



**NUMBER:** 18-077-17

**GROUP:** 18 - Vehicle Performance

**DATE:** August 31, 2017

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**SUBJECT:**

Connecting to the DRB III Emulator for Cummins Engines

**MODELS:**

1998 - 2002	(BR)	RAM Pickup
1998 - 2002	(BE)	RAM Pickup/Quad Cab
2003 - 2005	(DR)	RAM 1500/2500 Pickup

**NOTE:** This bulletin applies to vehicles equipped with the 5.9L I6 Cummins 24V Diesel Engine (Sale Codes ETC) or 5.9L I6 HO Cummins Turbo Diesel Engine (Sale Codes ETH).

**DISCUSSION:**

Proper diagnosis and connection of the DRBIII emulator to wiTECH.

**CAUTION!** Extreme care must be taken when programming the flash file of a generic ECM. Do not randomly select a flash file. If in doubt, contact the STAR Center for assistance. Installing an incorrect flash file into an ECM can cause severe engine damage. Once a flash file is selected and programmed, the controller cannot be reprogrammed with a different flash file.

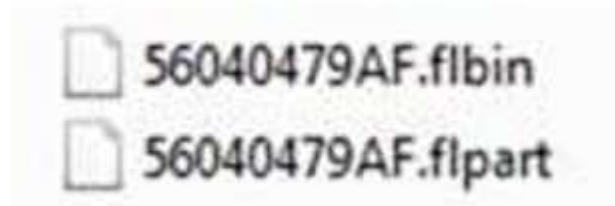
**NOTE:** For vehicles that are equipped with the SKIM, the DRB III tool is still needed to program the SKIM. Failure to install the SKIM pin number into the module after flashing the Cummins ECM will cause a start and stall condition.

**NOTE:** Connecting the DRB III Emulator to the ECM before flashing will result in the following message “Unable to ID Module For ECM” (Fig. 1) . This is normal because the ECM has not been programmed yet. It does not indicate the replacement module is faulty.



Fig. 1  
Unable to ID Screen

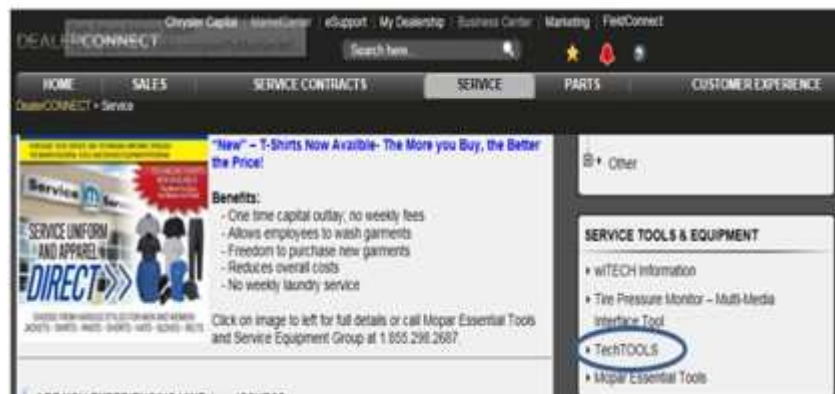
**NOTE:** Before beginning the programming procedure, all previous flash files must be removed from your computer, any previous flash files will be located at "c:\Users\{username}\AppData\Local\Temp\Low". The files that need to be removed will have a FCA part number followed by a (.flbin) and (.flpart) (Fig. 2) .



**Fig. 2**  
Files to be Deleted

Following are Step-By-Step screen shots of ECM programming using DRBIII Emulator:

1. Download TechTOOLS from DealerConnect (Fig. 3) .



**Fig. 3**  
TechTools Download

2. In TechTOOLS, enter the VIN or ECM part number(Fig. 4) .

**Fig. 4**  
VIN Screen

3. Select the DRBIII Emulator check box and then select "Show Updates" to display all available flashes (Fig. 5) .

VIN :  
Mileage :  
Controller Part Number(s) :

Flash Templates **Available Flashes** Recordings

Controller Identification Method

Vehicle Criteria

VIN :  
Year :  
Model :  
Engine :

Parts Criteria

Part Number R5135591AC

Available Flashes for 05135591AC

Show Updates ☒ DRB III Emulator

New Part #	Calibration	Sales Code	Type	Size (in KB)
25325331AI	REFERENCE NO. 53040319AM		ECM	705
25325333AI	REFERENCE NO. 53040530AD		ECM	705
25325351AI	REFERENCE NO. 53040317AL		ECM	705
25325353AI	REF. # 53040529AD - SEE NOTES		ECM	705

Selection(s): 1 of 4

Related Service Bulletin

**Service Bulletin**

18-006-12  
18-022-07  
18-030-10  
18-033-04  
18-037-04  
21-006-07

Flash information for

**New Part # 253253**

05135591AC  
05140622AA  
05191829AA  
25325331AB  
25325331AC  
25325331AD  
25325331AE  
25325331AF  
25325331AG  
25325331AH

