

REFERENCE:	Nova Bus Manuals
SECTION:	16: 24-Volt Electrical System
RS N°:	N/A
EFFECTIVE IN PROD.:	L621 (2011AL)

APPLICATION DEADLINE: 2015AL17
CLAIM REFERENCE NUMBER: WB-3080

SUBJECT:	V-BEA module
JUSTIFICATION:	CECM could be replace with a MCM module to reduce download time

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Replace Master ID and CECM by an MCM with new harness kit.	Client	Nova Bus	—
2	—	—	—	—

MATERIAL

QTY	PART N°	REV.	DESCRIPTION	REPLACES PART N°
LEVEL 1				
1	N64010	A	MCM to CSP-X89X communication cable	—
1	N64009	B	AIC to CSP-X89X communication cable	—
1	N64011	B	MCM to RF0-TB78A-S1 power cable	—
1	N60809	B	Driver top panel to CSP-X89X communication cable	—
1	N60798	A	MCM V-BEA module	N37152
LEVEL 2				
—	—	—	—	—

Materials will be available within 42 days. To order, please contact Prevost Parts by phone at 1-800-771-6682, by fax at 1-888-668-2555 or by email at prevostparts.commandes@volvo.com. Specify document number, quantity of parts required and shipping address.

TO OBTAIN THE SOFTWARE REVISION REQUIRED, CONTACT YOUR AFTER-SALES REPRESENTATIVE

DISPOSAL OF PARTS

REMOVED PARTS ARE:	DISCARDED *	RETAINED	* Dispose of the unused parts and the defective parts in accordance with local environmental standards in effect.
	Yes	—	

REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2014MR14	Initial release	Luc Carignan

APPROVED BY:**PAGE 1 OF 8**

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
New York City Transit - New York	L536	1200	1201	S92U793000490	S92U993000491	2
New York City Transit - New York	L545	1202	1289	S92U5A4000001	S92U0A4000098	88
New York City Transit - New York	L608	8000	8014	L82U6B4000047	L82U0B4000061	15
New York City Transit - New York	L620	8015	8074	L82U2B4000062	L82U7B4000123	60

**WARNING**

Follow your internal safety procedures.

PROCEDURE

This procedure is performed in three steps:

1. Installation of module MCM N60798 and cables
2. Program V-BEA system
3. Modify Cummins accelerator interlock parameter

1. INSTALLATION OF MODULE MCM N60798 AND CABLES

- 1.1. Remove the operator's partition panel. Retain the panel and the hardware.
- 1.2. Remove the light panel located behind the Main Panel. Retain the panel and the hardware.
- 1.3. Remove the operator's control panel rear access door.
- 1.4. Open the overhead console door, located above the operator's window.
- 1.5. Remove the anchor nuts from the overhead console panel. Retain the hardware. See Figure 1.
- 1.6. Pull on the overhead console panel in such a way to remove the Master ID connector. Retain the hardware.
- 1.7. Install the male connector of the new cable N60809 in the Master ID position on the overhead console panel. Use the retained hardware to attach the connector. See Figure 1.

