

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

APPLICATION DEADLINE: 2016JL31
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	N81735	NR	MCM to RFO 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
R1	2015JN29	Cable N64009 removed. Cables N60809, N64010 and N64011 replaced by cable N81735. Procedure modified to reflect these cable replacements	Luc Carignan

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 operator's control panel rear access door.
- 1.3. Open the overhead console door, located above the operator's window.
- 1.4. With a 5 mm (3/16 in.) nut driver, remove the Master ID anchor nuts from the overhead console panel. Retain the hardware. See Figure 1.
- 1.5. Install the female connector of the new cable N81735 in the Master ID position on the overhead console panel. Use the retained hardware to attach the connector using a 5 mm (3/16 in.) nut driver. See Figure 1.

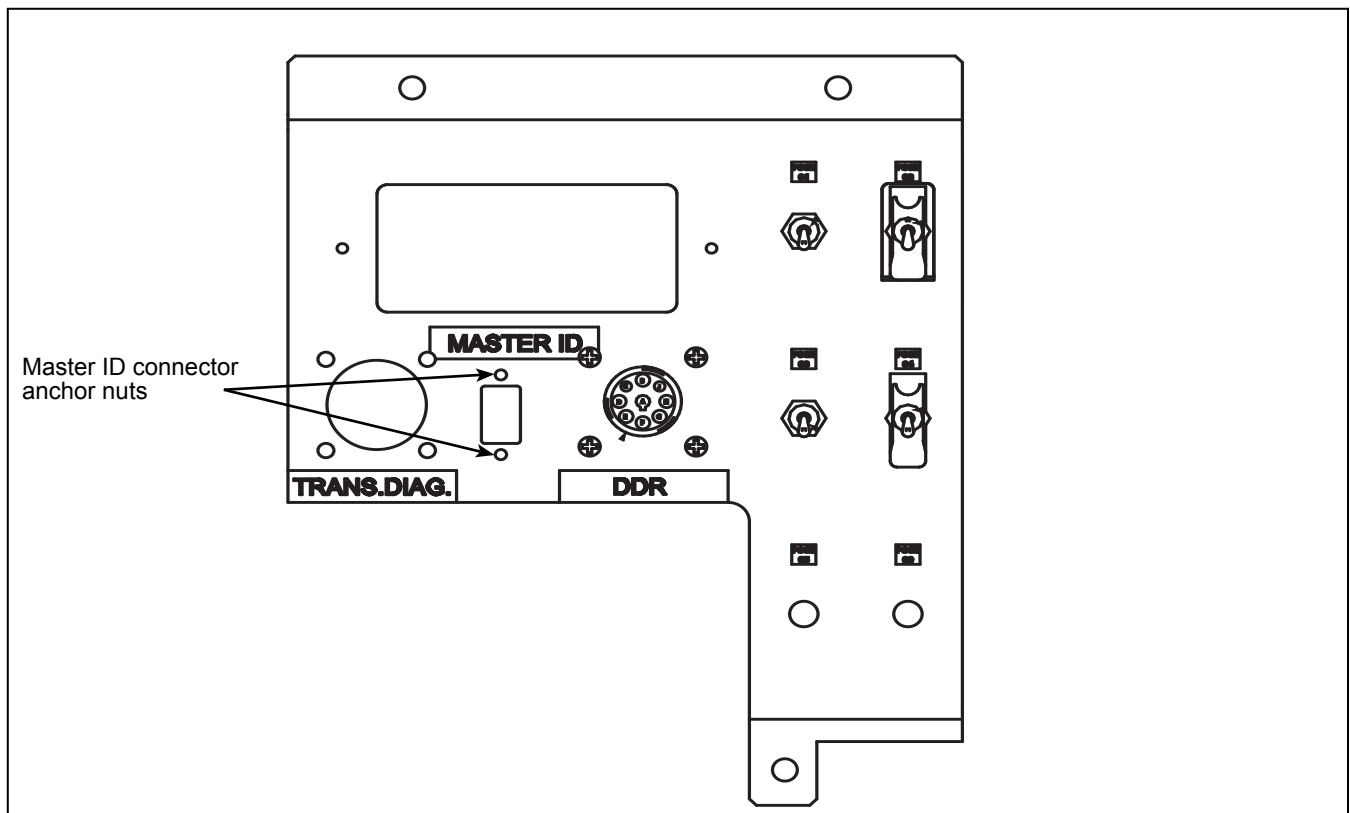


Figure 1 - Typical Overhead Console Panel

- 1.6. Route and connect the portion tag **TO MCM** of cable N81735 to **BLUE** MCM connector **CSP-X89H2** in the operator's control panel. Secure the cable with tie wraps along the routing. See Figure 2.
- 1.7. Disconnect the blue MCM connector **CSP-X89H2** from the CECM module. See Figure 2.
- 1.8. Connect all colored wires (green, white, orange, blue, red and 2 black) of cable N81735 to connector **CSP-X89H2**. See Figure 2 for pin position.
- 1.9. Replace CECM module with new MCM module N60798, using the same hardware. See Figure 2.
- 1.10. Connect the drain wire of cable N81735 to the bottom left anchor bolts of MCM module N60798. See Figure 2.
- 1.11. Close the overhead console door, located above the operator's window.
- 1.12. Open the left electrical Main Panel door.
- 1.13. Route through the driver's partition the break out section **To GND** and **To BAT 24V SWITCHED** of cable N81735 inside the left portion of the main panel. Secure the cable using tie wrap.

