

REFERENCE:	Nova Bus Manuals
SECTION:	16: Electrical System
RS N°:	MQR 7621-965
EFFECTIVE IN PROD.:	N/A

APPLICATION DEADLINE: 2017AL10  
CLAIM REFERENCE NUMBER: WB-3599

SUBJECT:	Engine overheat codes
JUSTIFICATION:	Disabling battery management feature may hinder the functionality of radiator ventilation fans thereby causing engine overheat codes. Also leads to battery overcharging.

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Enabling battery management system using Vanner dashboard and reprogramming the V-BEA system.	Nova Bus	Nova Bus	30 min
2	-	-	-	-

**MATERIAL**

QTY	PART N°	REV.	DESCRIPTION	REPLACES PART N°
<b>LEVEL 1</b>				
1	-	-	-	-
<b>LEVEL 2</b>				
-	-	-	-	-

**DISPOSAL OF PARTS**

REMOVED PARTS ARE:	DISCARDED	RETAINED	-
	-	-	

**REVISION HISTORY**

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2016FE19	Initial release	Kumaraswamy K S
R1	2016FE24	L746 has been corrected with appropriate program number FB_SEP6HE__00 M in the client list and Justification has been made much more detailed.	Kumaraswamy K S

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY	PROGRAM	REV.
		FROM	TO	FROM	TO			
CT Transit - Connecticut	L814	1462	1473	S92LXE4500717	S92L4E4500728	12	FB_CON6HE__00	G
CT Transit - Connecticut	L815	1426	1426	S92L0E4500709	S92L0E4500712	4	FB_CON6HE__00	G
SEPTA - Pennsylvania	L724	7300	7301	S92Y1D4500275	S92Y3D4500276	2	FB_SEP6HE__00	M
SEPTA - Pennsylvania	L728			L82W7D4500335	L82W7D4500335	1	FB_SEP4HE__00	G
SEPTA - Pennsylvania	L741	—	—	S92L4E4500504	S92L4E4500504	1	FB_SEP6HE__00	M
SEPTA - Pennsylvania	L742	7371	7414	S92L6E4500729	S92L7E4500772	44	FB_SEP6HE__00	M
SEPTA - Pennsylvania	L743	—	—	S92L1E4500489	S92L2E4500503	15	FB_SEP6HE__00	M
SEPTA - Pennsylvania	L744	—	—	L82L7E4500570	L82LXE4500661	89	FB_SEP4HE__00	G
SEPTA - Pennsylvania	L745	7415	7415	S92L0F4500873	S92L0F4500873	1	FB_SEP6HE__00	M
SEPTA - Pennsylvania	L746	7416	7454	S92L7F4500952	S92L8F4501012	39	FB_SEP6HE__00	M
SEPTA - Pennsylvania	L749	7302	7354	S92Y7D4500409	S92L2E4500470	53	FB_SEP6HE__00	M

**WARNING**

Follow your internal safety procedures.

**PROCEDURE**

- 1.1. Place the MASTER CONTROL SWITCH in the RUN position.
- 1.2. Open the access door to the console located over the driver's window to access the overhead left panel.

**WARNING**

Only an authorized personnel having received proper training should perform diagnostics. Misuse may comprise the integrity of the electrical system and render the vehicle non-functional. Special care and authorization are required to perform these procedures.

- 1.3. Connect the laptop to the DDR connector (see Figure 1).