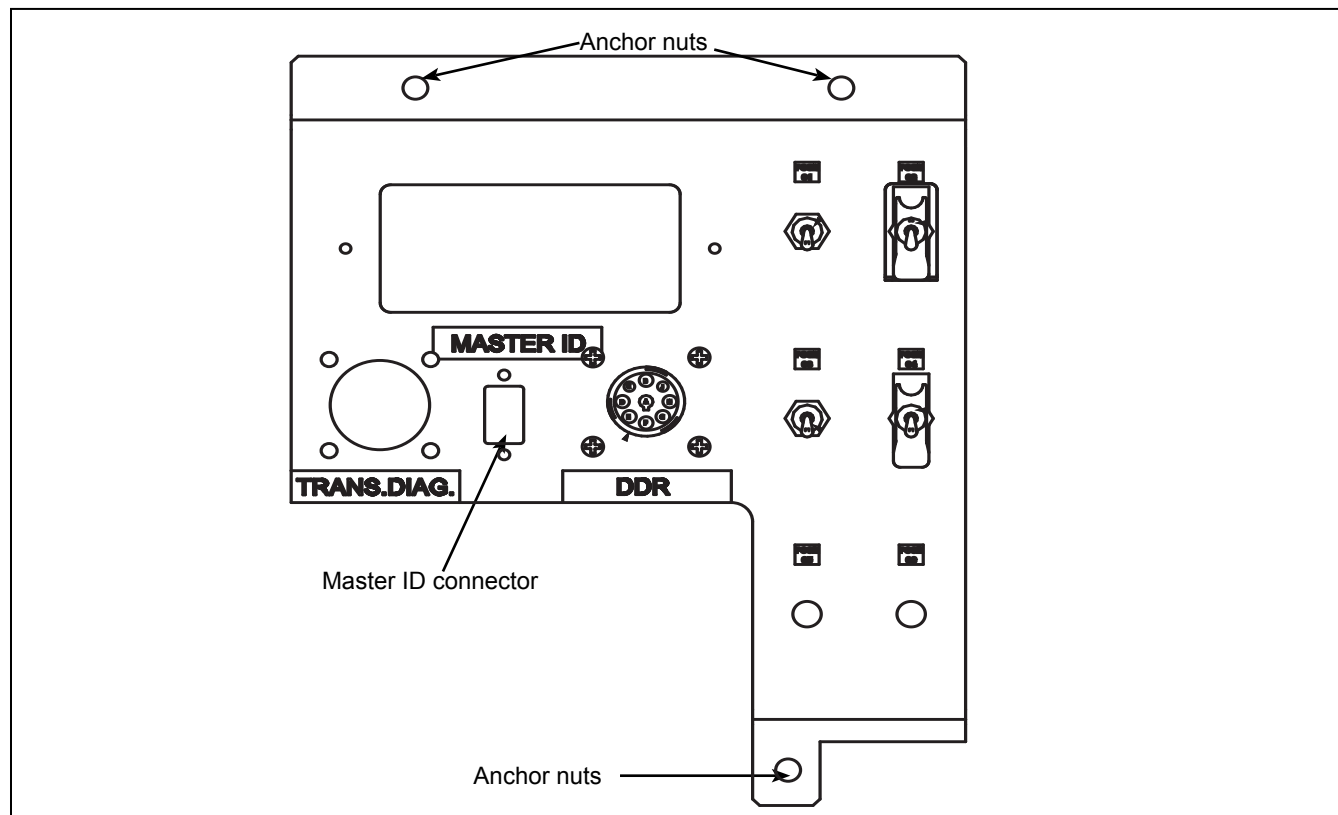


Figure 1 - Typical Overhead Console Panel

- 1.8. Return the overhead console panel to its original position using the retained hardware. See Figure 1.
- 1.9. Route and connect cable N60809 to **CSP-X89X** connector support in the operator's control panel. Secure the cable with tie wrap along the routing. See Figure 2.
- 1.10. Disconnect both communication cables installed on connector **CSP-X89X** located on the support in front of the CECM module and bundle them with tie wrap in such a way as to not use them as communication cables.
- 1.11. Connect cable N64010 to cable N60809 on **CSP-X89X** connector support in the operator's control panel. See Figure 2.
- 1.12. Disconnect the blue connector **CSP-X89H2** from the CECM module. See Figure 2.
- 1.13. Connect all colored wires (green, white, orange, blue and black) of cable N64010 in the connector **CSP-X89H2**. See Figure 2 for pin position.
- 1.14. Replace module CECM with new module MCM N60798, using the same hardware. See Figure 2.
- 1.15. Connect drain wire of cable N64010 to one of the anchor bolts on module MCM (N60798). See Figure 2.
- 1.16. Connect the black and red wires of cable N64011 in the blue connector **CSP-X89H2**. See Figure 2 for pin position.

