

DETROIT DIESEL MASTER REPROGRAMMING USER GUIDE

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Detroit Diesel Electronic Controls (DDEC)

HISTORY

DDEC is a computerized electronic system of engine control and fuel injection that replaces mechanical controls in Detroit Diesel engines. In addition, within its onboard computer DDEC offers engine protection and self-diagnostics to assist in troubleshooting engine problems.

DDEC first became available as an option on Detroit Diesel engines in 1985 and is now a standard feature on most Detroit Diesel engines.

DDEC II, introduced in 1987, offered significant improvements to the first DDEC Electronic Control Unit (ECU), including changes to the ECU to make it re-programmable.

DDEC III, released in September 1993, provides even further improvements to the electronic controls.

DDEC IV, released in 1997, continued the improvement of the electronic controls.

DDEC V, released in 2003, provides extended input and output functions for the next generation of diesel engines.

DDEC VI – Released in January 2007 and consists of a two-box system; Motor Control Module (MCM) & Common Power Train Controller (CPC). This new electronic system will replace the current 1-box ECU on all Detroit Diesel engines beginning in 2007. These include S60, MBE900, MBE4000 and the new Heavy Duty Engine (HDE).

OVERVIEW

Two major components of a DDEC engines are the Electronic Control Unit(s) and the Electronic Unit Injector (EUI). The ECU Utilizes the following:

- A microprocessor that uses sensors installed throughout the engine continuously monitors and analyzes the engine's performance during operation
- Flash Random Access Memory (FRAM) that stores runtime software, which contains engine control instructions
- Electronically Erasable, Programmable Read-Only Memory (EEPROM) that stores engine calibration values

The controller processes information received from the electronic sensors and sends electronic signals to the EUI. The EUI then performs the injection timing and metering functions that ensure peak engine performance and excellent fuel economy.

The diagnostics capabilities of DDEC contribute to the reliability and durability of the engine. In continually monitoring the engine's critical functions, DDEC stores data in the system's memory pertaining to oil pressure, coolant temperature and levels, and overspeeding. This provides an audit trail of engine performance information that enables maintenance technicians to quickly diagnose and correct minor problems before they become major ones. A self-diagnostic feature enables the system to check itself each time the engine starts, ensuring that all electronics, sensors, and warning lights are functioning properly.

DDEC REPROGRAMMING SYSTEM (DRS) SOFTWARE USAGE

If you purchased a Master Reprogramming System (MRS) Kit with a laptop, the DDEC Reprogramming System (DRS) Software was installed and successfully tested before shipment. You do not need to install the DRS software.

The DRS software is to be installed and used on only one computer. Unauthorized copying or use of any Detroit Diesel software is strictly prohibited.

IDS AND PASSWORD

A unique set of IDs has been issued to be used with each Master Reprogramming System (MRS) Kit. A password is required to use these IDs. You will find your password in the sealed yellow envelope labeled "Read These Instructions First."

For future reference, please fill in ID/Password information.

Application ID: _____

Detroit Diesel Network ID: _____

Detroit Diesel Password: _____

(DETROIT DIESEL Password will appear as (6) asterisks when entered into the logon parameters.)

Note: These IDs appear in the Update Logon Parameters screen. **Never** change these IDs unless directed by a Distributor Support Technician.

Application Password: _____

Note: This password is requested when downloading calibrations.

If you need any help or have any questions about the "Update Logon Parameters" screen, please refer to the section "Getting Help" at the end of this chapter.

WARRANTY INFORMATION

Each electronic component of the Master Reprogramming System (MRS) Kit is covered by a one-year warranty. The warranty period begins 10 days after the shipment date from Detroit Diesel Corporation. The warranty is void if there is evidence of tampering or if there is damage to any component in the kit caused by careless or improper handling of any kind.

Component Repairs

In the event that any part of the hardware package malfunctions during the warranty period, Detroit Diesel will repair or replace the defective part. To get assistance with part-related problems, use the following procedure:

1. During regular business hours call Detroit Diesel Customer Support Center at 1-313-592-5800.

Hours of Operation:

7:00am - 10:00pm Monday - Friday (EST)
7:00am - 7:00pm Saturday and Sunday (EST)

2. After regular business hours, weekends and holidays, call the Customer Service Center (CSC) at 313-592-5959.
3. If you are advised to return any defective part, please use the following address:

Detroit Diesel
Mail Code M-20
13400 West Outer Drive
Detroit MI 48239

4. If you need to replace any part in your MRS Kit, please contact your Detroit Diesel Distributor or Dealer who will order the parts from the supplier. Be sure to have the part number available when you contact them. See "Parts List" on the next page, or see Chapter 2, which contains a photo and a description of each part

PARTS LIST

The following is a list of part numbers, part suppliers, and part descriptions of each component shipped with a Master Reprogramming System (MRS) Kit.

PART NUMBER	SUPPLIED BY	DESCRIPTION
J-42765	Canton	MRS Case
J-42766	Canton	DDEC III/IV Reprogramming Module and Harness
J-46901	Canton	DDEC V Reprogramming Module and Harness
J-42767	Canton	AC Adapter
J-46902	Canton	High Speed Cable
J-42769	Canton	DC Power Cable
125032	Canton	USB-Link
J-39877-43	Canton	DDEC II & III Power Cable Adapter
J-42375-12	Canton	Cigarette Lighter DC Cable
J-48634	Canton	The USB-Link Adapter for Programming PLD Modules
J-48631	Canton	The MCM / CPC Desktop Programming Harness
P/N J-42161	Canton	VCU Bench Power Cable
J-47012	Canton	VCU Flash Cable
J-47913	Canton	PLD Flash Cable
Not Available	Detroit Diesel	USB Hardware Key
Not Available	Canton	2 Case Keys (in small yellow envelope)
Not Available	Detroit Diesel	DDEC Software (Latest Version)
Not Available	Kopyrite	MRS User's Guide
Not Available	Detroit Diesel	Laptop

About the MRS Electronic Components

This chapter contains pictures of each electronic component shipped with an MRS kit. Below each picture is a brief description of the function of the component and how it should be connected when reprogramming a DDEC module.

In order for you to become familiar with the MRS kit, we recommend connecting each component as described on each page. This can be done without applying power to the kit.

MRS CASE



The MRS case has room for a laptop computer and all the cables and connectors necessary for reprogramming your DDEC II, III, IV, V and VI control modules.

Do not remove the inside padding from the case. It is intended to protect all the electronic components of the system.

Detroit Diesel reserves the right to change, without notice, the case in which the M.R.S Kit is shipped.

DDEC II/III/IV REPROGRAMMING MODULE AND HARNESS



The DDEC reprogramming harness, P/N J42766, is used to program all DDEC II, DDEC III and DDEC IV Electronic Control Units (ECUs). It's powered by an AC power adapter and connected to your translator box through a 15-pin high-speed cable.

When first powered up and connected to a DDEC ECU, the lights perform a self-test in the following sequence:

- (1) The green "Ignition," yellow "Check Engine," and red "Stop Engine" indicator bulbs will light up.
- (2) The "Check Engine" and "Stop Engine" indicator bulbs will go out.
- (3) The yellow "Stop Engine" indicator bulb will light up and remain lit along with the green "Ignition" indicator bulb.