**Vehicle Descriptive**

2005 DR - 5.9L 24V

Fig. 5  
Part Number Screen

4. Select the appropriate ECM calibration, based off the engine reference number located on the valve cover. (Fig. 6) .

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 <b>MANUFACTURED BY</b> <b>CUMMINS INC.</b> <b>FOR</b> <b>CUMMINS/CHRYSLER</b> <b>Assembled in the USA &amp; Canada</b>	Engine No. Motor No. <b>56100101</b>	ECU No. <b>530400101</b>	MODEL MODEL <b>ISB 305</b>	Fuel Rate at idle HP Débit carburant à plein régime	<b>114</b>	max stroke	CPL 8029				
	Idle Speed (rpm) Vitesse Régime	<b>750</b>	Adaptation HP Press. Indicateur (psi)	<b>305</b>	at à	<b>2900</b> rpm	Family Famille	<b>403E</b>	FEL	EPA	CARB
	Form Order Order d'Atoutage	<b>153624</b>	Timing - T.D.C. Calage - P.M.H.	<b>ELECTRONIC</b>	Catalyst No. Catalyseur No.		<b>NOx</b>				<b>0.0</b>
	Valve lash (mm) Ajust. Soup. à froid	<b>0.020</b>	In. Ajust.	<b>0.010</b>	Exh. Exh.	Date of Mfg. Date of Fab.	<b>07-29-02</b>	C.I.D. Phase L. Cylindr.	<b>200</b> <b>5.9</b>	<b>PM</b>	<b>0-90</b>
<b>WARNING:</b> Injury may result and warranty is voided if fuel rate, rpm or altitudes exceed published maximum values for this model and application.  <b>AVERTISSEMENT:</b> Danger de blessures et d'annulation de la garantie, si le régime de combustion, le régime ou l'altitude, dépassent les valeurs maximum annoncées pour ce modèle et son utilisation.		This engine conforms to California Regulations applicable to 1997 model year medium duty vehicles. This engine is certified to operate on diesel fuel. SAE J1939 Certified.									

Fig. 6

Part Number from Label

1 - Controller Part Number on Label

**NOTE:** Based on the reference number, the software selected will be the latest available.

5. Press “Download” tab to download the chosen file to the computer (Fig. 7) .

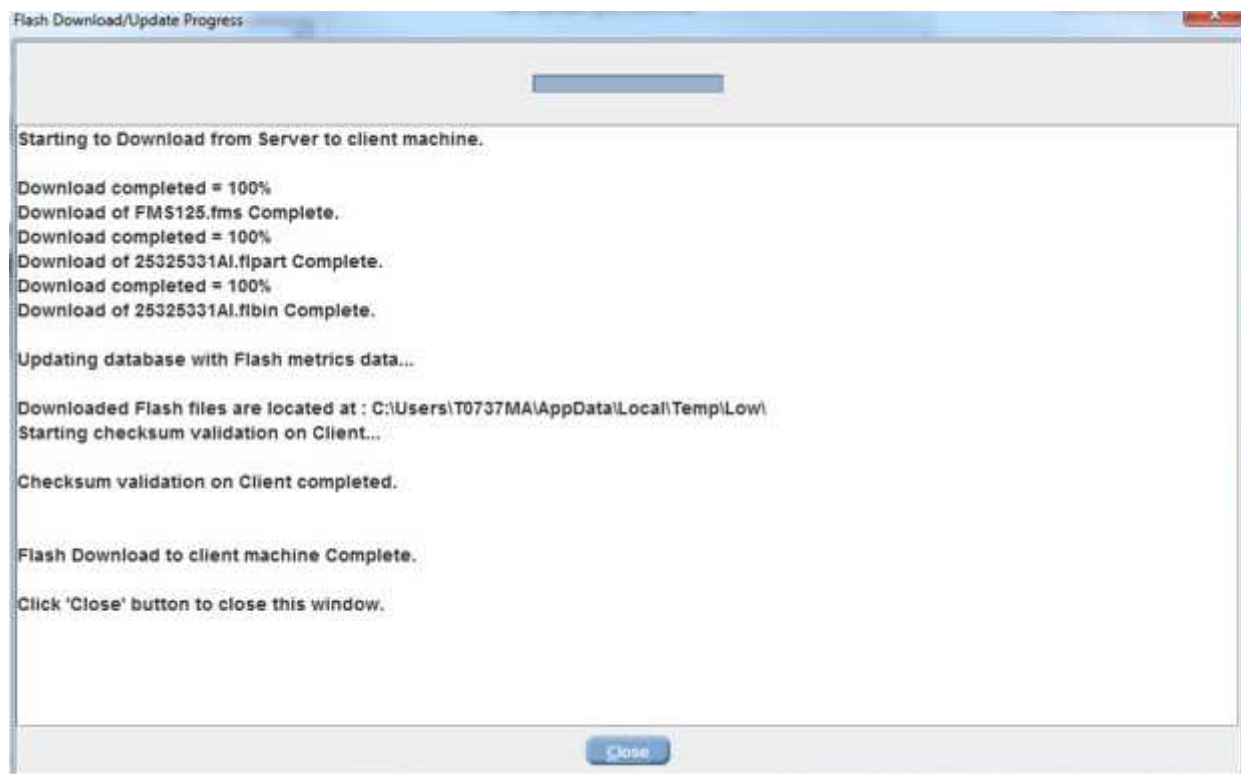
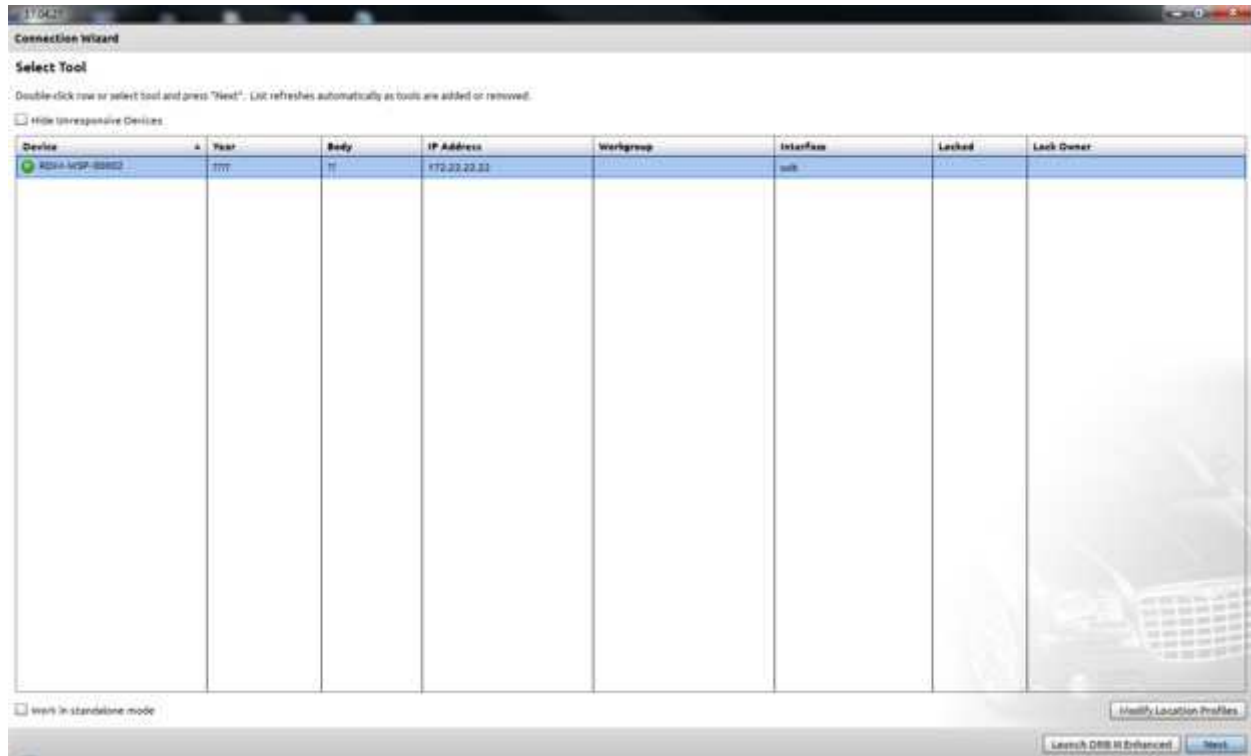