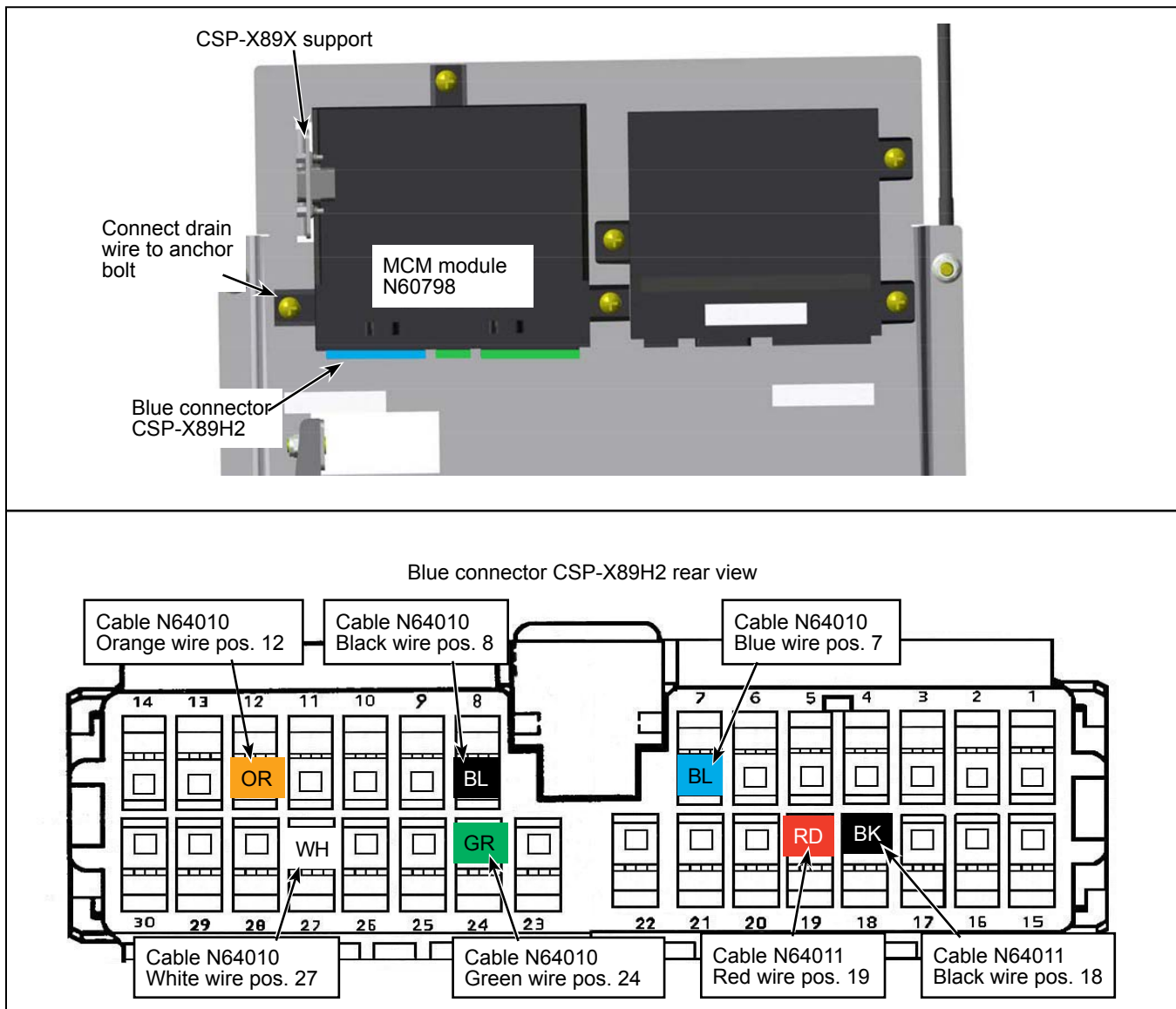


Figure 2 - Connection of Cable N64010 and N64011 to MCM Module

- 1.17. Close the overhead console door, located above the operator's window.
- 1.18. Open the left electrical Main Panel door.
- 1.19. Route cable N64011 inside the left portion of the Main Panel. Secure the cable using tie wrap.
- 1.20. Connect the red wire of cable N64011 to the Main Panel terminal block RF0-TB78A-S1. See Figure 3.
- 1.21. Connect black wire of cable N64011 to the Main Panel splice connector RF0-SC-78A, position H.
- 1.22. Disconnect cable **RF0-X78C2** from the Master ID module. See Figure 3.
- 1.23. Connect cable N64009 to connector **RF0-X78C2**. See Figure 3.