This self-test sequence indicates that a successful connection has been made to the ECU. After reprogramming process is complete, the red "Stop Engine" lamp will illuminate.

When connected to a DDEC II ECU, the green "Ignition" bulb will illuminate and the yellow "Check Engine" bulb will flash once very quickly. This sequence indicates a successful Reprogramming Module to DDEC II ECU connection. The "Ignition" bulb will remain on until the reprogramming is complete.

To avoid reprogramming problems, make certain that all cables and connectors are securely attached before starting to reprogram an ECU. Also, protect the module and the connectors from contamination by grease, dirt, etc.

NOTE: On the underside of the Reprogramming Module there is a label with the MRS serial number. Always refer to this number when requesting technical assistance.

DDEC V PROGRAMMING MODULE AND HARNESS



The DDEC V Programming Module enables a DDEC V ECU to be programmed on the bench. With the new USB-Link Translator Box, High Speed Cable and 6 and 9 Pin "Y" diagnostic connector, programming time will be reduced significantly.

2007 MCM/CPC DESKTOP PROGRAMMING HARNESS



The 2007 Desktop Programming Harness is used to program and update the MCM and CPC modules from a Series 60, MBE 900, MBE 4000 and Heavy-Duty Engine platforms. This is used in conjunction with the USB-Link and the 9-pin diagnostic connector included with this MRS kit.

AC ADAPTER



The AC Adapter is used to provide power to your bench-top Reprogramming harness. The Adapter is connected to each reprogramming harness available with this Reprogramming Station.

HIGH SPEED CABLE



The high-speed cable is a 15-pin to 15-pin cable used to connect your USB-Link to any one of the Detroit Diesel reprogramming harnesses. This cable can be used as an extension of the J1939 6/9 Pin diagnostic connector when programming any one of the Detroit Diesel Modules. (DDEC II, III, IV, V, VI and heavy-duty engine platforms as well as the EPA98 & EPA04 MBE Engines)

DC POWER CABLE



Use this cable to obtain power from the vehicle's battery.

WARNING: Always use caution when connecting the clip to the battery terminals.

PLD FLASH CABLE



This cable is used to program the PLD engine controller units on an EPA98 or EPA04 MBE engine. The 15-pin connector attaches to your translator box and the 16-pin connector attaches directly to the PLD module. Power is supplied by the vehicle unless reprogramming is done on the bench in which case the A/C adapter will need to be used.

VCU FLASH CABLE



This cable is used to program Vehicle Control Unit (VCU) modules on an EPA98 or EPA04 MBE engine. The 15-pin connector attaches to your translator box and the 21-pin connector attaches directly to the VCU module. Power is supplied by the vehicle unless reprogramming is done on the bench in which case the VCU Power Adapter is needed. See next page.

VCU POWER CABLE



This cable is used in combination with the VCU Flash Cable to program VCU modules on the bench.

The USB-Link Adapter for Programming PLD Modules



This is a USB-Link Adapter for Programming PLD Modules. The triangular end of this adapter will be connected to the matching end of the 6 ft. high speed cable. The 9-pin diagnostic connector is connected to its matching connector in the truck or vehicle.

USB-LINK TRANSLATOR KIT



This is the new Detroit Diesel Translator box for 2007 and beyond. The USB-Link Kit contains the USB-Link translator box, a USB cable that links the translator box to your PC and a 6/9-pin diagnostic connector. The 15-pin high speed cable (P/N: J-46902), can also be used between the USB-Link and 6/9-pin diagnostic connector as an addition 6 foot extension to the vehicle.

CIGARETTE LIGHTER DC CABLE



This is used to provide DC power to the Reprogramming Module through the cigarette lighter on the vehicle.

HARDWARE KEY



This is one of the most important components of the MRS Kit. The hardware key is necessary to gain access to the Detroit Diesel Reprogramming Software (DDRS). The hardware key must be attached securely to a USB port on the PC.

NOTE: The parallel port hardware key is also compatible with the current DDRS Software.

DDEC Distributor Reprogramming Software (DRS)

HOW TO DOWNLOAD CALIBRATIONS FROM DETROIT DIESEL'S SERVER FOR YOUR DDEC II, III, IV AND V ECUS.

Phone numbers used to access Detroit Diesel's Enterprise Server using the "DDEC Server Interface Software" are:

USA: 1-877-332-3425 - Toll Free (Translates on a keypad to 1-877-DDC-DIAL)

Canada: 1-877-332-4977 – Toll Free

International: 1-313-387-2417 – Long Distance Number to Detroit, MI, USA

If you have not installed prior versions of the DDEC Distributor Reprogramming System on your computer, you must verify that the communications portion is installed correctly. Verify that all of your logon parameters are correct.

1. To download calibrations from Detroit Diesel's Enterprise Server Interface, double-click with the left mouse button the icon on the desktop called "DDC Mainframe Communications".



Figure 1

2. The initial screen that comes up is the Welcome screen. To always have the Welcome screen displayed when "DDEC Server Interface" is launched, put a check next to "Show this Welcome Dialog on start-up". To download engine serial calibrations, select "Download Engine Serial Calibration(s)".

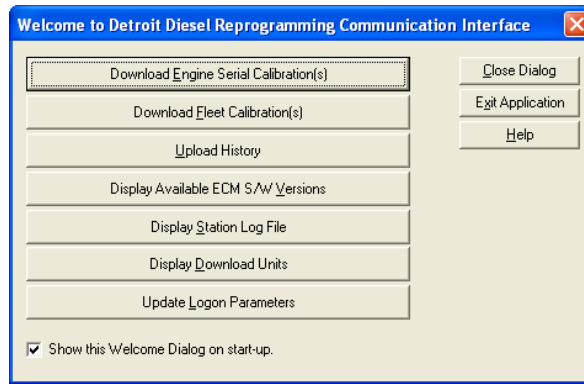


Figure 2

3. When the “Download Engine Serial Calibrations Dialog” box appears, type in the Engine Serial Number in the “Unit Number” field. Click the **Add** button to add the Unit Number to the bottom list box. Repeat this step for each Unit Number you want to download. Click the “Download” button when you are finished entering Unit Numbers.