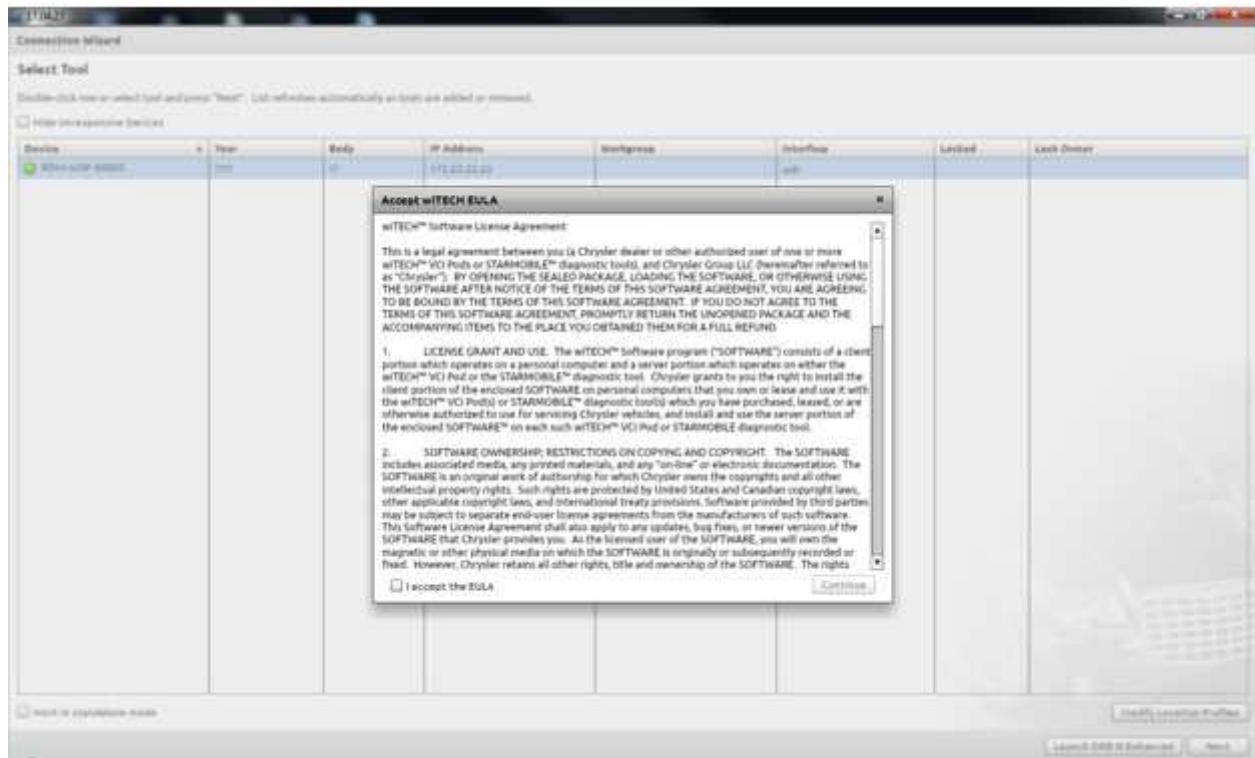
Fig. 7  
Download File Screen

6. When download is complete, log off DealerConnect then connect to wiTECH (Fig. 8) .