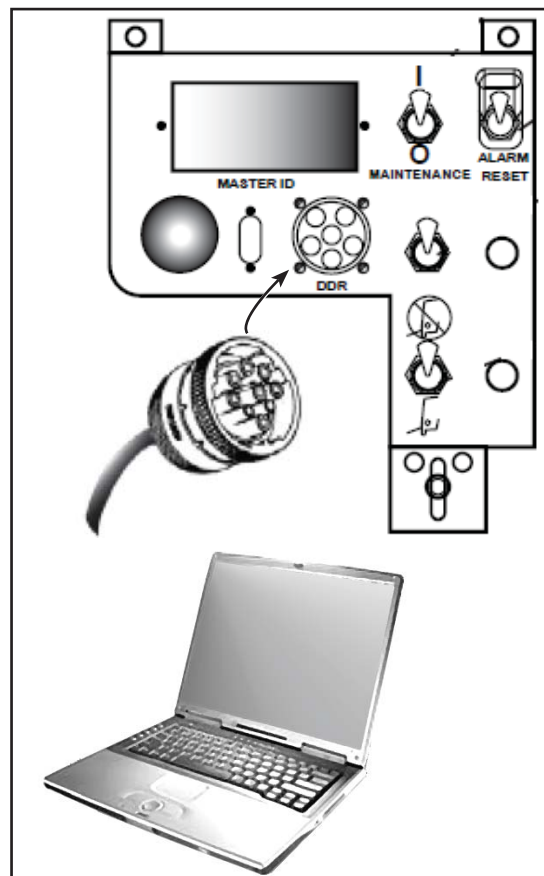


Figure 1 - Connecting Laptop to the DDU Connector

1.4. Open Vanner dashboard interface and select HVDC/HBA (see Figure 2).

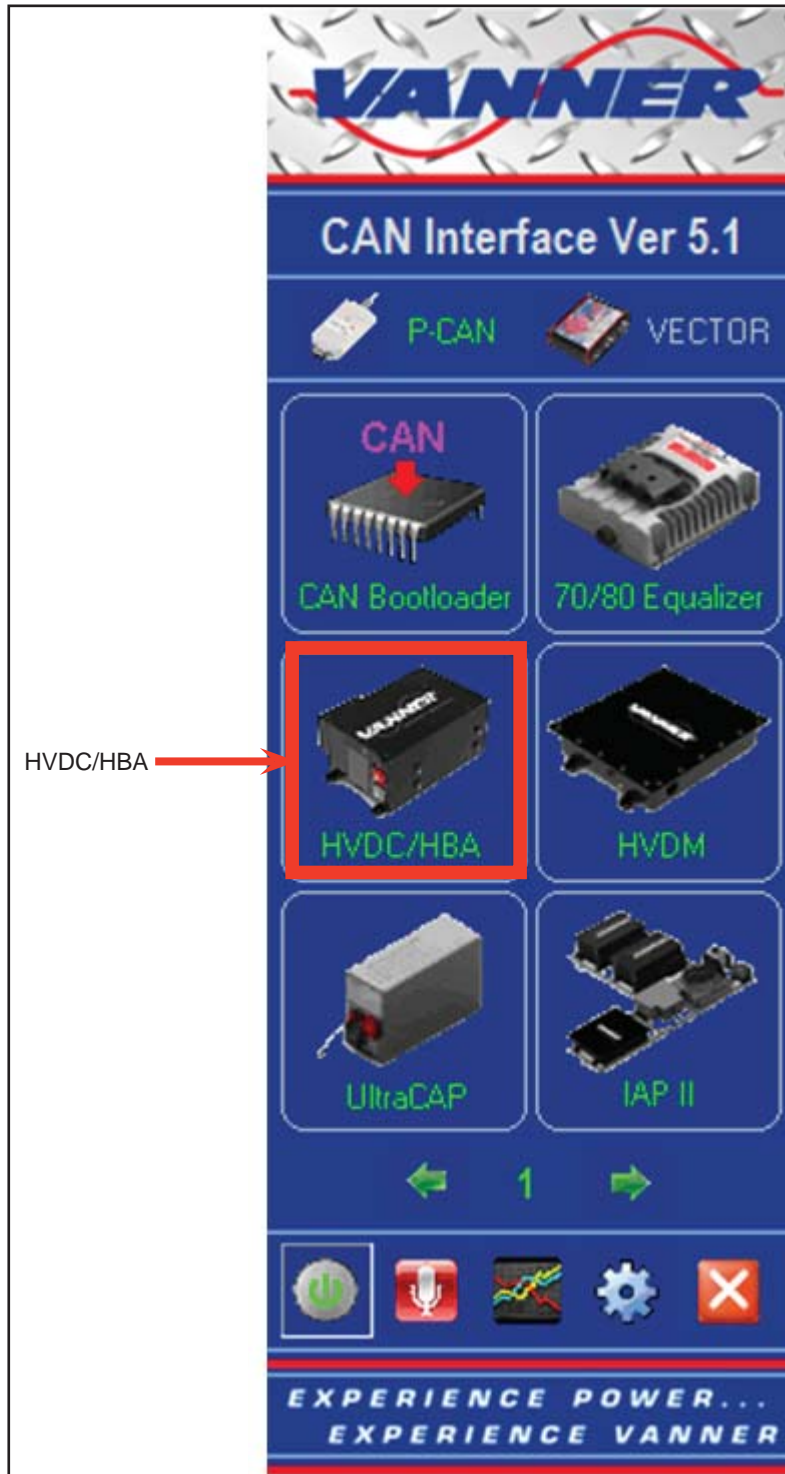


Figure 2 - Typical View of Vanner Dashboard Interface

- 1.5. If battery management is inactive, "Low Voltage Battery Status" will be 0% (see Figure 3).
- 1.6. Click on "Set Output Voltage" in converter control (see Figure 3).