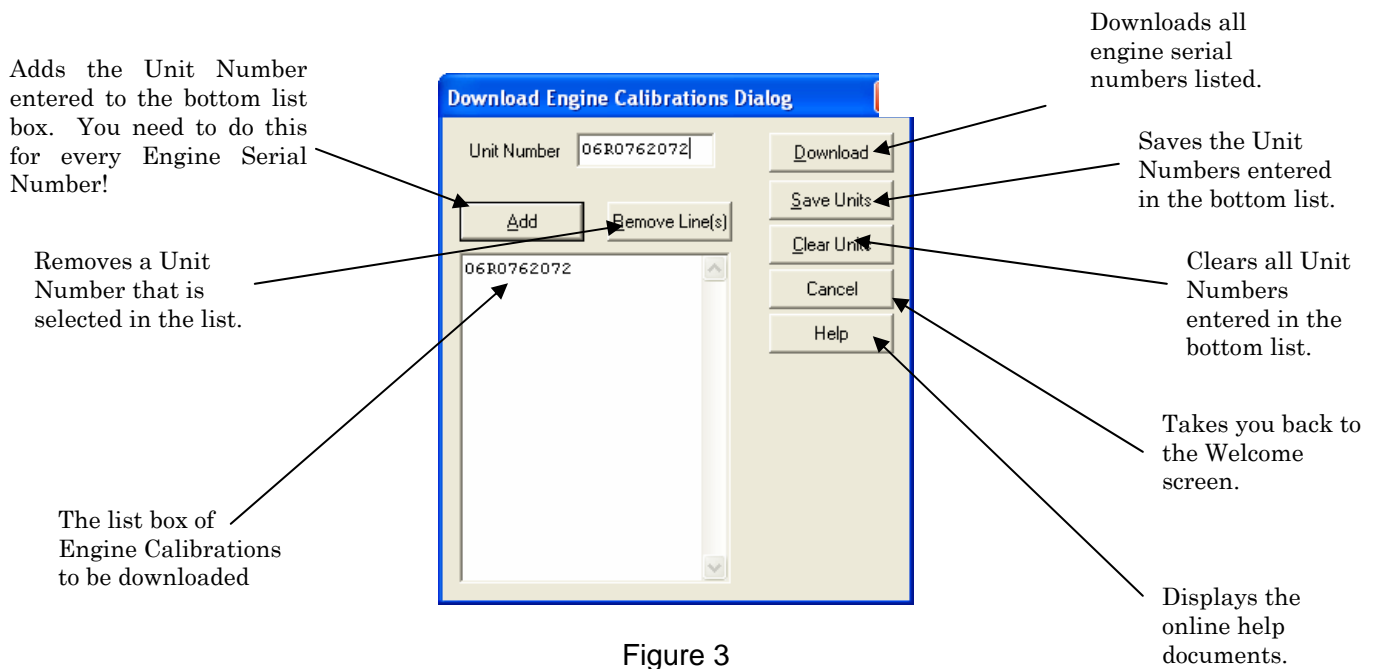


Figure 3

4. You will then be prompted to enter your application password. This password expires every month, so your password may be different.



Figure 4

5. The download process will now begin and it will initially bring up the "Display DDEC System File". This file will display critical information about downtimes and other important issues that need to be relayed to DDC customers.

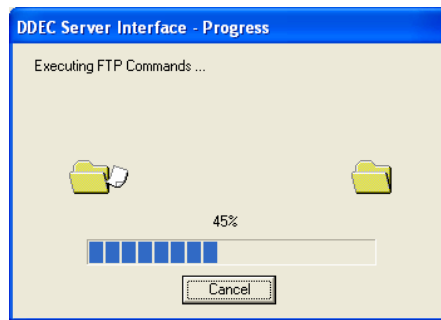


Figure 5

6. When the download process is complete, a Broadcast message will be displayed containing important information about the current release and any current service information.

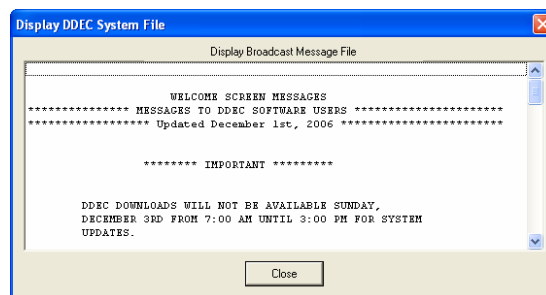


Figure 6

After reading the messages on this screen, click the "Close" button to proceed with the download.

7. The download process will continue.

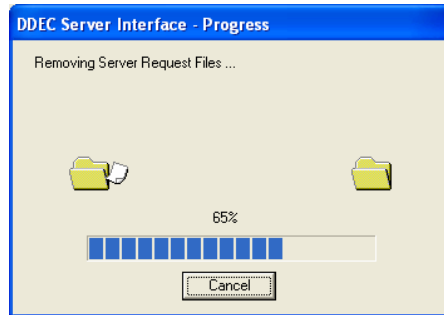


Figure 7

8. Once the download process has completed, you will receive a message stating "Unit Downloaded Successfully"

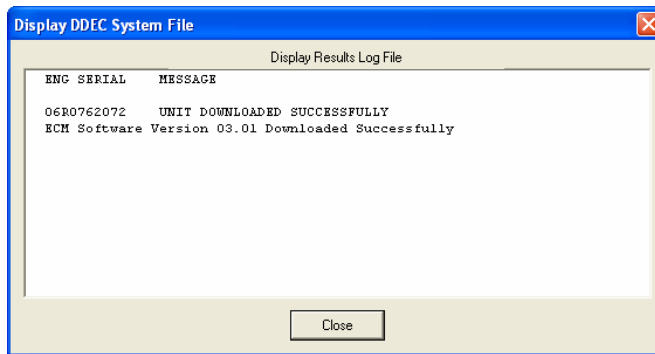


Figure 8

Click the "Close" button to finish the download.

9. Click "Exit Application" to exit the program.

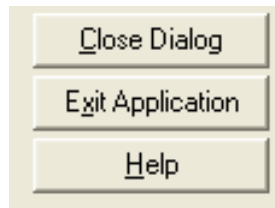


Figure 9

DETROIT DIESEL CORPORATION DISTRIBUTOR / CUSTOMER SUPPORT

USING DRS TO REPROGRAM YOUR DDEC II, III, IV AND V ECUS.

Before a DDEC ECU can be reprogrammed, you must download the Engine Serial Calibration of the engine for the ECU you want to reprogram. This documentation assumes that you have downloaded an Engine Serial Calibration correctly. If you have not done this yet, consult the instructions provided titled "How to Download Calibrations from DDC's Enterprise Server Interface Using DDEC Reprogramming System Software", pages 4-2 to 4-5. This documentation also assumes that all connectors are plugged in correctly.

1. To launch the DDEC Reprogramming System software, double click on the **"DDEC Reprogramming Sytem"** icon. (Figure 1).



Figure 1

2. The DDEC Reprogramming system can also be launched by clicking once with the left mouse button on **Start**, then Programs, then Detroit Diesel, then "DDEC Reprogramming System"(Figure 2).

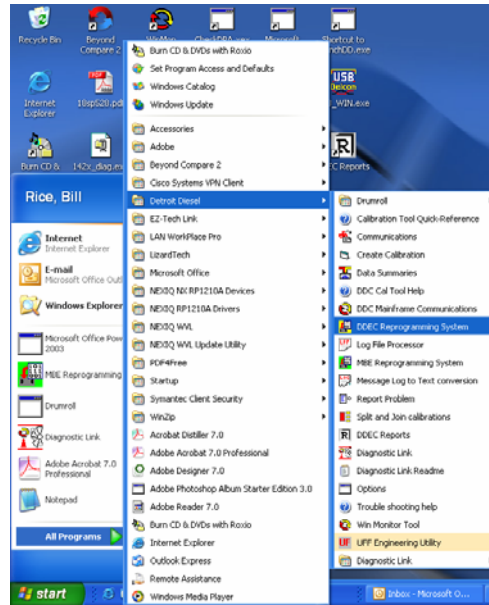


Figure 2

3. After the ECU is powered up and has finished booting, the **Communications Status Icon** on the upper left corner of the “DDEC Reprogramming System” screen (Figure 3) will change from red (off-line) to green with a letter "R" (on-line in "Running Mode"). When the green light is displayed, click on the **Program ECU** button in the "Welcome Panel" (Figure 3).

