



No.: 05 TS – 02
January 12, 2005

TO: All Distributors, FLLC Dealers and Their Branches – U.S. and Canada

ATTN.: General Manager, Service Manager

FROM: Technical Service

SUBJECT: **New Version of VCU Software for MBE On-Highway Engines**

There will be a new release of VCU software for MBE on-highway engines, diagnostic 154, version 14.21 software. The release will be available this week. Changes for diagnostic version 154 include:

- VCU 14.21 has internal changes that allow the MBE Electronic Controls to interact with the Eaton Vorad system. The adaptive cruise control for the Vorad system (parameter 11510) is now fully functional.
- There has been an additional selection added to VCU parameter 10810 (for VSS anti-tamper function) and 11512 (an additional setting has been added to the cruise power setting).

Updating modules with previous software versions to VCU 14.21

- You may generally update a VCU with 10.XX or later software to version 14.21 using the Detroit Diesel Reprogramming Station or the minidiag flashing option and the VCU flash cable (P/N: 23530553).
- Users with PLD software level 51 or earlier should consult technical service **before** upgrading the VCU.
- If you use a minidiag for flashing there is a document containing step-by-step instructions for flashing the VCU with the minidiag. This is part of a documentation package available for download from the Extranet. It is extremely important that you follow these steps to assure that the proper parameter settings are maintained in the VCU.
- For those using the Reprogramming Station, complete step-by-step documentation is provided in the application's "Help" file and in the manual located on the CD-Rom.

Electronic Service Tools Information for VCU 14.21

Detroit Diesel Reprogramming Station (DRS) / Version 5.2 Software

There is a new version of software for the DRS, version 5.2. This version will support the latest release (2.0) of DDEC V software and will support all parameter changes and operations for VCU 14.21 software as well.

NOTE: While DRS 5.2 software supports version VCU 14.21 software, it **does not contain** a VCU 14.21 file for updating a VCU. In order to produce and send the DRS 5.2 CDs out in a timely manner, the file for VCU 14.21 software could not be included on the CD.

The file was subsequently released to the main server and is now available on the DDC Server. It will be “pushed” down to reprogramming station users when they connect to the server. In order to determine what version of VCU software is currently on your reprogramming station PC, select the “Update VCU Software Level” from the main menu of the MBE reprogramming screen (see Figure 1):

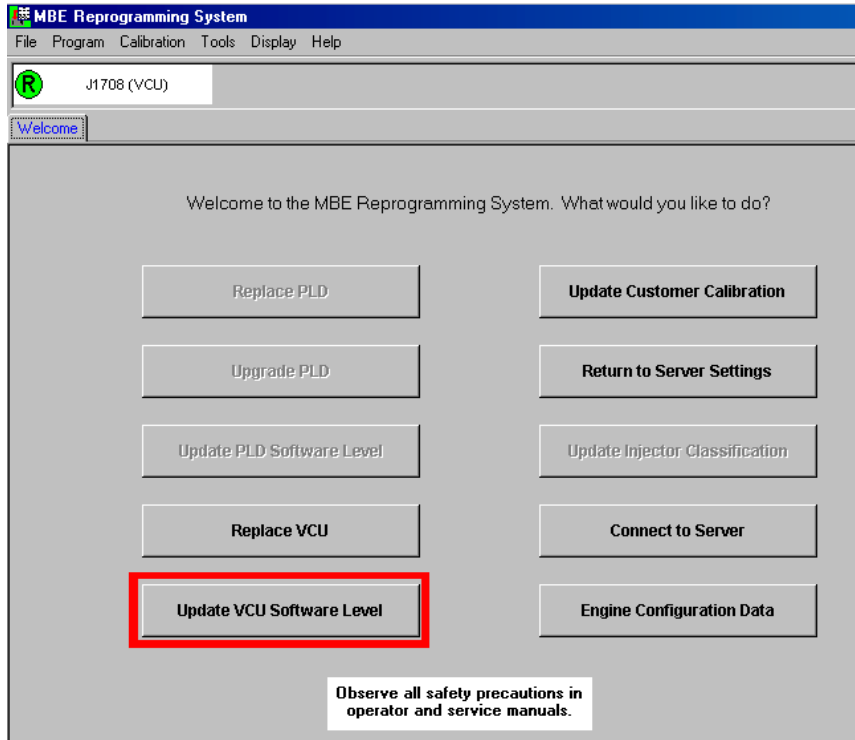


Figure 1 Determining VCU Software Level Screen

The first screen that pops up will give you information about the current version of VCU software on your PC. Once the latest version of VCU software has been downloaded to the reprogramming station from the DDC server, the screen in Figure 2 will appear. If version 14.20 is still showing on the screen, then the update has not yet taken place.