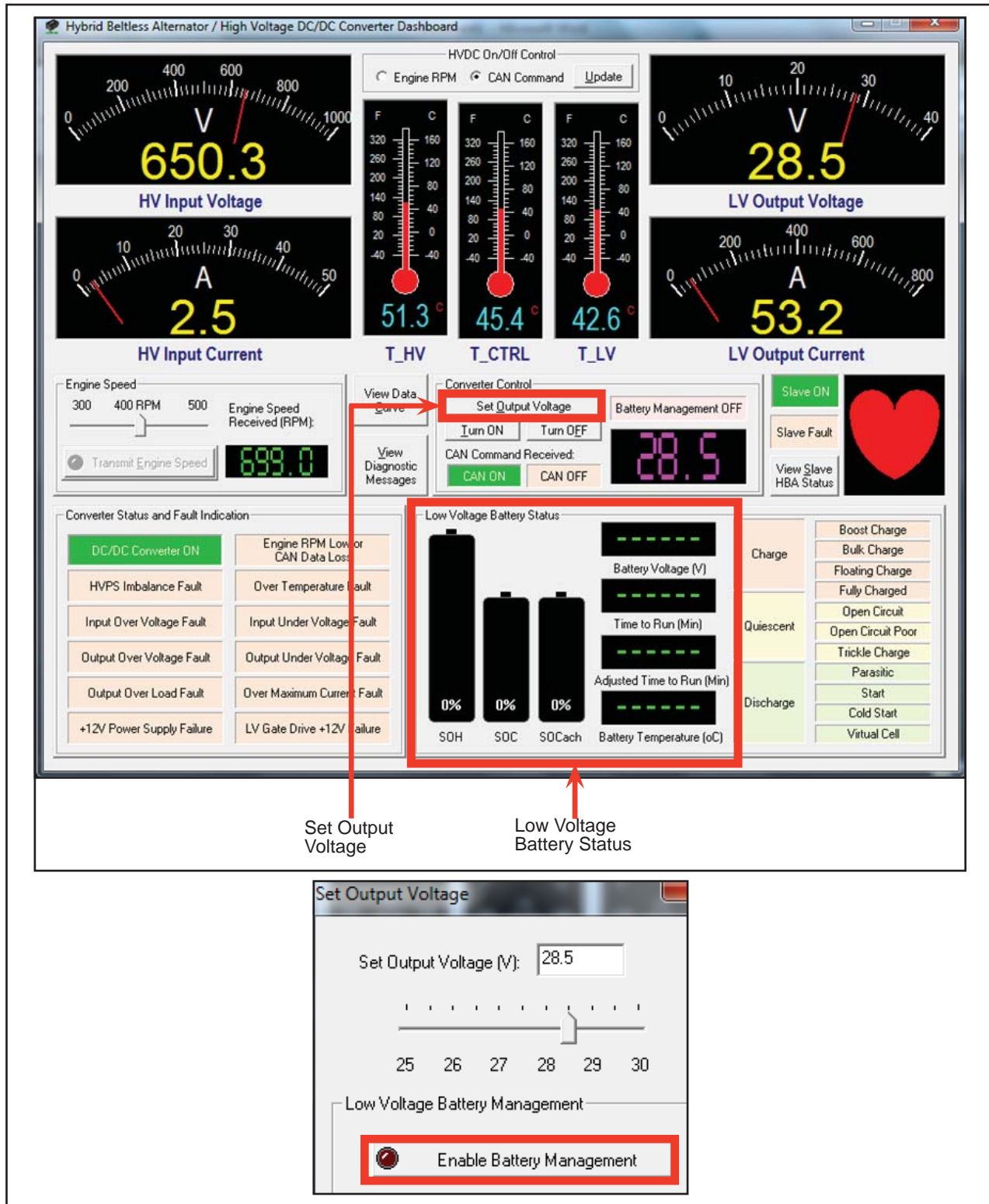


Figure 3 - Typical View of HBA Startup and Set Output Voltage Screen

1.7. Click on "Enable Battery Management" in "Set Output Voltage" tab to turn it ON and press OK. (see Figure 4).