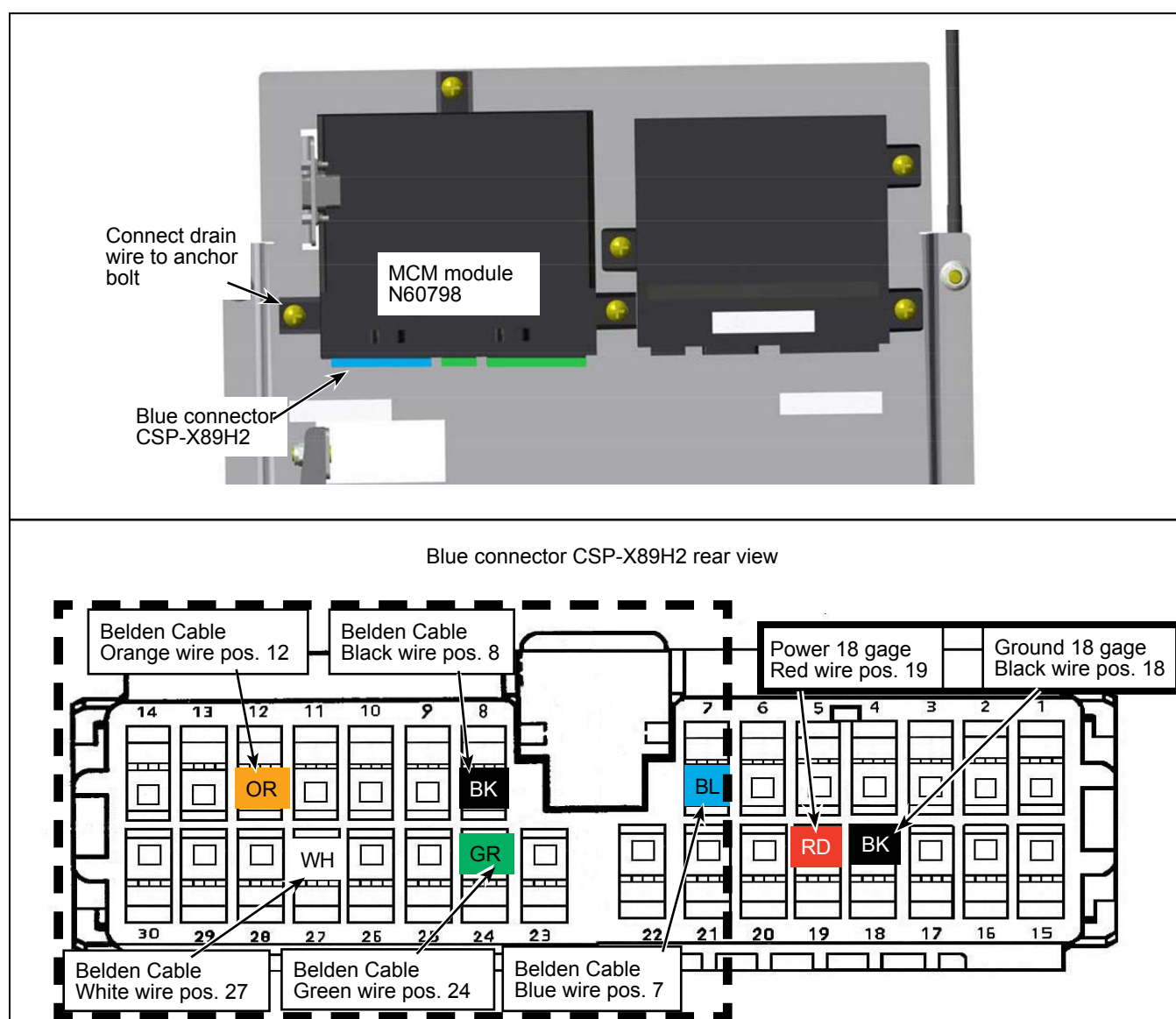


Figure 2 - Connection of Cable N81735 to Blue MCM Module Blue Connector

- 1.14. Connect the red wire tagged **To BAT 24V SWITCHED** of cable N81735 to main panel terminal block RFO-TB78A-S1. See Figure 3.
- 1.15. Remove and discard the **MASTER ID**. Retain the hardware.
- 1.16. Connect the black wire tagged **To GND** of cable N81735 to one of the anchor points used to maintain the **MASTER ID**. See Figure 3.
- 1.17. Disconnect cable **RF0-x78c2** from the Master ID module. See Figure 3.
- 1.18. Close the left electrical main panel doors.

