(PMI) Programmable Module Installation

This information is constantly updated, the latest version can be found on PTS.

	No PMI	PCM	ABS/ RABS	ACM	CSM/ RAP	CTM	DATC/ EATC	DDM/ RKE	DSM	EPB	FEM/ GEM	HEC/ ICM	LCM	LTM	MCM	NAV	OTC	RASM VDM	RCM/ ECS	REM	RESCU/ VEMS	SCLM	TPMS	VAPS	4x4CM	
Aviator		Type 2	03		03		03		03			03				03					03		03	03		
Blackwood		Type 1			02-03						02-03															
Continental		Type 1		◆99									99-02													
Contour/Mystique	X	Type 1																								
Cougar	X	Type 1																								
Crown Victoria/ Grand Marquis		Type 1						◆00-03					◆00-03					03						03		
Econoline	X	Type 1																								
Escape		Type 1									01-03	01-03														
Escort/Tracer	X	Type 1																								
Excursion		Type 1	■00-03		02-03						■00-01	02-03					■99-02 03								02-03	
Expedition/ Navigator		Type 2	03		◆99-01 01-03		03 EXP 99-03 NAV		03		◆99-02	03		03 NAV		03 NAV		03					03			
Explorer/ Mountaineer		02-03 Type 2	◆99-02 02.5-03		02-03		02.5-03		02.5-03		◆99-01	02-03											03		◆00-03 "N" Tow	
Explorer Sport/ Sport Trac		Type 1	■Before 7-24-00																						◆03 "N" Tow	
F-Series (150)		Type 1			◆99-01 01-03						◆99 00-03															
F-Series Super Duty 250 - 550		Type 1 03 6.0 DI Type 3	■99-03		02-03						■00-01	02-03					■99-01 ◆02-03		■99-03							
F650/F750		Type 1									view online service man						◆00-02									
Focus		Type 1 03 PVEZ Type 3	IVD must be **"Calibrated"**			00-01					02-03.5	00-03.5							00-03.5							
LS		00-02 Type 1 03 Type 3	00-03	00-03			00-03	00-03		03	00-03	00-03			00-03	03				00-03	◆00-02 03	00-02				
Marauder		Type 1						◆03					◆03													
Mustang		Type 1									◆00-03															
Ranger		Type 1	■99-00 w/ABS								■99-00 w/RABS															
Taurus/Sable		Type 1									◆99-03															
Thunderbird		02 Type 2 03 Type 3	02-03	02-03				02-03			02-03	02-03								02-03						
Town Car		Type 1	◆99-03	03				◆99-03	◆00-03				99-03					03	◆00 01-03		02-03					
Villager	X	Type 1																								
Windstar		Type 1	99-03					99-03			99-03	99-03			99-03					99-03						

PCM Types - Verify latest calibration after installing PCM

Type 1 Bolt In - May require tire size, and axle ratio to be entered.

Type 2 Requires PMI - Requires using **Flash Cable (NGS only).**
* When using **WDS**, if "Hardware Level Conflict" message is displayed after replacing PCM, delete current sessions, start new session, re-perform PMI, answer questions accordingly.

Type 3 CAN Network - requires WDS or NGS+

■ If using NGS - Select Service Bay Functions - (Select Module) - Select applicable feature.
If using WDS - Select applicable feature within Module Programming.

◆ Module does NOT use AS BUILT data. PMI can be used to inhale and exhale customer preferences when replacing module.
If using NGS, use UBP Cable. If original module is not available, use "Customer Preference Item" menu on NGS to configure features.
If using WDS, and original module is not available, select PMI and answer questions when prompted.

Module uses AS BUILT data and PMI must be performed when module is replaced. Use **UBP Cable(NGS only)**.
If original module is not available then AS BUILT data must be entered to correctly configure module.

Note: WDS may ask questions instead of prompting for AS BUILT.

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Accessing AS BUILT Data

1. Log on to WWW.FMCDEALER.COM
2. If logged in as a technician, select "Service Publications" under TOP SPOTS. **OR** if logged in as a service manager, select "Service Publications" under VEHICLE SERVICE.
3. Click on "Service Publications" again.
4. Click on "As Built"
5. Click on "Call As Built"
6. Enter the vehicle VIN number in the box and click on SUBMIT at the bottom.
7. The " Module Reprogramming" page will open with the "VIN" and "Vehicle Data" at the top.
8. Below this are two columns, the one on the left is PCM DATA and the one on the right is BCE DATA.
9. Only programmable modules available in that vehicle will be listed under BCE Modules.
10. Some modules may have more than one line of data.
11. If a module is not listed, then it is not a programmable module.
12. If As Built data is not available then Ford Technical Hotline must be contacted.