**Fig. 8**  
**Download Screen**

## 7. Launch DRB III Enhanced (Fig. 9) .



**Fig. 9**  
**Launch Screen**



8. You will see the DRB III Emulator screen. Press “Yes” (Fig. 10) .

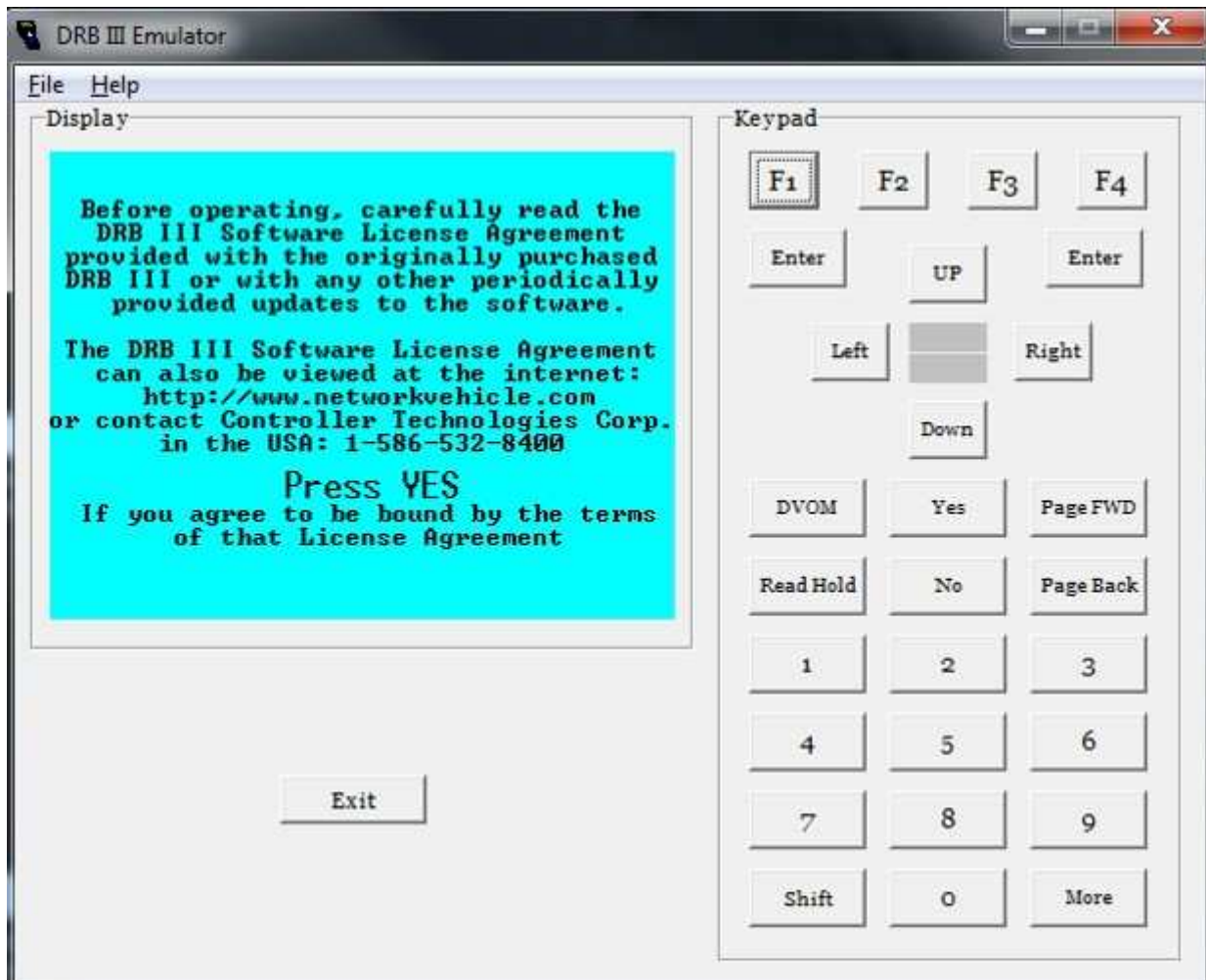


Fig. 10  
Emulator Screen

9. Select "Vehicle Flash" (Fig. 11) .

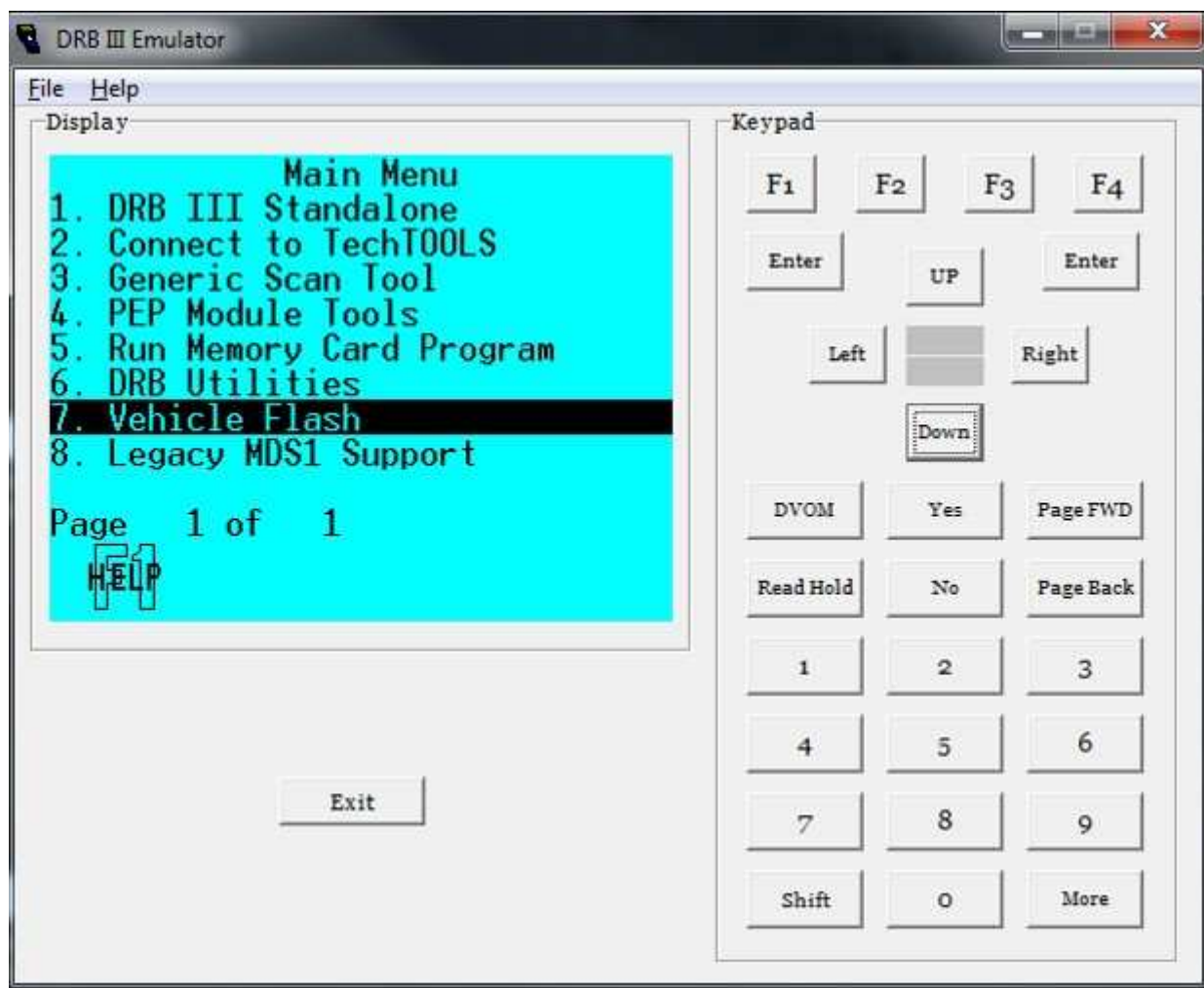


