehicles can I code keys and link modules on?

- Always refer to the application sheets at the back of this document or to the applicable Application Sheets for specific vehicle coverage.

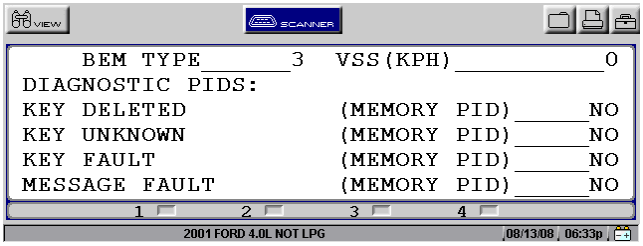
Can I use the recode keys and link the BEM on BF models?

- No - the BF Series uses a different system for Key Coding and Module Linking. Do not attempt to do this.

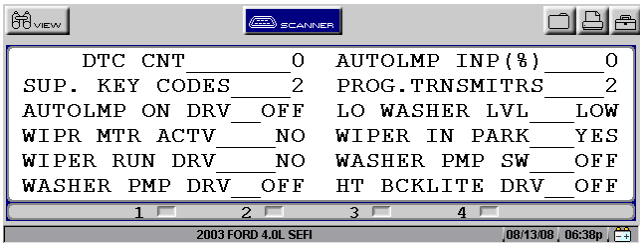
I have coded keys to a Falcon but the Parameter Reset (Linking) is not working.

- Ensure 2 keys have been coded to the BEM and one key is not faulty. If two keys are not coded the modules will not link.

  AU Models: check the BEM data list for Diagnostic PID's to see if Key Faults have been registered. The Diagnostic PID's should all read NO if no faults are detected. Not enough keys or a faulty key may register as a fault.



  BA Models: Check BEM Memory Codes to see if any Key Faults have been set in the BEM and check BEM data list to see how many keys are registered to the BEM. The parameter *SUP. KEY CODES* should show at least *2.*



- It has been known that some non-genuine Ford keys may not code to the vehicle.

Why do I have to wait for 10 minutes when linking the modules?

- The vehicles module has to wait the 10 minutes before allowing linking. This is a safety feature to delay any unauthorised tampering with the vehicle.

I have coded some keys to a Falcon and now it will not start.

- After coding keys to a Falcon the BEM and PCM must be linked again to enable the vehicle to run. This is called a Parameter Reset.

Continued Next Page

A BA Falcon has had a flat battery and now will not start and the "hand" symbol is flashing on the instrument panel. Do I have to re-link the PCM to BEM?

- There should be no issue with a flat battery on a BA vehicle. The vehicle should start with a new battery or a jump-start. The modules should not be affected by a flat battery.
- It has been known to happen that a PCM may "lose" the BEM codes for an unknown reason. The vehicle will be in a no-start condition. If this happens a "Parameter Reset" should be performed. See Ford Key Coding and Parameter Reset information in this document for details of this procedure.
- Check the BEM data list to make sure 2 keys are coded to the BEM.
  - If two keys are coded then perform a "Parameter Reset" from the engine Functional Tests.
  - If 1 or no keys are coded then recode 2 keys to the BEM. After coding the keys then perform a "Parameter Reset" from the engine Functional Tests.

A BA Falcon has had the Powertrain Control Module (PCM) replaced with a brand new unit, what needs to be done to get the vehicle to run?

- Brand new BA PCM's are supplied "dumb". They require programming with Ford specific operating information before they can operate. It must be programmed by a Ford dealer before it can be linked to the BEM.

Can I use non-genuine keys with a vehicle?

- It is recommended that genuine Ford keys are used with a vehicle.

During the "Key Coding (Key off)" procedure, only the first key is learnt by the vehicle and not the second. Even if the key order is swapped, only the first key will cycle the locks through the procedure. Why?

- It has been found previously that some locksmiths simply use the owner's original key and simply make a "clone". This means that during the key coding procedure, the BCM is fooled into thinking that you are attempting to re-code the same key. If this is the case, you may need to purchase another genuine Ford key.