*** The NGS and WDS refer to the FEM as a GEM module.

Acronyms

ABS	Antilock Braking System
ACM	Audio Control Module
CSM	Central Security Module
CTM	Central Timer Module
DATC	Dual Automatic Temperature Control
DDM	Driver Door Module
DSM	Driver Seat Module
EATC	Electronic Automatic Temperature Control
ECS	Electronic Crash Sensor
EPB	Electronic Park Brake
FEM	Front Electronic Module
GEM	Generic Electronic Module
HEC	Hybrid Electronic Cluster
ICM	Instrument Cluster Module
LCM	Lighting Control Module
LTM	Liftgate Module
MCM	Message Center Module
NAV	Navigation Module
OTC	Overhead Trip Computer
RAP	Remote Anti-Theft Personality
RASM	Rear Air Suspension Module
RCM	Restraint Control Module
REM	Rear Electronic Module
RESCU	Remote Emergency Satellite Cellular
RKE	Remote Keyless Entry
SCLM	Steering Column Lock Module
TPMS	Tire Pressure Monitoring System
VAPS	Variable Assist Power Steering
VEMS	Vehicle Emergency Messaging System
VDM	Vehicle Dynamics Module
4x4CM	4x4 Control Module

BCE Module Addresses

A0-01	DDM/RKE
A2-01	DSM
AF-01	LTM
C1-01	CSM
C3-01	SCLM
DA-01	TPMS
19-01	4x4CM
2A-01	EPB
20-01	VDM/RASM
28-01	ABS
30-01	VAPS
48-01	RAP
50-01	REM
52-01	GEM or FEM or CTM
58-01	RCM or ECS
6A-01	OTC
60-01	ICM Or HEC
68-01	NAV
61-01	MCM
70-01	LCM
80-01	ACM
90-01	RESCU or VEMS
98-01	DATC or EATC

PMI using NGS
To be used when original BCE module is NOT available

1. Install new module.
2. Using NGS with latest version green card select "Programmable Module Installation".
3. Select which module is being replaced and press trigger (FEM is referred to as GEM).
4. Follow on screen Instructions.
5. Select "Retrieve Module Config – Old ECU" and press trigger.
6. Follow on screen instructions.
7. NGS will attempt to retrieve module data from the PCM
   a. If module data is available proceed to step A.
   b. If NGS displays "Call As Built Data Center" proceed to step B.

STEP A

1. At menu select " Restore Configuration – New ECU" and press trigger.
2. NGS will complete loading retrieved data into the module and display "Module Download Successful".
3. Verify proper operation.

STEP B

1. If NGS displays "Call As Built Data Center" – press trigger.
2. NGS may ask for VEHICLE DATA – enter vehicle data and press store.
3. NGS will ask for module data line 01 – enter data and press store.
4. NGS will then ask if there is an additional line of data available for that address – select YES or NO depending on info in As Built Data sheet. (See sample data)
5. Repeat steps 3 and 4 until you answer NO for step 4.
6. NGS should then show a screen stating that module data was stored – press trigger.
7. Follow on screen instructions.
8. Select "Restore Module Config – New ECU" and press trigger.
9. NGS will complete downloading data just entered into the module and display a message "Module Data Download Successful".
10. Verify proper operation.

PMI using NGS
To be used when original BCE module is available

1. Using NGS with latest version green card select "Programmable Module Installation".
2. Select which module is being replaced and press trigger (FEM is referred to as GEM).
3. Follow on screen Instructions.
4. Select "Retrieve Module Config – Old ECU" and press trigger.
5. Follow on screen instructions.
6. At menu select " Restore Configuration – New ECU" and press trigger.
7. Follow on screen instructions.
8. NGS should display "Module Download Successful".
9. Verify proper operation.

PMI using WDS
To be used when original BCE module is NOT available

1. Install the new module first.
2. Connect the WDS and ID the vehicle as normal.
3. From the Toolbox icon, select and highlight "Module Programming" and press check mark from the toolbox menu.
4. Select and highlight "Programmable Module Installation" and then highlight module that was replaced and press check mark.
5. Follow on screen instructions and turn ignition switch to OFF and press check mark.
6. The WDS will retrieve the module data from the PCM and automatically download it into the new module and display "Operation Successful – Programming Complete".
7. IF the data is not available in the PCM, the WDS will display a screen stating to contact the As Built data center. Retrieve data from WWW.FMCDEALER.COM at this time and press check mark.
8. Enter the module data (module address and line are displayed to the left of the three entry boxes) and press check mark.
9. WDS will now download the data into the new module and display "Operation Successful – Programming Complete".
10. Verify proper operation.