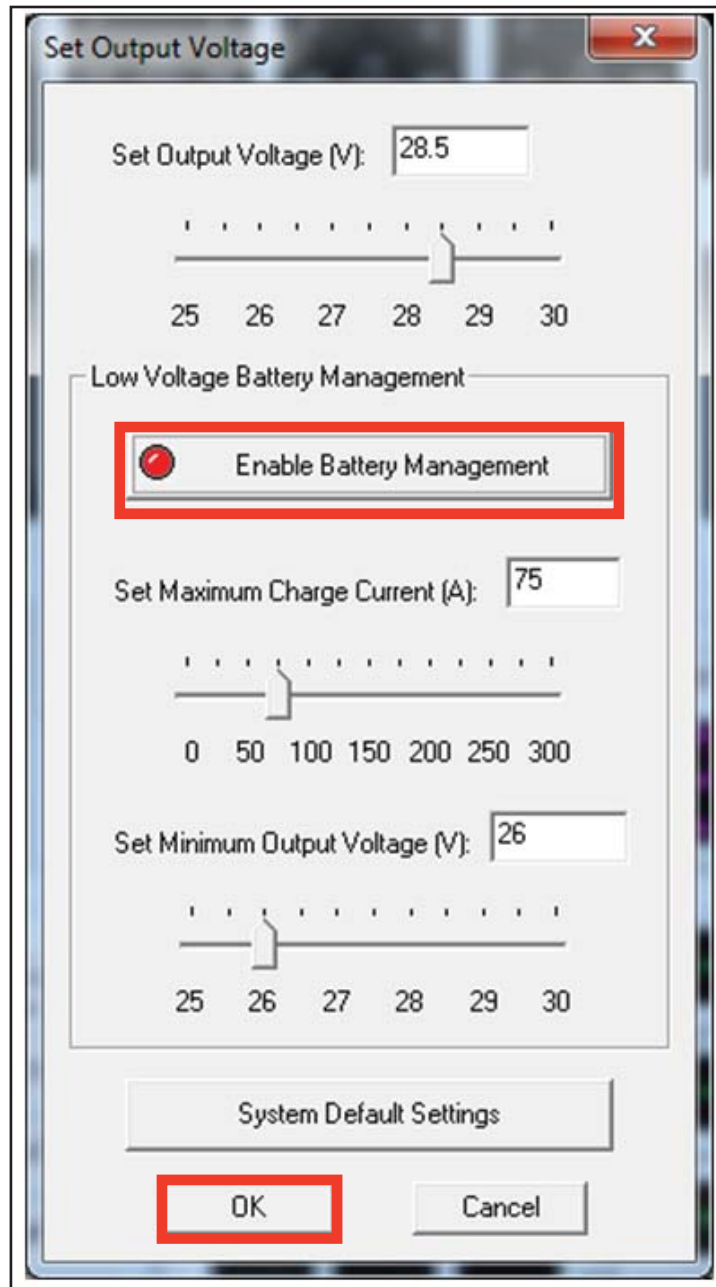


Figure 4 - Enabling Battery Management in Set Output Voltage Tab

- 1.8. Check for proper reading data of "Low voltage Battery Status" (see Figure 5).