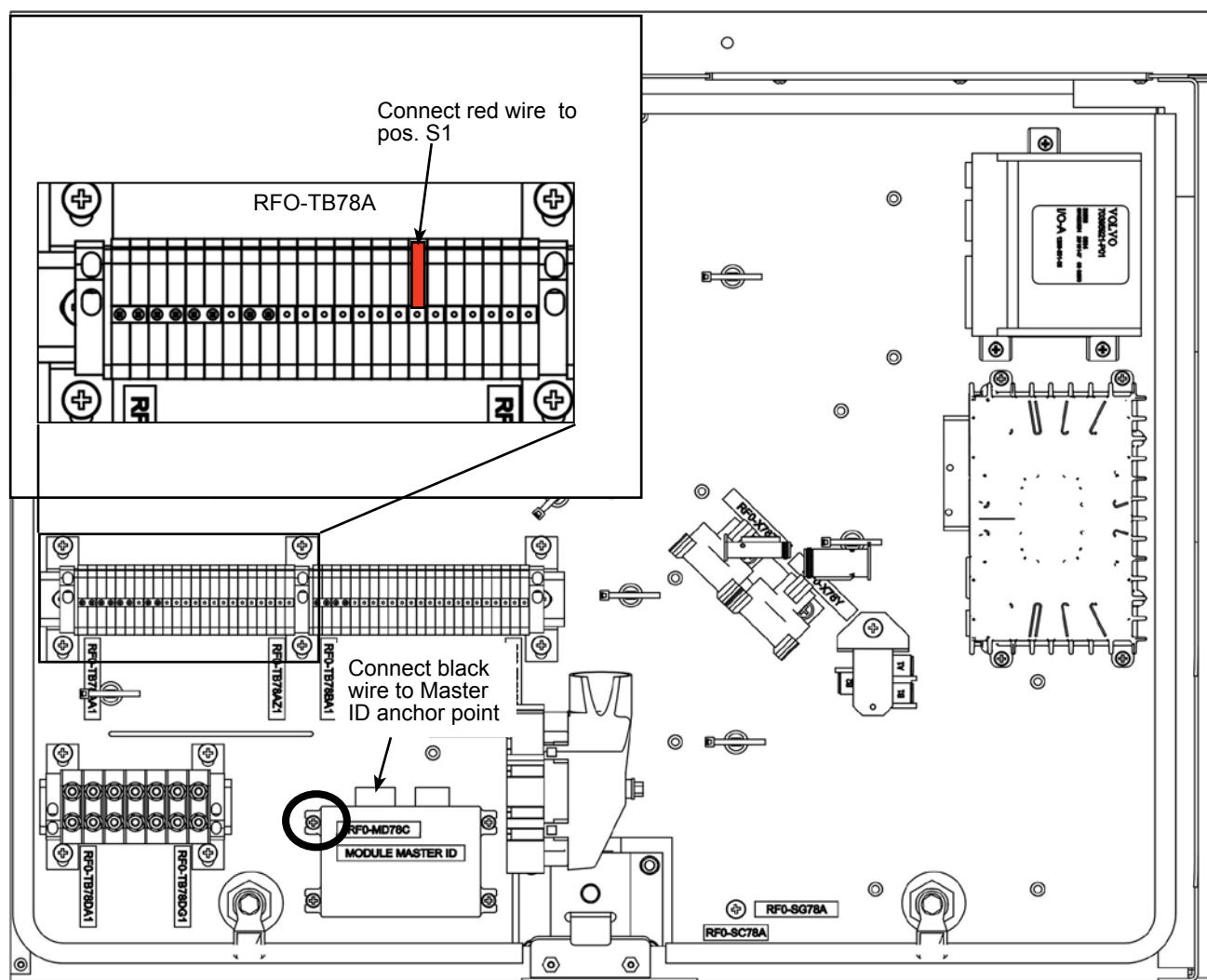


Figure 3 - Cable N64011 and N64009 Connection in Main Panel

- 1.19. Install the operator's partition panel using the retained hardware.
- 1.20. Install the rear access door of the operator's control panel.