PMI using WDS
To be used when original BCE module is available

1. Connect WDS and ID the vehicle as normal.
2. Select and highlight "Module Programming" and press check mark from the toolbox menu.
3. Select and highlight "Programmable Module Installation".
4. Follow on screen instructions and turn ignition switch to OFF and press check mark.
5. Replace module and press check mark.
6. Follow on screen instructions and turn ignition switch to ON and press check mark.
7. Module configuration is complete.
8. Verify proper operation.

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Module Reprogramming

VIN: 1LNHM83W23Y637799
Vehicle Data: 2EFC 1183 FFBD <----- Vehicle Data used by NGS

PCM Module			
PCM 1	FFFF	FFFF	FF0C
PCM 2	FFFF	FFFF	FF0D
PCM 3	FFFF	FFFF	FF0E
PCM 4	FFFF	FFFF	FF0F
PCM 5	FFFF	FFFF	FF10
PCM 6	FFFF	FFFF	FF11
PCM 7	FFFF	FFFF	FF12
PCM 8	FFFF	FFFF	FF13
PCM 9	FFFF	FFFF	FF14

BCE Modules				
20-01	0001	0000	FF21	
58-01	94BB	FF00	00A7	This is the RCM or ECM As Built Data as denoted by the module address 58-
58-02	03A5	A500	00A7	Notice there are three lines of data available for this module on this vehicle as denoted by the module addresses 58-01 58-02 and 58-03
58-03	0000	0000	005B	
70-01	F403	0000	FF67	<--- Single line of LCM As Built Data 70-01
80-01	0400	0000	0085	<--- Two lines of ACM As Built Data 80-01 and 80-02
80-02	0100	0000	0083	

End of As Built information

How does PMI work with NGS?

1. When "Retrieve Config Old ECU" is selected
   The NGS will first attempt to read the VIN from the PCM VID block. If the VIN cannot be read, the NGS will ask the user to enter the VIN using the Scroll and Trigger button.

   It will then perform Self Test on the selected module to determine if the module has been previously configured. It does this by checking for the presence of DTC B2477.
   If DTC B2477 is NOT detected. The NGS will "Inhale", or read the data from the module and store it so that it can be "Exhaled" or downloaded into the new module. NGS will state that module data has been stored. Return to the main menu and select Restore Config New Ecu.

   If DTC B2477 is detected during Self Test, the NGS display will read "This Module Has Not Been Configured. Reinstall the Original Module to Retrieve Configurable Data. If the Old Module is Not Available, Continue for Backup Data."
   When the Trigger button is pressed after this screen is displayed, the NGS will attempt to retrieve the selected module's backup data from the PCM if available (Not all vehicles contain BCE module backup data in the PCM). If NGS as able to retrieve the module's backup data from the PCM, NGS will state that module data has been stored. Return to the main menu and select Restore Config New Ecu.

   If the NGS is NOT able to retrieve the module's backup data from the PCM, it will state to contact the As-Built Data Center. When entering As-Built data to configure the module, the NGS will require that the Vehicle Data located under the VIN number on the vehicles As-Built Data page be entered. The Vehicle Data is used by the NGS to verify that the As-Built page being used to configure the selected module is actually for the vehicle VIN as recognized by NGS, either as entered by the technician or read from the PCM during the first step. After the NGS verifies the Vehicle Data that was entered matches the VIN that was stored, it will then ask that the selected module's data be entered from the As-Built Data page. After all the selected module's data has been entered, NGS will state that module data has been stored. Return to the main menu and select Restore Config New Ecu.

2. When "Restore Config New ECU" is selected
   The NGS will retrieve the selected module's data from an internal NGS memory location as it was either "Inhaled" from the original module, retrieved from the PCM, or manually entered by the Technician.
   It will then download the configuration data into the new module.
   After the data has been downloaded from the NGS to the module, the NGS will read the configuration data back from the module and compare it the data that was stored in the internal NGS memory location.
   If the data read from the module matches the data stored in NGS, the NGS will state Configuration Complete.