Fig. 11  
Vehicle Flash

10. Select "Flash Powertrain" (Fig. 12) .

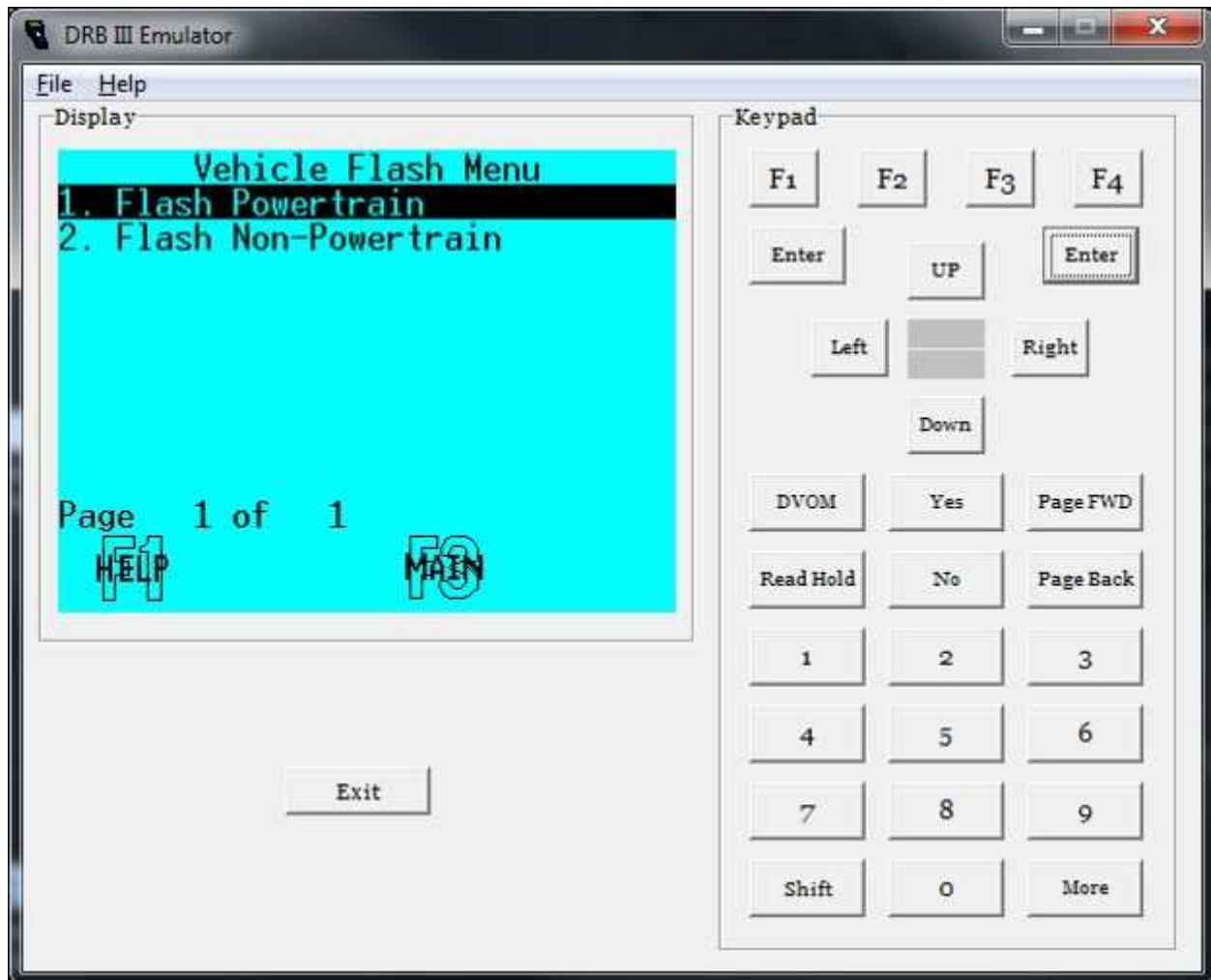
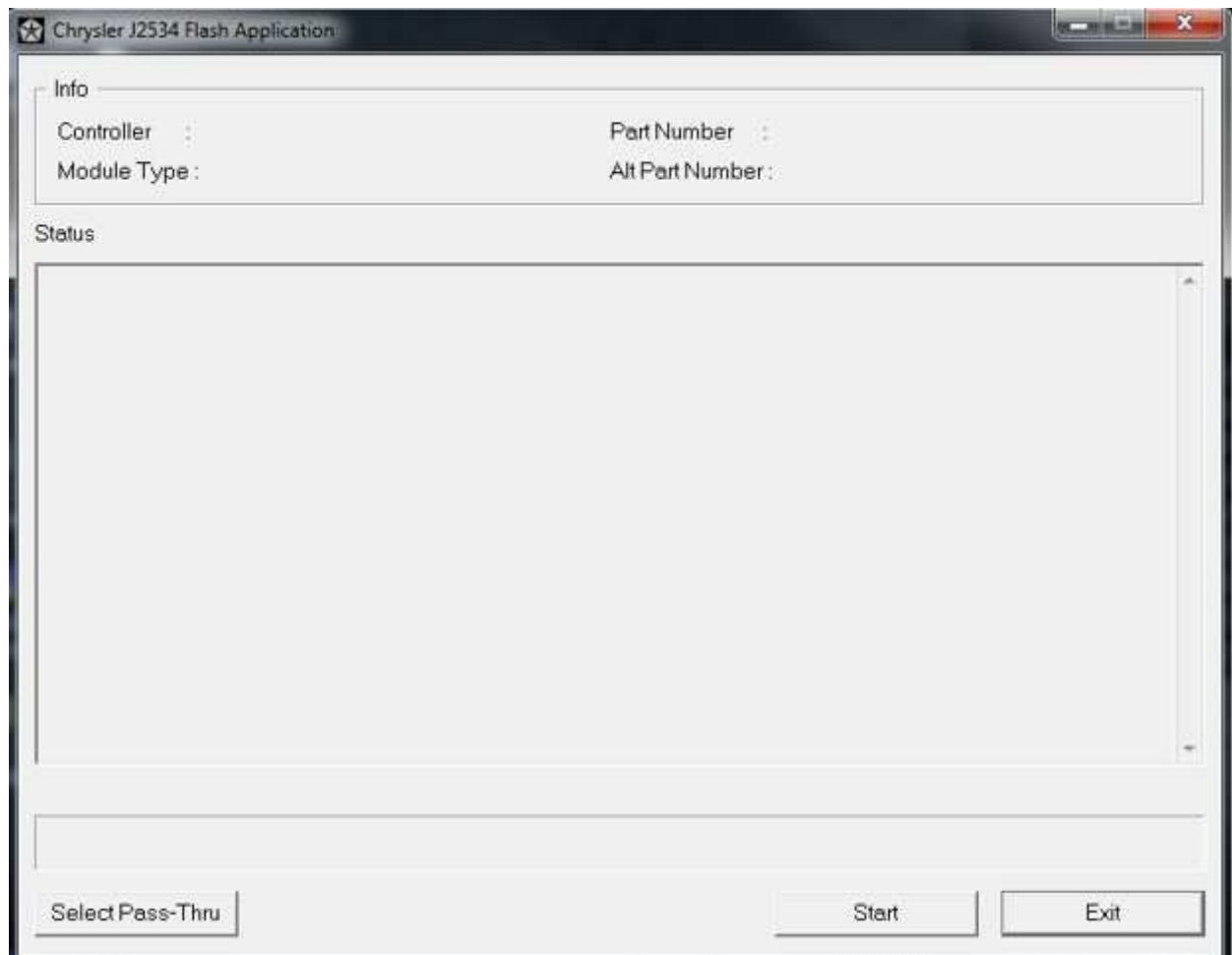