2. PROGRAM V-BEA SYSTEM

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

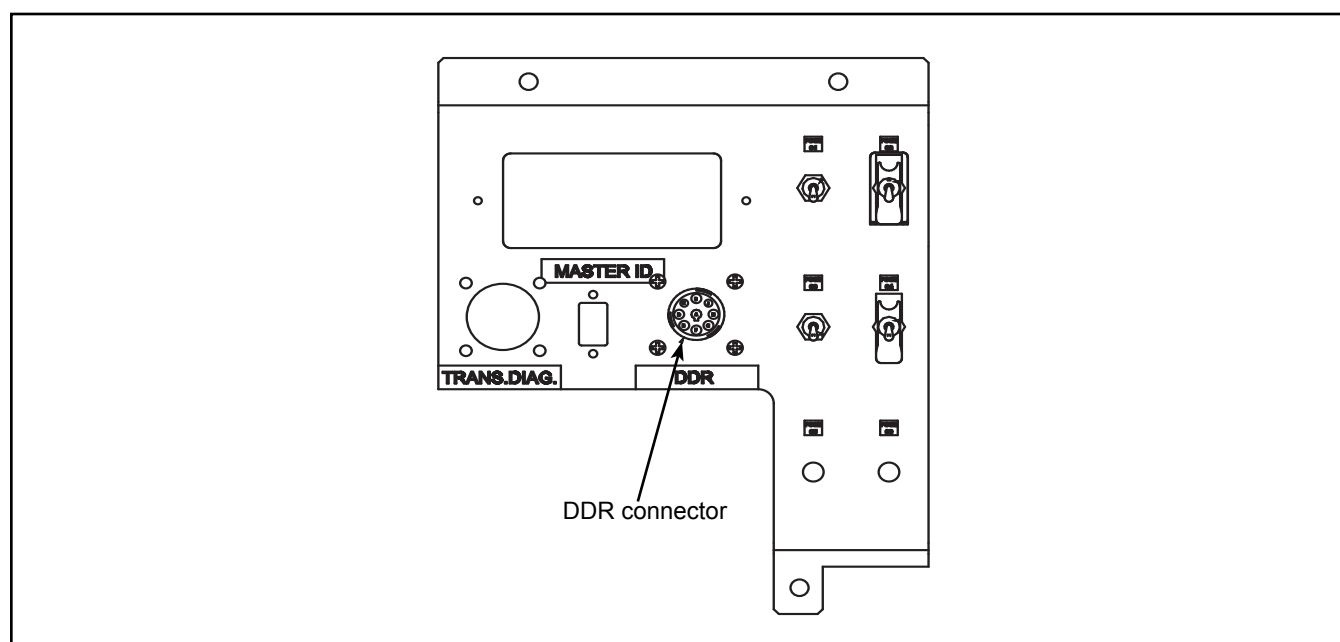


Figure 4 - DDR Connector in a Typical Control Panel

- 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.