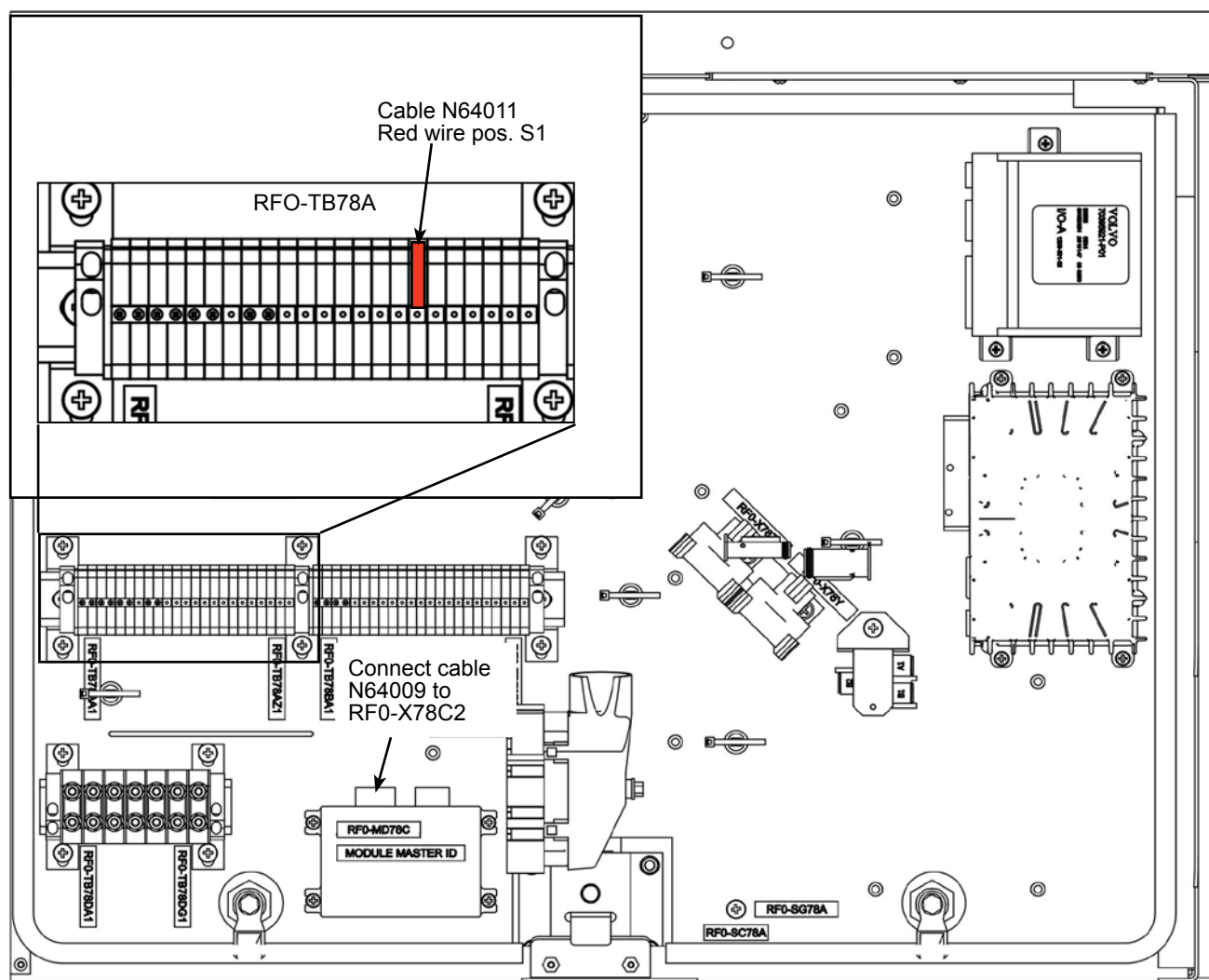


Figure 3 - Cable N64011 and N64009 Connection in Main Panel

- 1.24. Route cable N64009 to **CSP-x89x** connector support in front of the MCM module in the operator's control panel. Secure cable with tie wraps.
- 1.25. Close the left electrical Main Panel door's.
- 1.26. Install the operator's partition panel using the retained hardware.
- 1.27. Install the light panel behind the Main Panel using the retained hardware.
- 1.28. Install the operator's control panel rear access door.

2. PROGRAM V-BEA SYSTEM

- 2.1. Download the file FB_LXXX in the V-BEA system, in accordance with the heading **REPROGRAMMING THE V-BEA** in section **16: V-BEA (Volvo bus Electronic Architecture)** in the Nova LFS Maintenance manual.

3. MODIFY CUMMINS ACCELERATOR INTERLOCK PARAMETER

- 3.1. Open the compartment located at the upper left of the driver's seat.
- 3.2. Connect one end of the Cummins Inline interface to the **DDR** plug in the panel located in the compartment and to your laptop computer. See Figure 4.