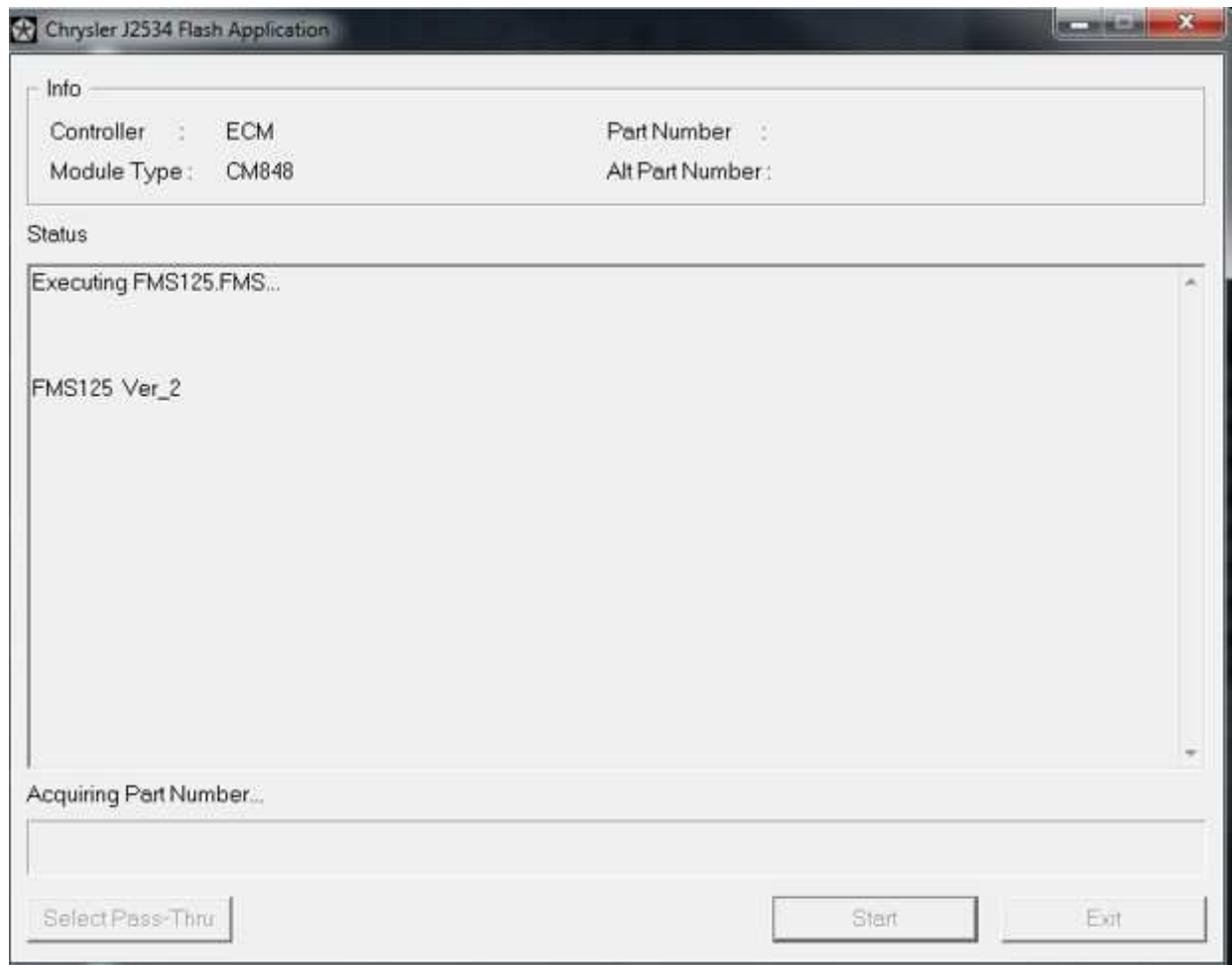
Fig. 12  
Flash Powertrain

11. You will see the following screen but, with no data displayed. This does not mean ECM does not communicate (Fig. 13) .