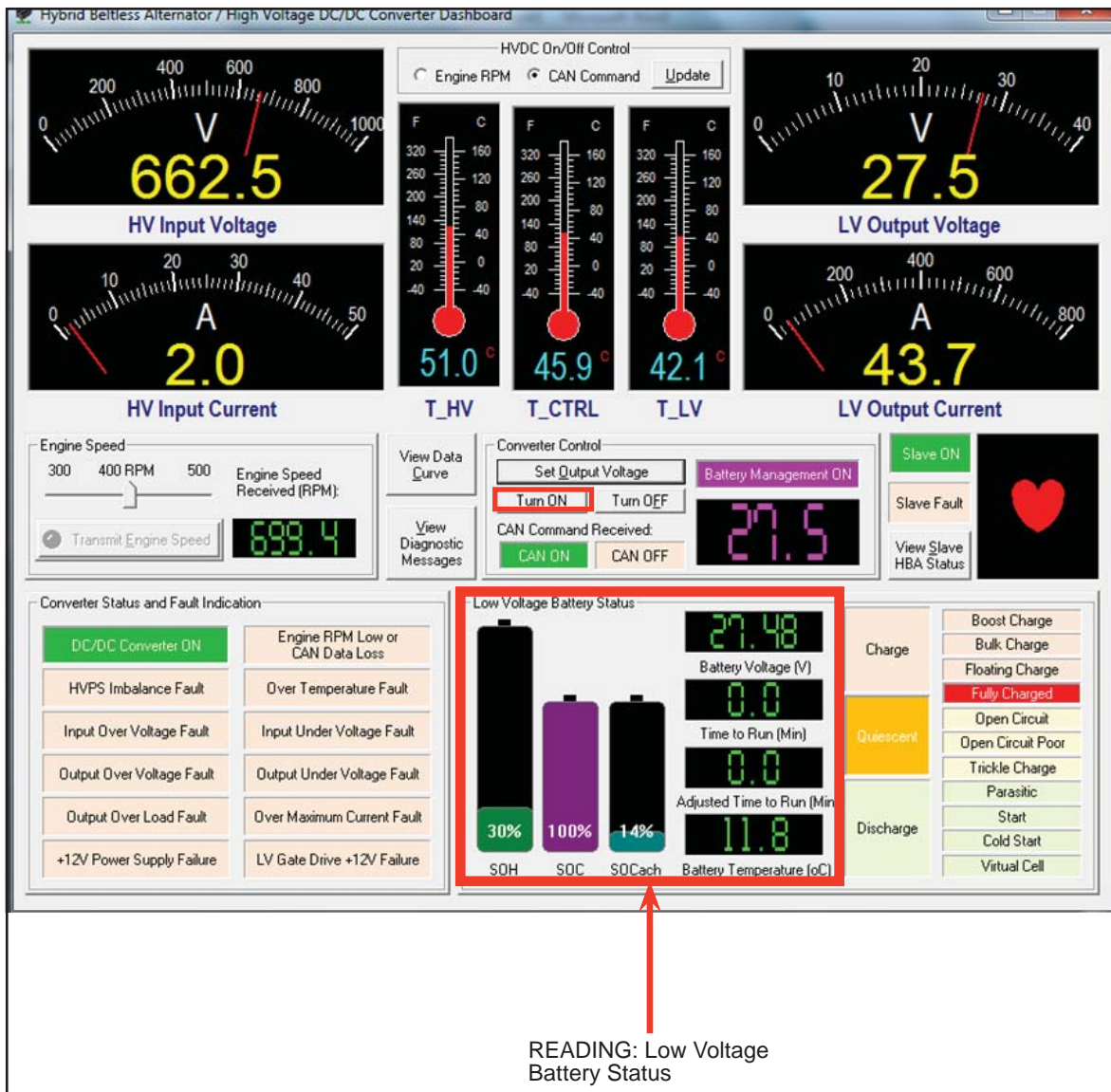


Figure 5 - Typical View of HBA Dashboard with Battery Management 'ON'

- 1.9. Close the Vanner dashboard interface.
- 1.10. Establish a connection to the MasterID/MCM using "MAIDCOM2".
- 1.11. Open explorer at the "Volvo Bus On-Board Web Server" and type the following address:  
"http://localhost:49555/cp/html/start.html" (see Figure 6).



Figure 6 - Typical View of Web Browser Address

- 1.12. The web-browser will navigate to the familiar links. Click on "Programming" then "Download".
- 1.13. Click on "Start Downloader".
- 1.14. Click on "Download Software Package" (see Figure 7).