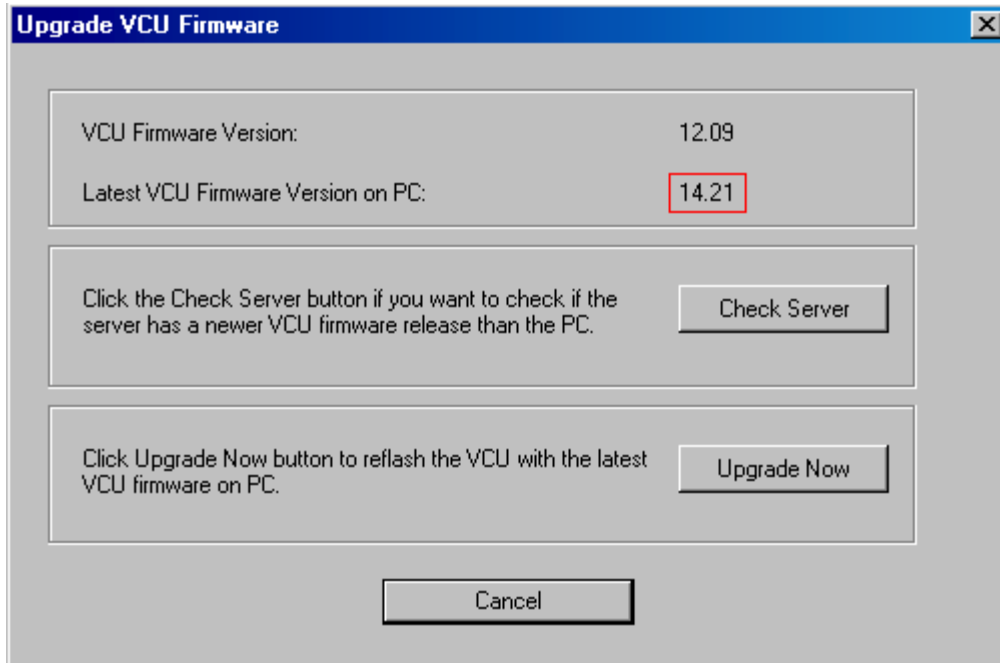


Figure 2 Upgrade VCU Firmware Screen

For questions about the new reprogramming station software release please call our DRS Support Team at 313-592-5505.

Detroit Diesel Diagnostic Link (version 6.2)

DDDL 6.2 contains support for DDEC V, Release 2.0 software and VCU 14.21 software. It became available in December 2004. The new version of DDDL is also the first version to contain an integrated electronics-troubleshooting guide for the MBE system similar to the DDEC Troubleshooting Guide.

You must have DDDL version 6.2 in order to fully communicate with VCU 14.21. Users with DDDL 6.1x or earlier will get an error message when initially attempting to connect to a VCU with version 14.21. The error message tells them they are missing the appropriate BMF file and will have limited functionality.

There is an issue with the cylinder cutout operation on MBE engines with Diagnostic Link 6.2. This issue may be corrected by the replacement of a single file. To receive the corrected file, call SPX Support at 800-328-6657 or DDC Support at 313-592-7050.

NOTE:

While the new version of DDDL supports VCU version 14.21, features such as the PLD routine that activates the proportional valves was not received in time to be included in this version of DDDL.

Currently registered users of DDDL 5.0 or greater may upgrade to version 6.2 for a fee of \$75.00. The cost to upgrade DDDL version 4.21 or earlier is \$250. To purchase upgrades or receive technical assistance for DDDL please call the SPX Corporation at 800-328-6657.

minidiag

1) Will there be new minidiag2 assistant software? Yes, there is new minidiag2 assistant software (version 3.19) available to support VCU 14.21 software. As with the release of VCU 14.20, there will be two versions of minidiag2 assistant available. Both versions with documentation will be available for download from the DDC Extranet (available the first week of January 2005). The CD will be available at a later date.