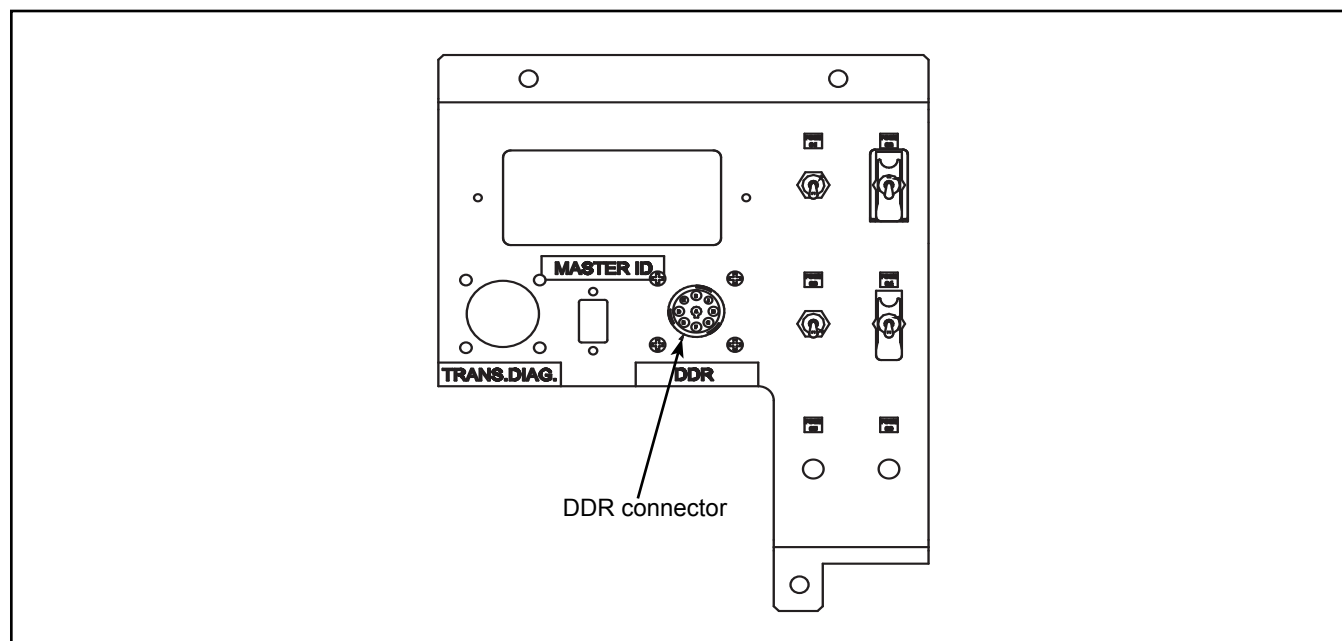


Figure 4 - DDR Connector in a Typical Control Panel

- 3.3. Open the Cummins **INSITE** software.
- 3.4. Select **CONNECT TO ECM**. See Figure 5.
- 3.5. Select **FEATURES AND PARAMETERS**. See Figure 5.

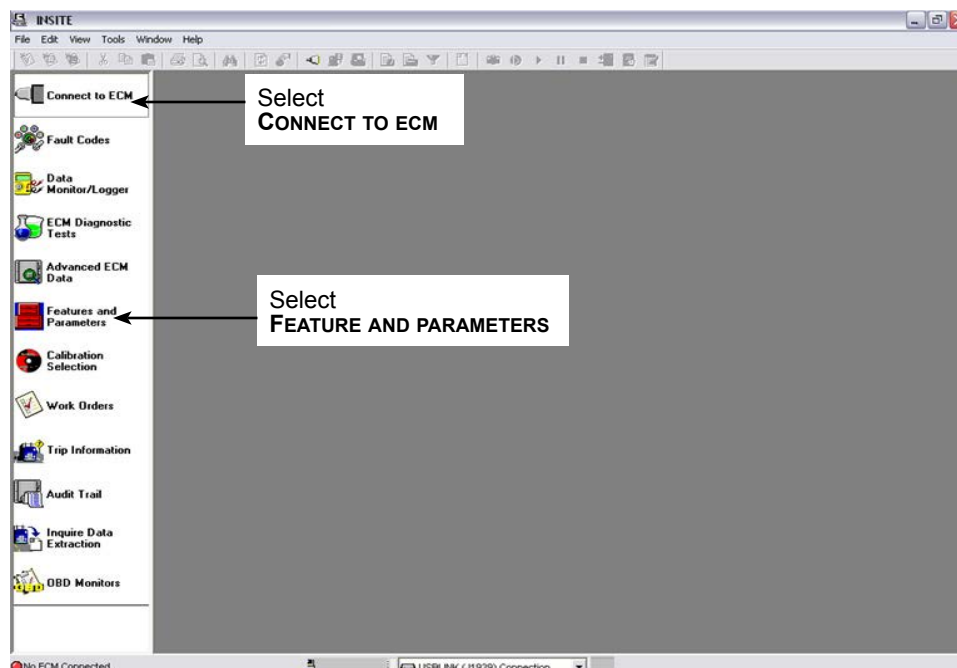


Figure 5 - Cummins Insite Homepage

- 3.6. Locate and open the **SAE J1939 MULTIPLEXING** line. See Figure 6.