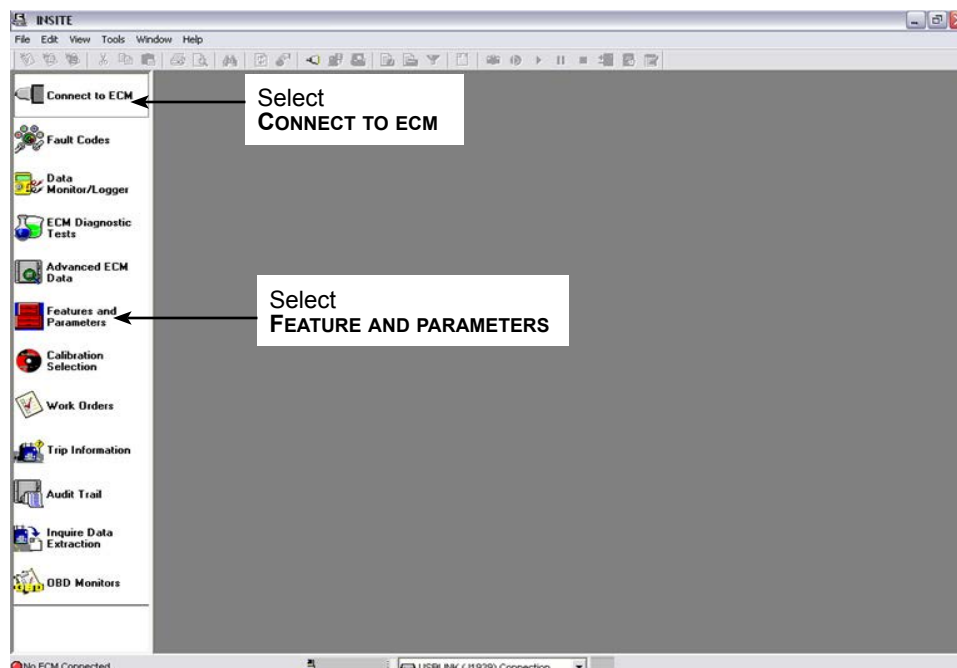


Figure 5 - Cummins Insite Homepage

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

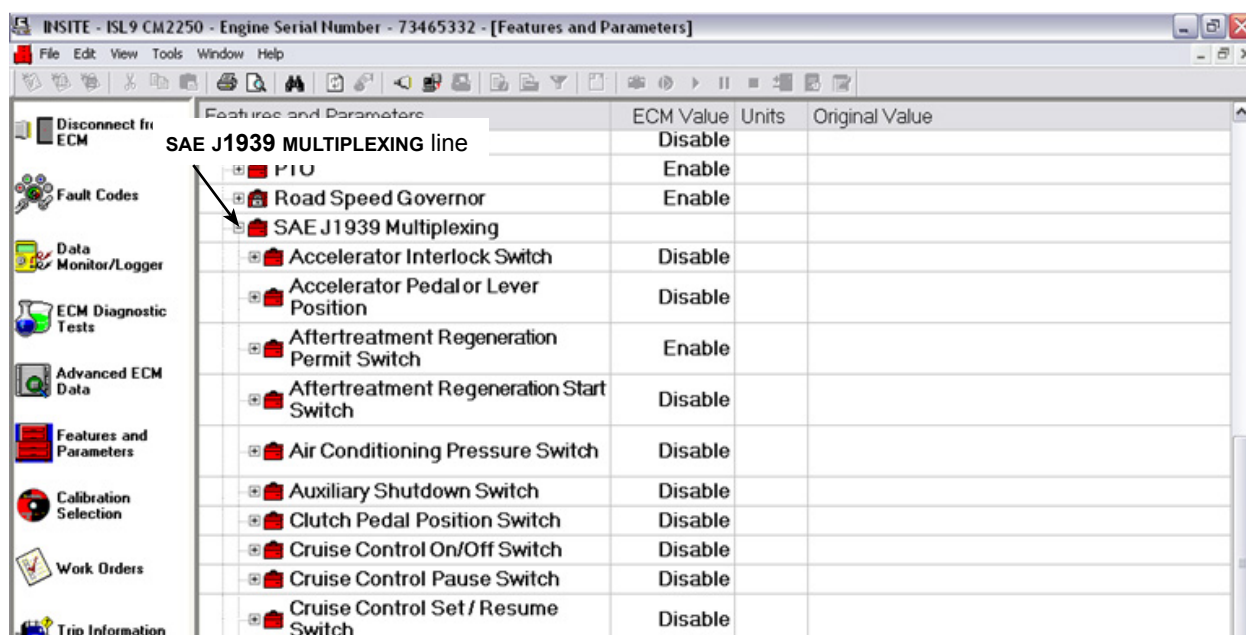