NOTE: If a *timeout error* occurs during programming, cycle the ignition (turn it off, wait ten seconds and turn it back on) and repeat the programming process.

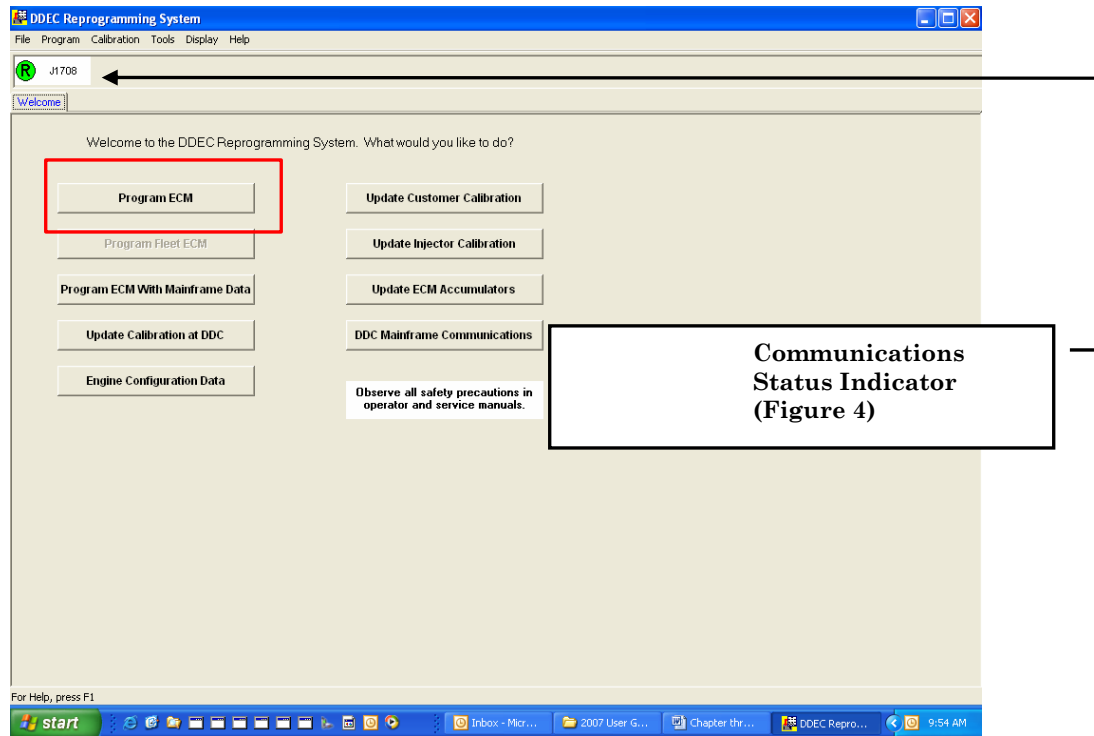


Figure 3

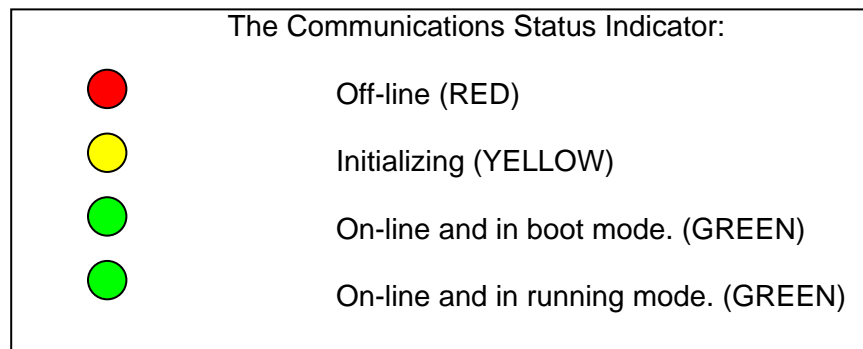


Figure 4

4. The reprogramming process will begin (Figure 5).

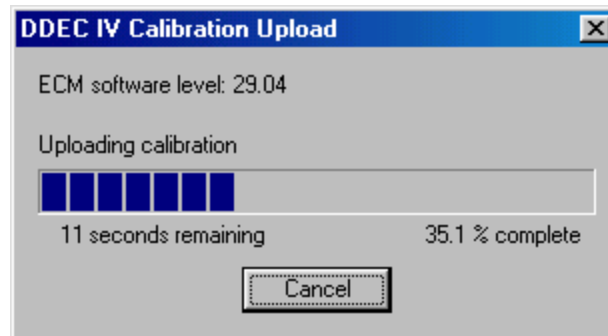


Figure 5

5. If you are reprogramming a DDEC III or DDEC IV ECU, a Charge or No Charge Screen will appear (Figure 6). Select "Charge".

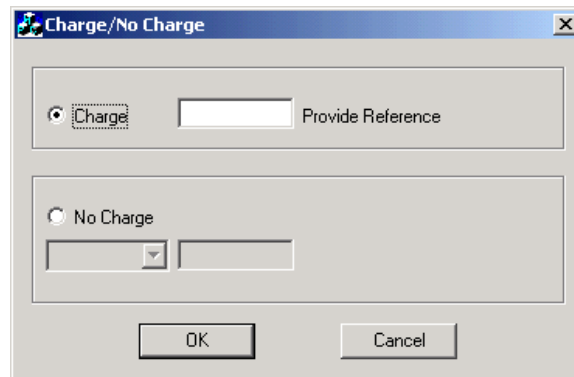


Figure 6

4. If you require a "No Charge" reprogram, see Figure 7. For further instructions on the "Charge / No Charge" screens, refer to the DDC Technical Service Letter **97TS-27**.