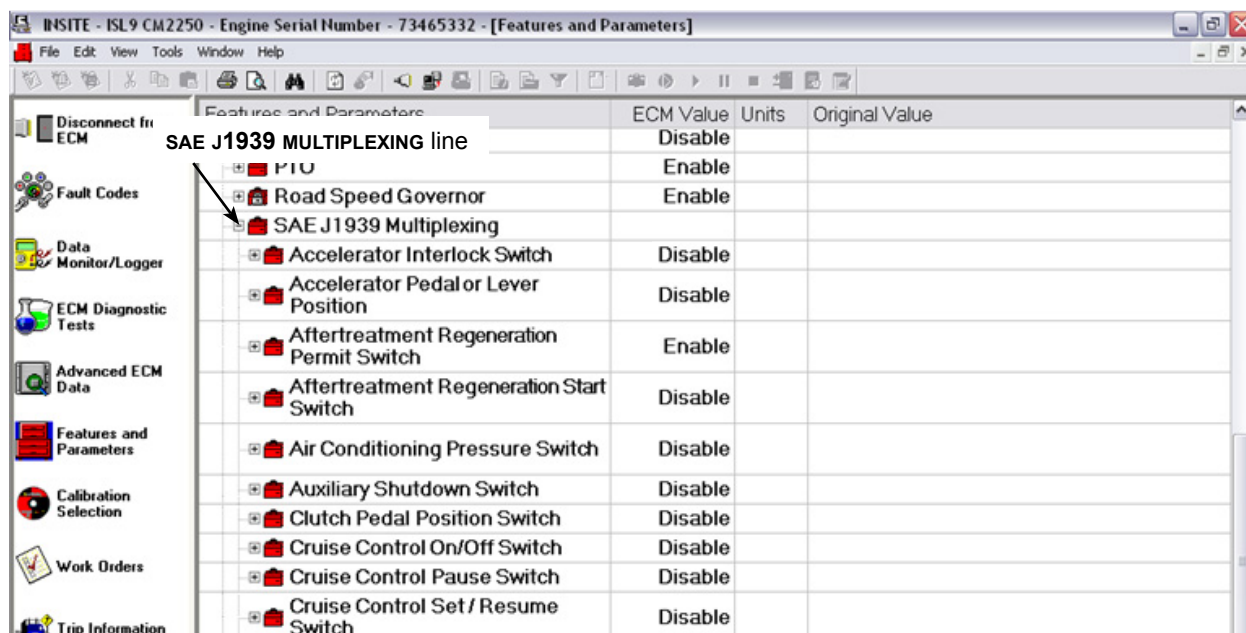


Figure 6 - SAE J1939 Open Menu

- 3.7. Change the **ACCELERATOR INTERLOCK SWITCH** parameter from **DISABLE** to **ENABLE**. See Figure 7.