2) Wasn't the last minidiag2 assistant software version that supported version 14.20 also version 3.19? Yes, the version number of the minidiag2 assistant has not changed but the content to allow support for diagnostic version 154 has.

3) If the version numbers are the same how can I tell if I have the most current version of minidiag2 assistant loaded on my computer? If you are not sure if your version of minidiag2 assistant 3.19 on your PC is the latest version, follow these steps (see Figure 3):

- a. Open your version of minidiag2 assistant and choose the "parameter assistant" from the main menu.
- b. From the "parameter set" drop-down menu choose "new".
- c. Highlight the "ADM – VCU" selection in the "ecu" box. You will see diagnostic version 154 as pictured in Figure 3. Only the latest version of 3.19 software will have an entry for diagnostic version 154.

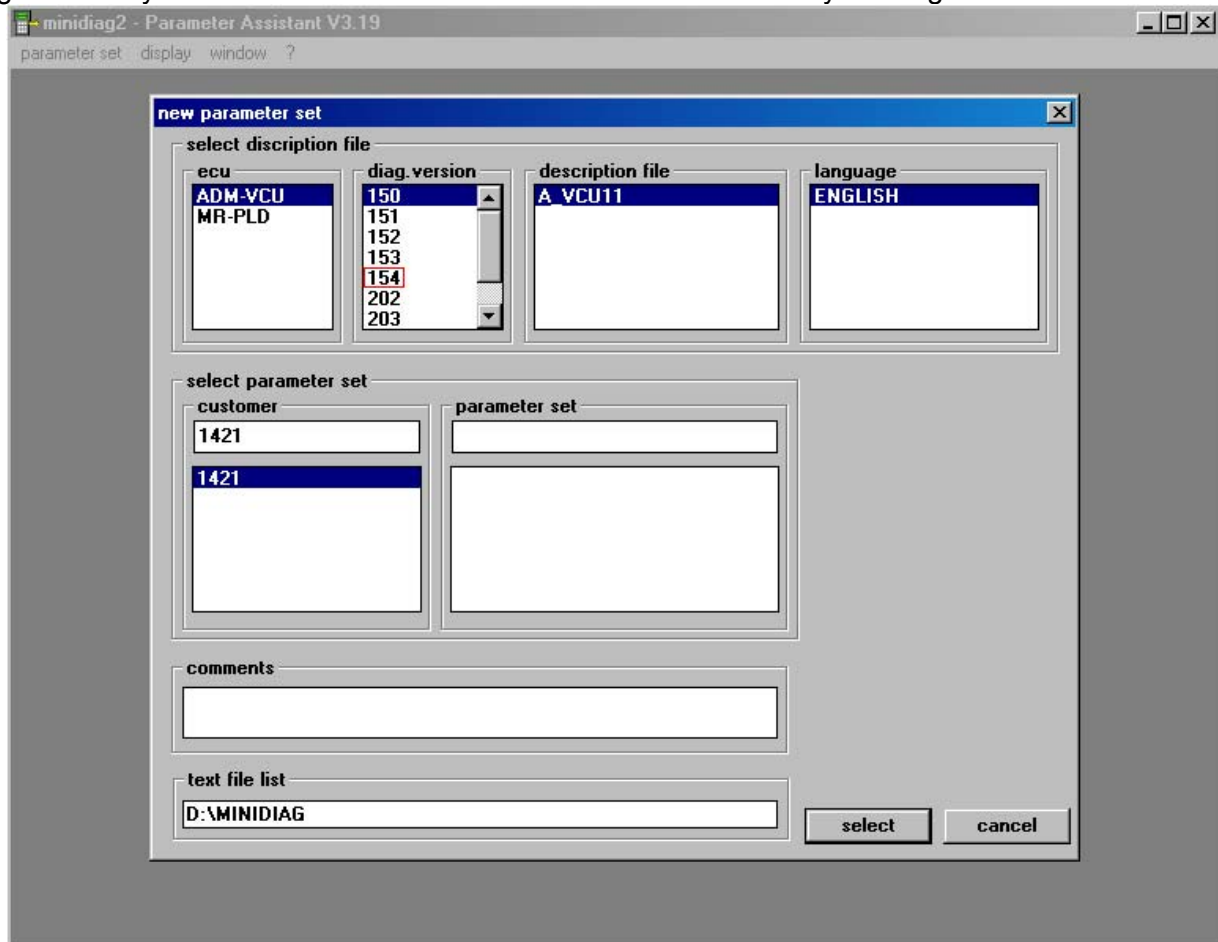
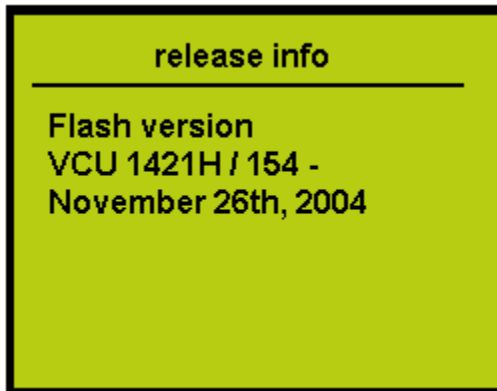