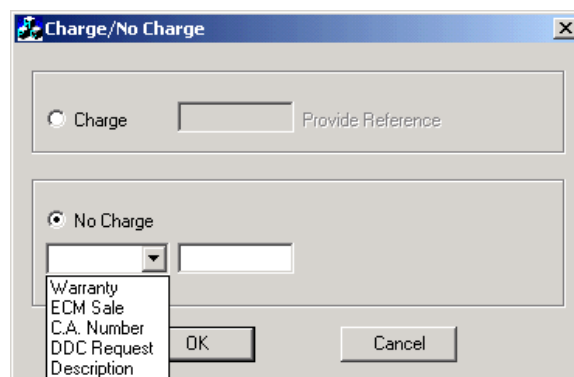


Figure 7

5. The calibration will be downloaded to the ECU. (Figure 8)

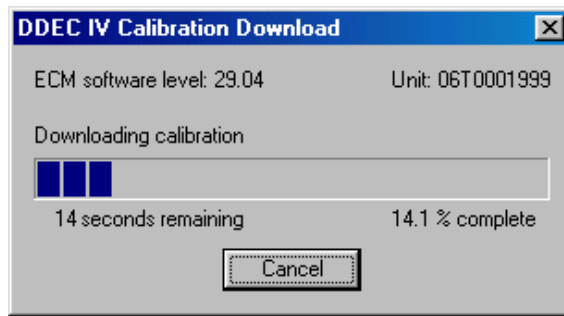


Figure 8

6. When the programming is complete, a "Reprogramming Information" window will display. This will mark the end of the programming process. Click the "Close" button on this screen after reviewing and verifying that the information on this screen is correct. (Figure 9).

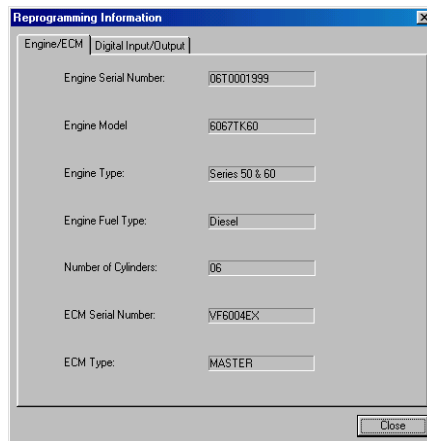


Figure 9

7. Close out of the "DDEC Reprogramming System" window by clicking on the "X" button in the upper right corner of the window or click on "File" in the menu bar then "Exit".

NOTE: For more detailed information on the operation of this software, please review the help file by selecting "Help" on the menu bar, then selecting "Help Contents".

Selecting the Type of Connection for Downloading Calibrations with DRS

Beginning with the release of DRS 6.0, the capability to download DDEC engine calibrations over a standard internet connection is now available. Please follow the procedures outlined below to select the appropriate connection type for your location.

1. After installing DRS 6.0, double-click on the “DDC Mainframe Communications” icon then click the “Update Logon Parameters” button. The screen shown below will be displayed (Figure 1).

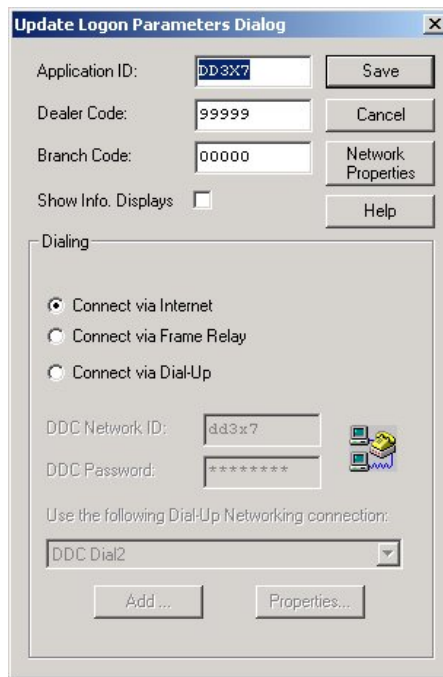


Figure 1

2. If you are a dealer (not a DDC Distributor) and your reprogramming station PC is connected to the internet, select the “Connect via Internet” option. Select this option even if you have a dialup connection to the internet; the “Dialup Connection” option is specifically for dialing directly into the DDC network. The “Frame Relay” option is available to DDC Distributors only.
3. If you are a DDC Distributor and your PC is connected to your company’s network, select the “Connect via Frame Relay” option. You can also use either of the other two options; however, the “Frame Relay” option provides a straight FTP connection to the DDEC calibration server which is not subject to any connectivity problems which may occur on the public internet.
4. The “Connect via Dialup” option should be used if you are attempting to connect from a remote site and where an internet or frame relay connection is not possible.

Testing Your Connection to the DDC Server via the Internet

1. If you have selected the "Connect via Internet" option and experience difficulties connecting to the DDC server, launch Internet Explorer, click on "File >> Open" and type in the following URL: <http://ddcapps.detroitdiesel.com>. After clicking "OK", the page shown below should be displayed in your browser window (Figure 2).



Figure 2

2. If you cannot open the page displayed above, in Internet Explorer click on "File" and make certain the "Work Offline" option is not enabled. If there is a check mark next to "Work Offline", simply click on the "Work Offline" option one time to disable it (Figure 3).

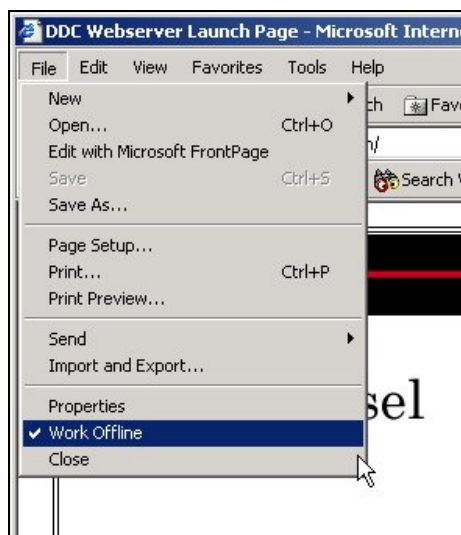


Figure 3

3. If disabling the “Work Offline” option does not allow you to view the web page shown in Figure 2, contact the DDC Software Support team at 313-592-5800 for further troubleshooting assistance.

Setting up DRS Communications to program DDEC V ECUs on the bench

A DDEC V ECU can only be programmed on the bench using the J1939 vehicle communications protocol. Follow the instructions below to enable J1939 programming within Detroit Diesel DRS software.

Note: These instructions only apply to DRS version 4.0 and later. Previous versions do not incorporate J1939 programming capability.