Figure 6 - SAE J1939 Open Menu

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

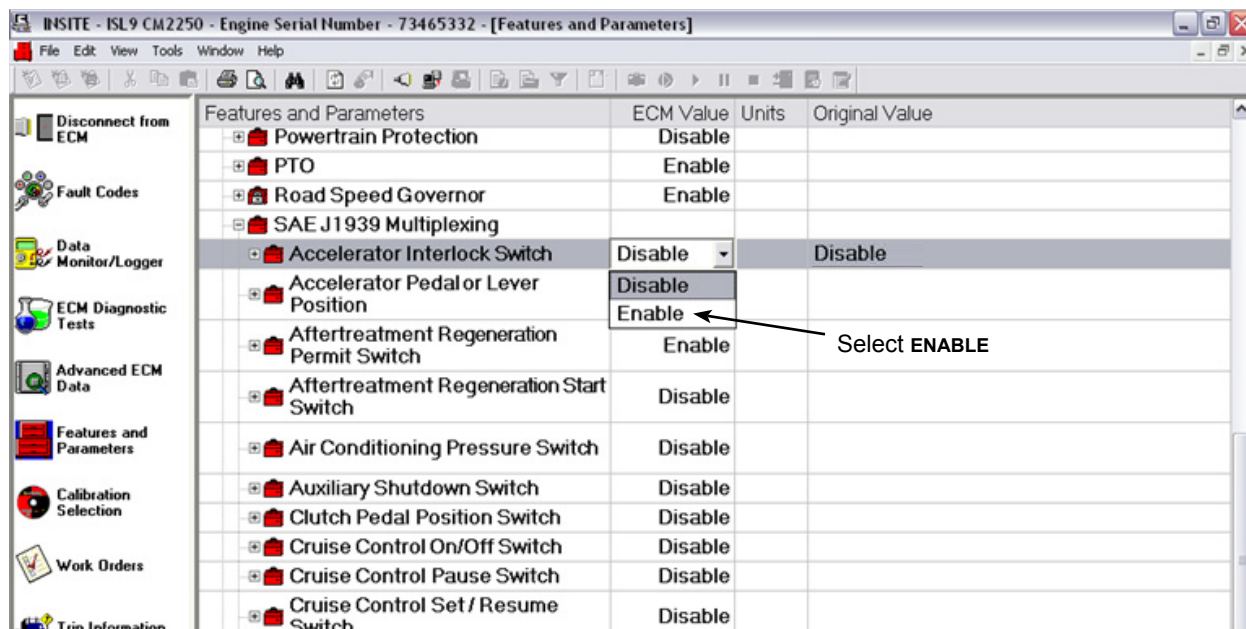


Figure 7 -