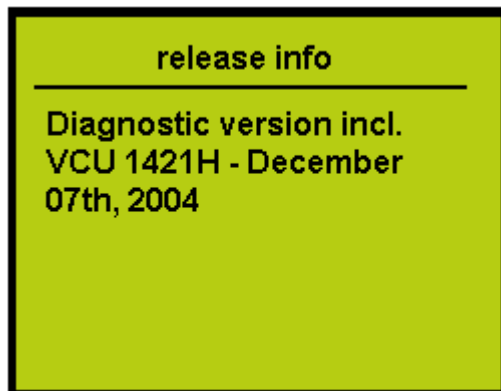
Figure 3 Determining Current Version of minidiag2 assistant Screen

4) If the version numbers are the same how can I tell which version of 3.19 is in my minidiag? If you are not sure if the version of minidiag2 assistant 3.19 loaded in your minidiag is the latest one follow these steps:

- a. From the first screen on your minidiag, choose “minidiag2 info”
- b. From the next screen, choose “release info”
- c. You’ll see one of the following screens depending on whether you have loaded the flashing version or the diagnostic version.



Flash version information



Diagnostic version information
(For all on- and off-highway applications)

5) Why do we have a flash version and a diagnostic version?

The minidiag tool is running into memory limitations. If the minidiag contained all the various diagnostic versions of software it is capable of supporting, there would be no room left for VCU flashing functionality. If the ability to flash a VCU is added, some diagnostic versions need to be removed. One release of minidiag2 assistant 3.19 has the capability to flash VCUs with the latest software and another version has no-flash capability but will support all current on- and off-highway modules. The version containing VCU flash capability supports diagnostics for the following modules:

Module Type	PLD	VCU	ADM2
Diagnostic Versions Supported	4 (sw 51)	150 (sw 10.0/11.03)	202
(Corresponding software level	5 (sw 53)	151 (sw 12.xx)	203
in parenthesis)	6 (sw 56)	152 (sw 13.xx)	204
	9 (sw 60)	153 (sw 14.19 / 20)	
		154 (sw 14.21)	

The version without the VCU flashing capability will contain support for all of the above versions plus additional PLD support for diagnostic versions: 3, 22, 23, 100, 102, and 103. It will contain support for these additional diagnostic versions of ADM: 1, 2, 4, 25, 100, 101, 102, and 110. The following modules will also be supported:

ABS / AG-AGE / FLA-CAN / GS-EPS / KS-MKR / FR-FMR / RS-RET.

NOTE: The VCU flashing capability for the minidiag may not be supported for major releases of VCU software in the future; however, VCU 14.21 will still offer this option. Diagnostic software support **will** be maintained for future releases of both on- and off-highway software.

6) So which version should I choose? There is no right or wrong answer. A general recommendation for DDC Distributors would be to load the non-flash version so that you'll be ready to completely service any on-highway or off-highway Mercedes engine that comes to your shop. This version will allow you to do all the typical functions of the minidiag (read and clear codes, view the data list, and change parameters). You'll be able to flash VCUs with your programming station. Those Dealers or Distributors who do not service off-highway units may choose the VCU flash version. Both versions are available on the CD or may be downloaded from the Extranet.

7) Are there any other new features to the minidiag? There is a new PLD routine in the "routines" section of the minidiag handheld tool. Routine 013 allows the user to set the status of the proportional valve from active to inactive for troubleshooting purposes

8) Where can I get help if I have questions on the new minidiag software? You can contact the Detroit Diesel Customer Support Center at 313-592-5800 for assistance with the minidiag.