1. From the DRS “Welcome Screen” click on “Tools” then “Comms Settings.” The screen below will be displayed (Figure 1).

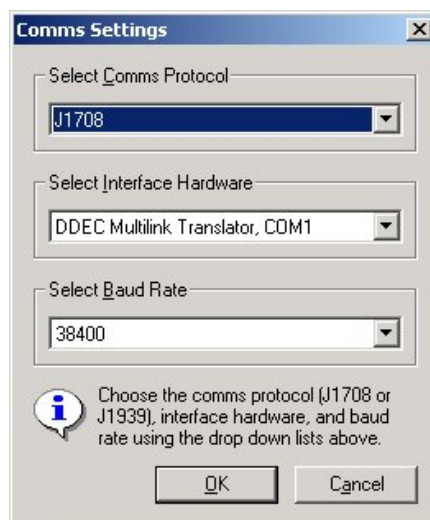


Figure 1

2. Change the Comms protocol from J1708 to J1939 (Figure 2).

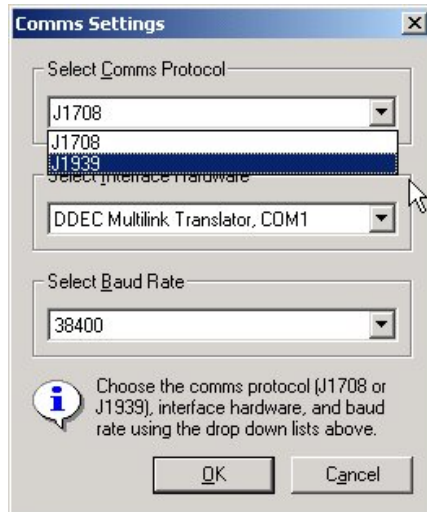


Figure 2

3. After this change is made the Comms Settings should match those displayed in (Figure 3).

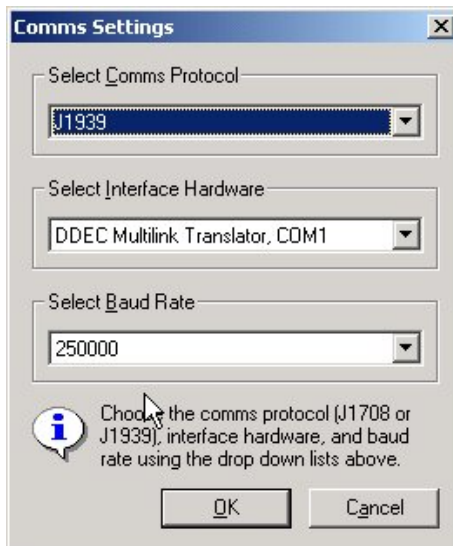


Figure 3

Detroit Diesel Reprogramming System (DDRS)

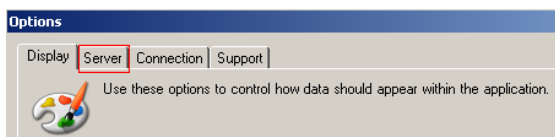
CONFIGURING DDRS TO CONNECT TO THE DDC PROGRAMMING SERVER

Special Note- In order to use this section you must have a current programming station ID and hardware key.

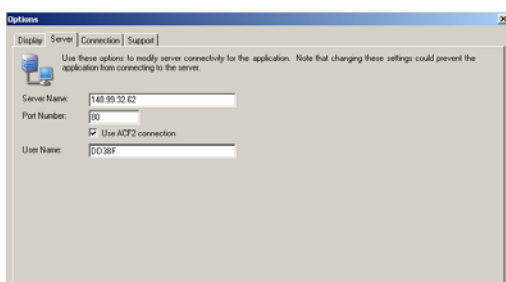
From the “Tools” drop-down menu select “Options”



Choose the “Server” tab to configure your settings. You must have your hardware key plugged in to gain access to the Server Tab.



The settings that need to be configured in DDRS are similar to connecting with DRS. You may use your current ID, password, and method of connection (Internet or Frame Relay). For assistance with these settings call The Detroit Diesel Customer Support Center at 313-592-5800.



Support for 2007 Settings - Current DRS Connection Type:

DDC LAN Network
Distributor Frame Relay
Dial-up

Accessing the Server Via Internet

Server Name: 148.99.32.62

Server Name: ddcapps.detroitdiesel.com

Port Number: 80

Port Number: 80

Use ACF2 Connection: checked

Use ACF2 Connection: checked

User Name: Current DRS ID

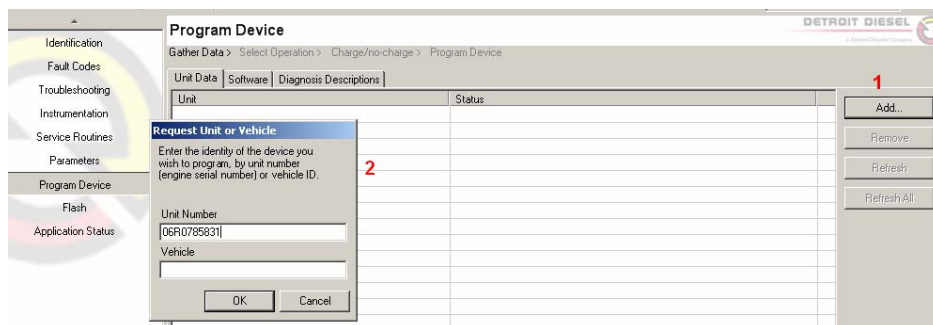
User Name: Current DRS ID

FLASHING THE CPC USING PROGRAM DEVICE

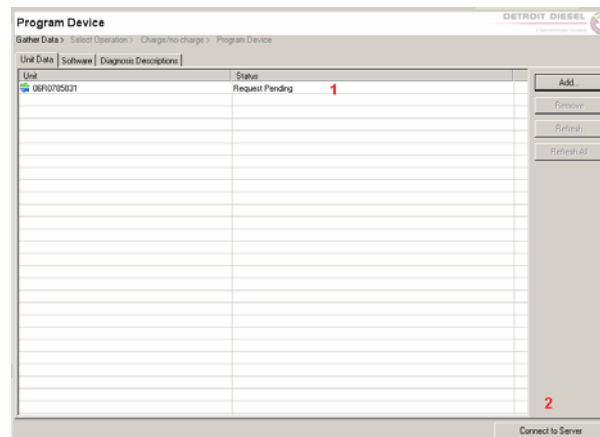
- The CPC module may be flashed using DDRS through the diagnostic connector or through the new desktop harness in the programming station upgrade kit for DDEC VI. The Nexiq USB Link will be necessary to program the CPC module, This will also be part of the programming station upgrade kit for DDEC VI.

To begin programming either a CPC or MCM (for any reason) the user will connect to the DDC server for information on the engine serial number.

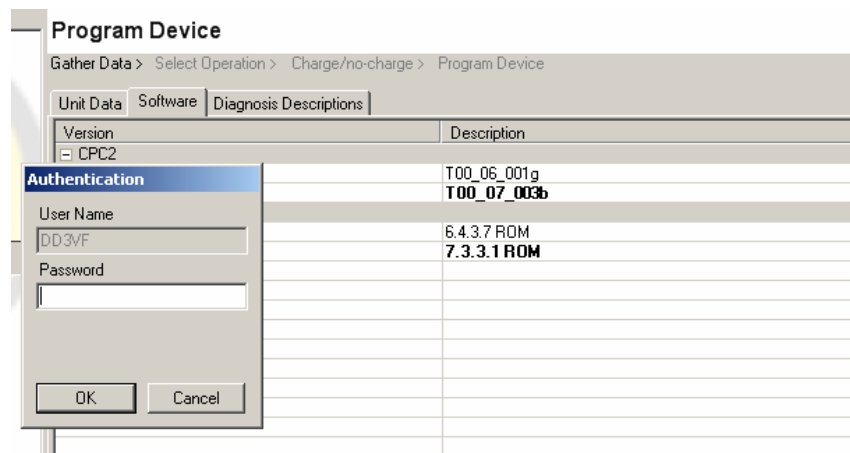
To begin the process select the “Add” box (1), and when the “Request Unit” window appears add the ESN (2). When entering the ESN, make certain you enter a capital “R” as this screen is case sensitive.