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

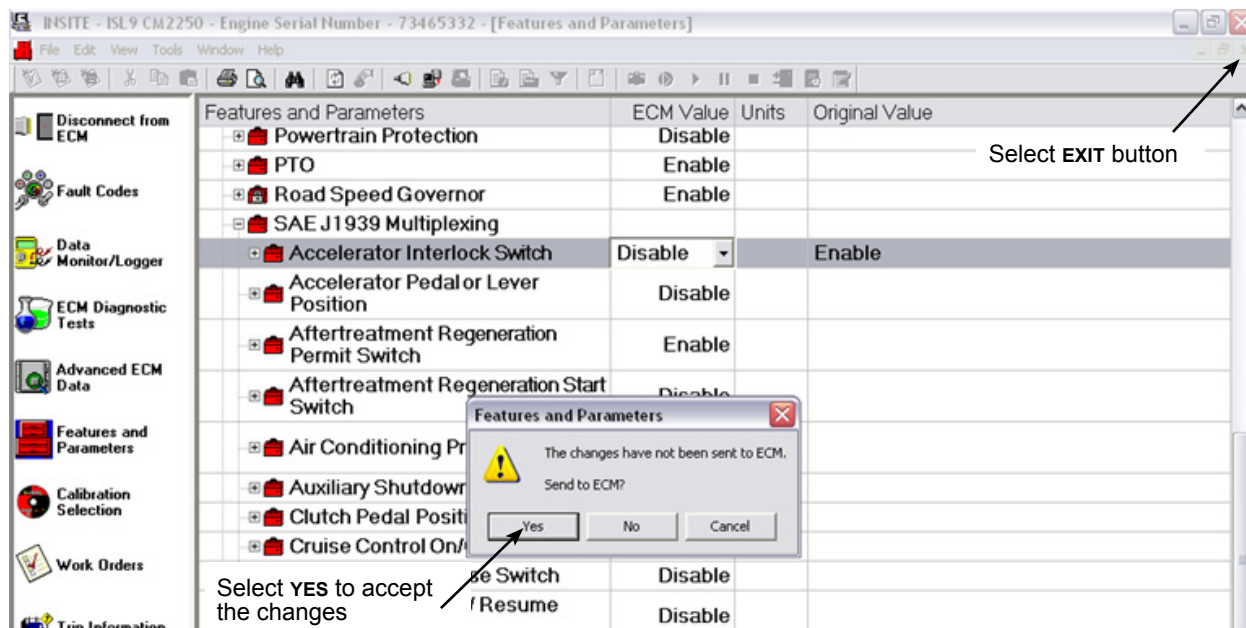


Figure 8 -

- 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. ❖