Holden Vehicles		YEARS	Add Key	New Key	Display Security Number	Link BCM	Radio Pin Number	Ignition Key Number	Glove box Key number	Erase Key
Commodore / Calais VZ	3.6L 5.7L	2004 - 2006	NA	Y	Y	Y	D R	D R	NA	NA
Commodore / Calais VY/VYII	3.8L 5.7L	2002 - 2004	NA	Y	Y	Y	D R	D R	NA	NA
Commodore / Calais VX/VXII	3.8L 5.7L	2000 - 2002	Y	Y	Y	Y	D R	D R	D R	NA
Commodore / Calais VT/VTII	3.8L 5.0L	1997 - 2000	Y	Y	Y	Y	D R	D R	D R	NA
Commodore/Calais VS	3.8L 5.0L	1995 - 1997	Y	Y	Y	NA	D R	D R	D R	NA
Commodore / Calais VR	3.8L 5.0L	1994 - 1995	Y	Y	Y	NA	N	N	N	NA
Ute VZ	3.6L 5.7L	2004 - 2006	NA	Y	Y	Y	D R	D R	NA	NA
Ute VY / VYII	3.8L 5.7L	2003 - 2004	NA	Y	Y	Y	D R	D R	NA	NA
Ute VU / VUII	3.8L 5.7L	2000 - 2002	Y	Y	Y	Y	D R	D R	D R	NA
Ute VS	3.8L 5.0L	1995 - 2000	Y	Y	Y	NA	D R	D R	D R	NA
Ute VR	3.8L 5.0L	1994 - 1995	Y	N	Y	NA	N	N	N	NA
Adventra VY	5.7L	2003 - 2005	NA	Y	Y	Y	D R	D R	NA	NA
Crewman VZ	3.6L 5.7L	2004 - 2006	NA	Y	Y	Y	D R	D R	NA	NA
Crewman VYII	3.8L 5.7L	2003 - 2004	NA	Y	Y	Y	D R	D R	NA	NA
One Tonner VZ	3.6L 5.7L	2004 - 2005	NA	Y	Y	Y	D R	D R	NA	NA
One Tonner VYII	3.8L 5.7L	2003 - 2004	NA	Y	Y	Y	D R	D R	NA	NA
Statesman WL	3.6L 5.7L	2004 - 2006	NA	Y	Y	Y	D R	D R	NA	NA
Statesman WK	3.8L 5.7L	2003 - 2004	NA	Y	Y	Y	D R	D R	NA	NA
Statesman WH / WHII	3.8L 5.7L	1999 - 2001	Y	Y	Y	Y	D R	D R	D R	NA
Statesman VS	3.8L 5.0L	1995 - 1999	Y	Y	Y	NA	N	D R	D R	NA
Statesman VR	3.8L 5.0L	1994 - 1995	Y	N	Y	NA	N	N	N	NA
Frontera MX	3.2L	2001 - 2003	Y	Y	N	N	N	N	N	Y
Rodeo RA	2.4L	2003 - 2008	Y	Y	N	N	N	N	N	Y
Rodeo RA	3.0L-T	2003 – 2006	Y	Y	N	N	N	N	N	Y
Rodeo RA	3.5L	2003 – 2005	Y	Y	N	N	N	N	N	Y
Rodeo R9	2.2L 3.0L-T 3.2L	2003 – 2006	Y	Y	N	N	N	N	N	Y
Supported in Holden Astra Etc. Selection										
Astra TS	1.8L 2.0L-T 2.2L	1998 – 2005	Y	Y	N	N	N	N	N	Y
Barina XC	1.4L 1.8L	2001 – 2005	Y	Y	N	N	N	N	N	Y
Combo XC	1.4L 1.6L	2003 – 2010	Y	Y	N	N	N	N	N	Y
Vectra JSII	2.0L 2.2L 2.5L	2000 – 2002	Y	Y	N	N	N	N	N	Y
Vectra JR/JS	2.0L 2.2L 2.6L	1997 - 2000	Y	Y	N	N	N	N	N	Y
Zafira TT	2.2L	2001 – 2005	Y	Y	N	N	N	N	N	Y

Key: Y = Supported D = Display NA = Not Applicable N = Not Supported R = Reprogram Number

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Ford Vehicles		YEARS	Code Keys	Link PCM/BEM
Falcon BAII (inc XR)	4.0L (+LPG) 4.0L-T 5.4L (+BOSS)	2004 - 2005	Y	Y
Falcon BA (inc XR)	4.0L (+LPG) 4.0L-T 5.4L (+BOSS)	2002 - 2004	Y	Y
Falcon AUIII	4.0L (+LPG) 5.0L	2001 - 2002	Y	Y
Falcon AUII	4.0L (+LPG) 5.0L	2000 - 2001	Y	Y
Falcon AU	4.0L (+LPG) 5.0L	6/1999 - 2000	Y	Y
Falcon Ute BAII (inc XR)	4.0L (+LPG) 4.0L-T 5.4L (+BOSS)	2004 - 2005	Y	Y
Falcon Ute BA (inc XR)	4.0L (+LPG) 4.0L-T 5.4L (+BOSS)	2002 - 2004	Y	Y
Falcon Ute AUIII	4.0L (+LPG) 5.0L	2001 - 2002	Y	Y
Falcon Ute AUII	4.0L (+LPG) 5.0L	2000 - 2001	Y	Y
Falcon Ute AU	4.0L (+LPG) 5.0L	6/1999 - 2000	Y	Y
Fairmont BAII	4.0L 5.4L	2002 - 2005	Y	Y
Fairmont BA	4.0L 5.4L	2002 - 2005	Y	Y
Fairmont AUIII	4.0L 5.0L	2001 - 2002	Y	Y
Fairmont AUII	4.0L 5.0L	2000 - 2001	Y	Y
Fairmont AU	4.0L 5.0L	6/1999 - 2000	Y	Y
Fairlane BA MKII	4.0L 5.4L	2005 - 2005	Y	Y
Fairlane BA	4.0L 5.4L	2003 - 2005	Y	Y
Fairlane AUII	4.0L 5.0L	2000 - 2003	Y	Y
Fairlane AU	4.0L 5.0L	6/1999 - 2000	Y	Y
LTD BA MKII	5.4L	2005 - 2005	Y	Y
LTD BA	5.4L	2003 - 2005	Y	Y
LTD AUII	4.0L 5.0L	2000 - 2003	Y	Y
LTD AU	4.0L 5.0L	6/1999 - 2000	Y	Y
Territory SX	4.0L	2004 - 2005	Y	Y
Ford Performance Vehicles (FPV)				
BA MKII Series GT	5.4L BOSS	2004 - 2005	Y	Y
BA MKII Series GT-P	5.4L BOSS	2004 - 2005	Y	Y
BA MKII Series Pursuit	5.4L BOSS	2004 - 2005	Y	Y
BA MKII Series Typhoon	4.0L-T	2004 - 2005	Y	Y
BA MKII Series Tornado	4.0L-T	2005 - 2005	Y	Y
BA Series GT	5.4L BOSS	2003 - 2005	Y	Y
BA Series GT-P	5.4L BOSS	2003 - 2005	Y	Y
BA Series Pursuit	5.4L BOSS	2003 - 2005	Y	Y

Key: Y = Supported N = Not Supported