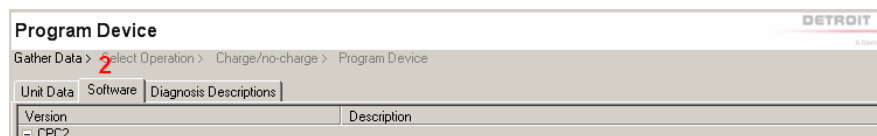
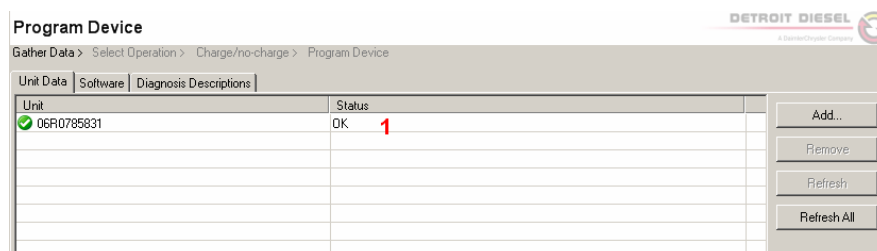
The ESN that was just entered will go into the “Unit” list with a “Request Pending” status. **(1)** To get data from the server on this unit choose the “Connect to Server” box in the lower right of the screen **(2)**



After choosing the “Connect to Server” box a small window will appear asking for your programming station password. Enter the programming station password you normally enter for current DDEC and MBE programming and select “OK”.



After gaining access to the server information the status of the ESN in the “Unit” list changes to “OK”. **(1)** You may now go to the “Software” tab **(2)** and view the level of software that will be programmed into the CPC **(3)**.



3

In the next screen please select the operation you wish to perform in this case we'll select "Update Device Software"(1) and then go to the "Next" box (2) in the lower right of the screen .

Program Device

Gather Data > Select Operation > Charge/no-charge > Program Device

Select the device to program

Name	Description
CPC2	Common Powertrain Controller (CPC) is a vehicle electronic controller. The CPC2 generation is to be used primarily in t...

Select the reprogramming operation you wish to take place

☐ Replace Device Settings with Server Configuration

☒ Update Device Software 1

☐ Change Dataset

Back Next

2

The next screen to appear will ask you provide information on the billing details of this operation. The choices are the standard one available in the current programming station software.

Go to the "Next" box when this section is complete.

Program Device

Batter Data > Select Operation > **Charge/no-charge** > Program Device

Charge

Provide reference:

No Charge

Memory

ECM Sale

C.A. Number

DGC Request

Description

Provide reference:

(R 0: Number)

Back New

The next screen to appear allows you to review the choices you've made on the previous screens. If everything is OK you may begin the flash process by choosing "Start". To make corrections to your settings choose the "Back" box.

The screenshot shows the 'Program Device' screen in the Detroit Diesel Diagnostic Studio (DDSD). At the top, there is a header bar with the text 'DETROIT DIESEL' and 'DDSD'. Below the header, the title 'Program Device' is displayed. A message states: 'The following data will be programmed'. Below this message is a table with two columns: 'Name' and 'Target Data'. The table contains the following data:

Name	Target Data
Device	CPCE
Operations	Update Device Software
Software	130_07_0030
Settings	Factory Settings
Engine Level Number	0001070007
Vehicle Identification Number	XXXXXXXXXXXXXXX

Below the table, there is a message: 'If this is correct, click the Test button'. To the right of this message is a red button labeled 'Test'. Below the message and button is a table with two columns: 'Step' and 'Result'. The table is currently empty.

Once “Start” is selected the process will begin. From this point on there will be no more intervention necessary by the user. The program will go through each step and mark the progress.

Step	Result
✓ Connect to device	Complete
✓ Read existing settings	15.9% Complete
Flash Firmware	
Reset device to default settings	
Write existing settings	
Write Engine Serial Number	
Write Vehicle Identification Number	
Commit settings to permanent memory	
Reconnect to device	

Connections
✓ CPC2: Reading (15.9%)

The program will automatically store the existing settings, flash the updated firmware, reset the CPC to default settings, reload the current settings, and re-connect to the controller upon completion of the process. The user may follow each stage of the process on the screen.

Step	Result
✓ Connect to device	Complete
✓ Read existing settings	Complete
⚡ Flash Firmware	39.1% Complete
Reset device to default settings	
Write existing settings	
Write Engine Serial Number	
Write Vehicle Identification Number	
Commit settings to permanent memory	
Reconnect to device	

Step	Result
✓ Connect to device	Complete
✓ Read existing settings	Complete
✓ Flash Firmware	Complete
✓ Reset device to default settings	Complete
⚡ Write existing settings	7.0% Complete
Write Engine Serial Number	
Write Vehicle Identification Number	
Commit settings to permanent memory	
Reconnect to device	

You will receive a message that the process was successful upon completion **(1)** and the status window in the lower left of the window will return to “online” **(2)**.

The device was successfully programmed	
Name	Actual Data
Device	CPC2
DiagnosisVariant	App_0009
Software Version	T00_07_003b
Diagnosis Version	9
VIN	0000000000000000
Engine Serial Number	06R0785831
Odometer	0
ECU Serial Number	00.0000.00
Hardware Part Number	
Software Part Number	
Software Mode	Running in Application
Software Date	2006/06/21 14:47
Real Time Clock	2006/August/03 08:23:23

Connections

✓ CPC2: Online 2

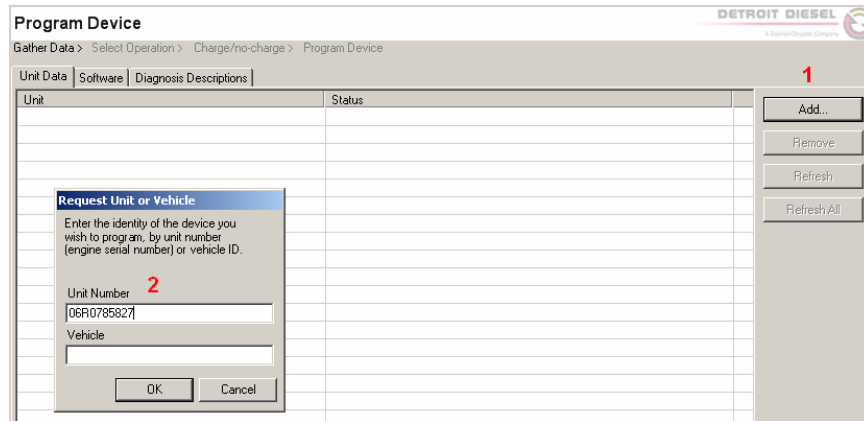
FLASHING THE MCM USING PROGRAM DEVICE

The MCM module may be flashed using DDRS through the diagnostic connector or through the new desktop harness in the programming station upgrade kit for DDEC VI. The Nexiq USB Link will be necessary to program the MCM module, This will also be part of the programming station upgrade kit for DDEC VI.