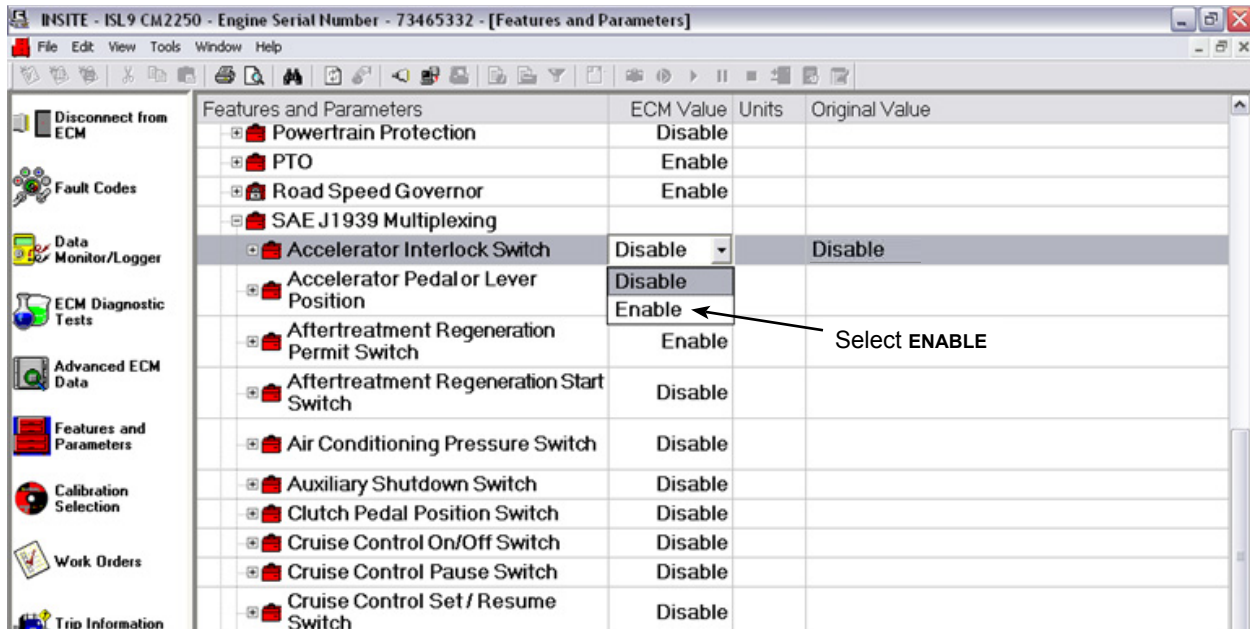


Figure 7 -

- 3.8. Select **EXIT** button in order to save the new parameter in **ECM**. Accept the changes by selecting **YES**. See Figure 8.

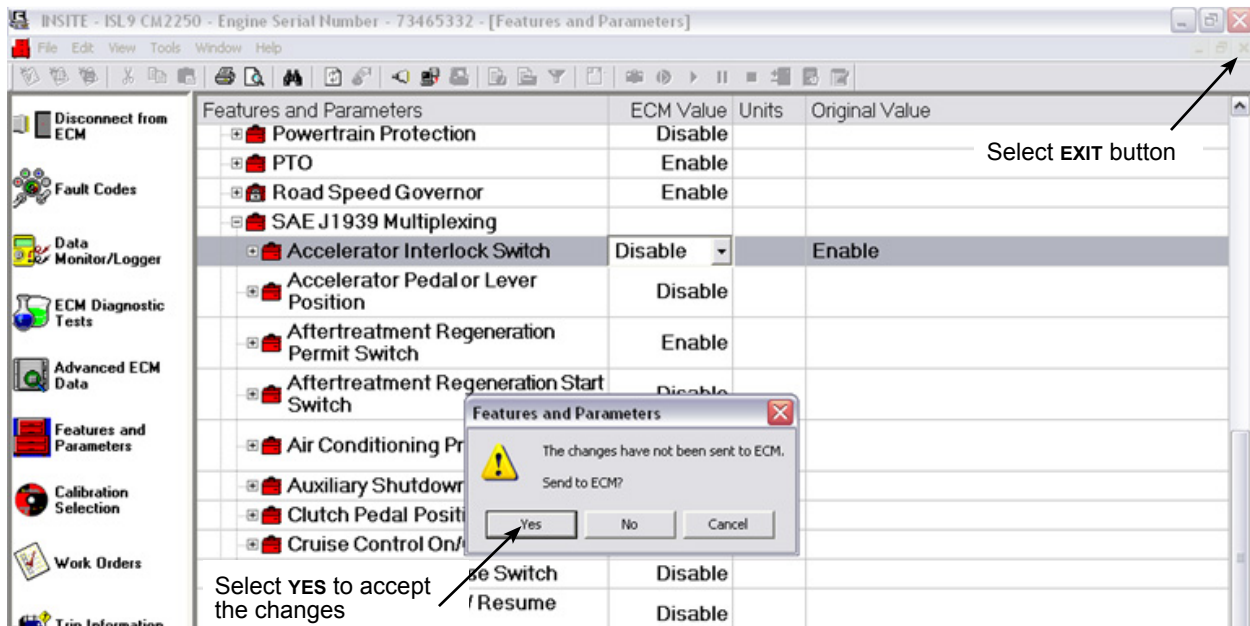


Figure 8 -

- 3.9. Close the Cummins **INSITE** software and disconnect the Inline interface cable from the **DDR** Connector.
- 3.10. Close the compartment located at the upper left of the driver's seat. ❖