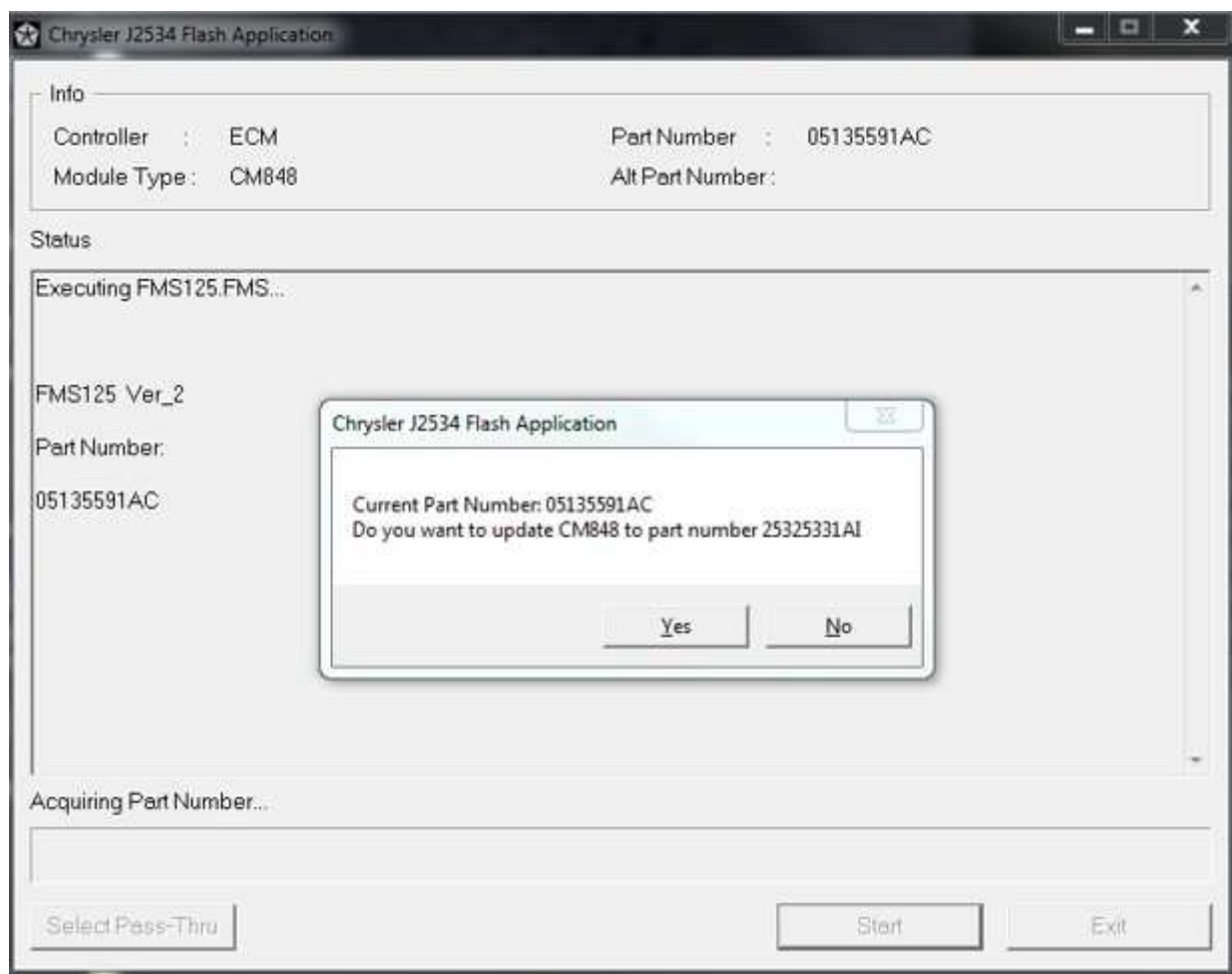
**Fig. 13**  
**Start Screen**

12. Select "Start" (Fig. 14) .



**Fig. 14**  
**Executing Screen**

13. The screen will populate with Module and Part Number information and an option to download (Fig. 15) .



**Fig. 15**  
**Downloaded Screen**

**CAUTION! Failure to install the SKIM pin number into the module after flashing the Cummins ECM will cause a start and stall condition.**

14. Is the vehicle equipped with SKIM?
  - YES>>> Proceed to [Step 15](#).
  - NO>>> Proceed to [Step 16](#).
15. On vehicles equipped with SKIM, transfer the VIN and Security Key information from the SKIM to the ECM. Using the DRBIII® select:
  - a. "DRBIII Standalone"
  - b. "1998 - 2005 Diagnostics"
  - c. "All"
  - d. "Theft Alarm"
  - e. "SKIM"
  - f. "Miscellaneous"
  - g. "Cummins ECM Replaced"
  - h. Clear all DTCs that may have been set prior to the repair. The wiTECH application will automatically present all DTCs and allow them to be cleared. Process is complete.
16. On vehicles not equipped with SKIM, manually enter the VIN in the ECM. Using the DRBIII® emulator select:
  - a. "DRBIII Standalone"
  - b. "1998 - 2005 Diagnostics"
  - c. "Engine"
  - d. "Cummins Controller (ECM/ENGINE)"
  - e. "Miscellaneous"
  - f. "CM84X Check VIN"
  - g. Follow the directions on the DRBIII® screen. When the process is complete, proceed to next step.
  - h. Clear all DTCs that may have been set prior to the repair. The wiTECH application will automatically present all DTCs and allow them to be cleared. Process is complete.

**POLICY:**

Information Only