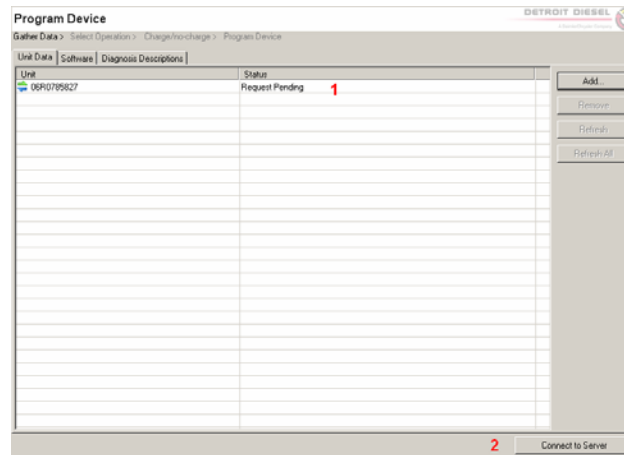
To begin programming either a CPC or MCM the user will connect to the DDC server for information on the engine serial number. The user will always need to connect to the

server in the case of the MCM module. In the case of a CPC software level upgrade leaving the current settings in tact a server connection would not be necessary.

To begin the process select the “Add” box **(1)**, and when the “Request Unit” window appears add the ESN **(2)**



The ESN that was just entered will go into the “Unit” list with a “Request Pending” status. **(1)** To get data from the server on this unit choose the “Connect to Server” box in the lower right of the screen **(2)**



After choosing the “Connect to Server” box a small window will appear asking for your programming station password. Enter the programming station password you normally enter for current DDEC and MBE programming and select “OK”. The request for information will be sent to the server.

Program Device

Gather Data > Select Operation > Charge/no-charge > Program Device

Unit Data Software Diagnosis Descriptions

Version	Description
CPC2	
	T00_06_001g
	T00_07_003b
	6.4.3.7 ROM
	7.3.3.1 ROM

Authentication

User Name: DD3VF

Password:

OK Cancel

Upon completion of your request you will be presented with the options available. In this case we will select to use the latest settings **(1)** and click on “Next” to continue **(2)**.

Program Device

Gather Data > Select Operation > Charge/no-charge > Program Device

Select the device to program

Name	Description
MCM	Based on template: MCM 2.20.5

Select the reprogramming operation you wish to take place

☒ Replace Device Settings with Server Configuration

☐ Update Device Software

☐ Change Dataset

Select the unit and settings data to apply to this device

Unit	Status	Settings	Description
03R0705S27	OK	oem	
		latest	
		default	Reset configuration to default (not rec...

Back Next

2

On the next screen you’ll be asked to select the appropriate billing option for the job you are about to do **(1)**. The selections are the same as those in the current programming station software. When this done go to the “Next” box in the lower right of the screen **(2)**.

Program Device

Gather Data > Select Operation > Charge/no-charge > Program Device

☐ Charge

Provide reference:

☒ No Charge **1**

Warranty

ECM Sale

C.A. Number

DDC Request

Description

Provide reference: 56769

(P.D. Number)

Back Next

2

You’ll be given one more opportunity to review the selections you’ve just made. If they are correct click on the “Start” box in the middle of the screen to begin programming the MCM.

Program Device

Gather Data > Select Operation > Charge/no-charge > Program Device

The following data will be programmed

Name	Target Data
Device	MCM
Operation	Replace Device Settings with Server Configuration
Unit	06R0785827
Software	6.4.3.7
Dataset	455@1550
Settings	latest
Engine Serial Number	06R0785827

If this is correct, click the Start button

Start

Once “Start” is selected the process will begin. From this point on there will be no more intervention necessary by the user. The program will go through each step and mark the progress

Processing...

Step	Result
Connect to device	Complete
Flash Firmware	16.9% Complete
Flash Dataset	
Reset device to default settings	
Write settings from server	
Write Dataset specific settings from server	
Write Engine Serial Number	
Write Vehicle Identification Number	
Commit settings to permanent memory	
Reconnect to device	

Connections

MCM: Flash (16.9%)

The user may follow each stage of the process on the screen. You will receive a message that the process was successful upon completion.

The following data will be programmed

Name	Target Data
Device	MCM
Operation	Replace Device Settings with Server Configuration
Unit	06R0785827
Software	6.4.3.7
Dataset	455@1550
Settings	latest
Engine Serial Number	06R0785827

The device was successfully programmed

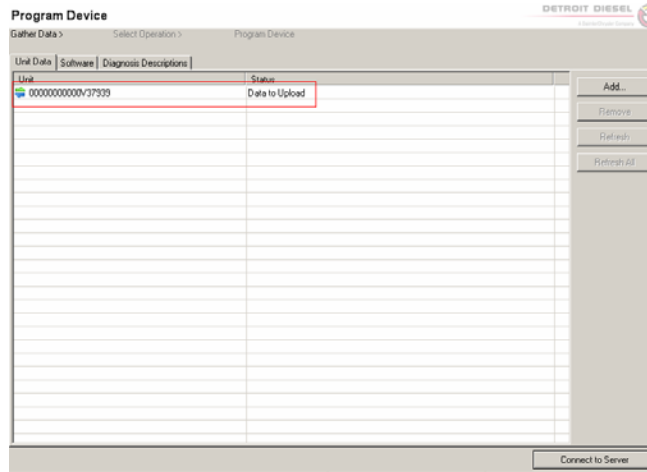
Start

Name	Actual Data
Device	MCM
Diagnosis Variant	mcm_De1A
Software Version	6.4.3
Diagnosis Version	26
VIN	
Engine Serial Number	06R0785827
Fuelmap Part Number	6N407456
Certification Number	1400
ECU Serial Number	04030001
Hardware Part Number	1234567891234
Software Part Number	0004487530001
Software Mode	Running in Application

Back Finish

You may also upload the latest settings to the DDC server. Settings are automatically marked for upload after a programming event. The VIN or ESN will appear in the “Unit

Data” list with a status of “Data to Upload”. The next time a sever connection is made the data will be sent.



GETTING HELP

If you have any questions related to the Detroit Diesel Reprogramming System (DDRS) software or DDEC Reprogramming Software (DRS), please proceed as follows:

For help during regular business hours.

Call our Customer Support Center (CSC) at 313-592-5800. If all technicians are busy, leave a voice mail message with your full name, the telephone number where you can be reached and a brief explanation of your problem. A technician will return your call as soon as possible.

Hours of Operation:
7:00am - 10:00pm Monday - Friday (EST)
7:00am - 7:00pm Saturday and Sunday (EST)

For help after regular business hours, weekends and holidays.

Call the Customer Service Center (CSC) at 313-592-5959 and select from the following menu:

Option #1 – Password Reset (24/7 Support)

Option #2 – Software Support

7:00am - 10:00pm Monday - Friday (EST)

7:00am - 7:00pm Saturday and Sunday (EST)

If you are calling anytime outside of these service hours, please leave a message with the following information: Name, Phone #, Brief description of problem. A service technician will call you back within 24 hours. If this is an emergency, select option #4.

Option #3 - General Questions (24/7 Support)