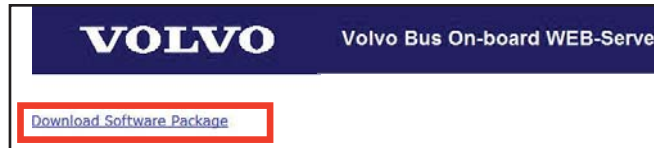


Figure 7 - Typical View of Download Software Package Link

- 1.15. Enter "Username" and "Password". Then click on "Browse" (see Figure 8).



Figure 8 - Browse for File Request

- 1.16. Select the proper file "FB\_XXXXXX\_\_00" as per the client list above.
- 1.17. Click on "Download". A progress bar will appear at the bottom of the page. The download may take several minutes, depending on the size of the file and the speed of the laptop.
- 1.18. Make sure the reprogramming was successful by verifying if the "Code 100: Download OK" is displayed in the window. If so, click on "Restart System Software" (see Figure 9).

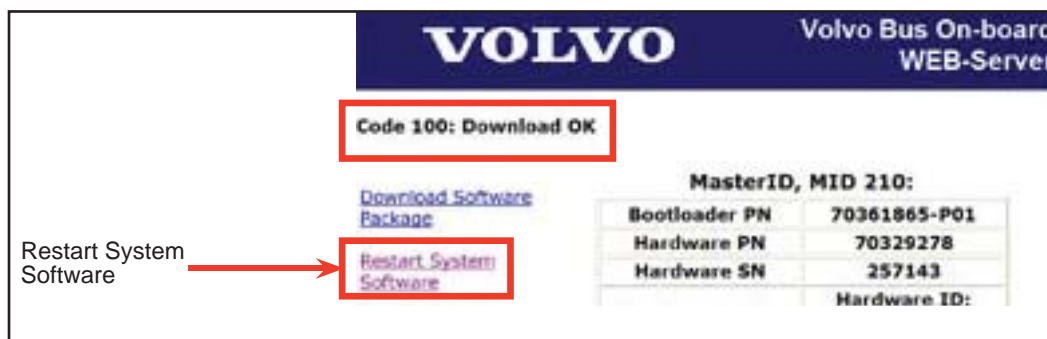


Figure 9 - Typical View of Restart System Request

- 1.19. A window will appear confirming that the system is programming the CECM-B application. This stage will download the update directly to the CECM (Central Electric Control Module).



#### CAUTION

It is important to deactivate the software link before disconnecting the transfer cable.

1.20. A progress indicator confirms the download process. Once completed, the main "Volvo Bus On-Board Web Server" page appears. Click on the "Vehicle Information" and then "Body ECU info" (see Figure 10).

**VOLVO**

Body ECU info

Chassis : ~~XXXX~~ NOVA  
Body : NR  
2008-07-01/14:22:08

BBUS state:N(\_N\_)

**Body ECU info**

ECU address	ECU name	Location	HW part number	HW serial number
40	40	Dash	70370999	8160032
41	41	Dash	70370999	8160026
36	36	Lateral Consol	70361720	8030007
42	42	Lateral Consol	70393900	8200720
43	43	MainPanel +RF0	70393900	8170472
44	44	MainPanel +RF0	70370999	8160137
50	50	Roof Unit	70393900	8190413
51	51	Roof Unit	70370999	8150160
52	52	Roof Unit	70370999	8160043
53	53	Interior Back	70393900	8200925
54	54	Interior Back	70370999	8160041

Navigation menu (left):  
 + Language ( English )  
 - **Vehicle information**  
 Master ID information  
 - **Body ECU info**  
 Body component list  
 + Fault log  
 + MID view  
 + Operation view  
 + Function diagram view  
 + Parameters  
 + Programming  
 + Help  
 + Exit

Figure 10 - Vehicle Information and Body ECU Info

- 1.21. Verify all modules are programmed and communicating.
- 1.22. Disconnect the laptop from the vehicle.
- 1.23. Close the access door located over the driver's window.
- 1.24. Start the vehicle and perform the running test.
- 1.25. The vehicle may be returned to service.❖