ATTENTION!

68RFE Relearn Process

If your 2010+ Ram is equipped with the 68RFE automatic transmission, you must perform a re-learn procedure each time the ECM is flashed, even if you aren't loading transmission tuning. Failure to do so will cause premature transmission failure. To perform the procedure after the ECM is flashed, drive the truck and apply no more than 30% throttle for at least 25-30 miles. It is important that the transmission shifts up and down as much as possible during this period. NOTE: The 25-30 miles is to re-establish the CVI values. It is common for these transmissions to take 400-500 miles or more to settle down. Sustained highway speeds should be avoided for the first 25-30 miles. If you purchased a tuned TCM for your 2007.5-2009 68RFE equipped Ram, you must perform the same relearn process upon installation of the TCM.

Technical Support

For technical support please contact us at:

Email:

SUPPORT@CTTTUNING.CA

Telephone:

1-800-855-5015 M-F 9AM-5PM CST

*NOTE: We offer recovery files for free on our website. At the top of the page, click Support and then click EFI Live Recovery Files.

Customer Service

For general questions and information, please contact us at:

Email:

SUPPORT@CTTTUNING.CA

Telephone:

1-800-855-5015 M-F 9AM-5PM CST

CTTTuning.ca

Error Codes

These are just a few common EFI Live error codes and their common fixes.

$0194	The Autocal is out of storage. Free up storage by deleting unnecessary files such as old datalogs using EFI Live Exploer.
$0281	Make sure ignition is in the RUN positon, check Autocal cables, and re-try.
$0340	For '07.5-'12 Cummins, flash the Patch File then the tune file. For '13+, make sure V8 software is on most recent release. Afterwards, update the firmware and boot block.
$0502	Re-load the BBX file onto the Autocal.
$0531	Compare the ECM serial number to what you entered when you placed your order.
$053E	Compare the VIN to what you entered when you placed your order. If the VIN is correct and the truck is an '07.5-'12 Cummins, flash the patch file followed by the tune file.
$0549	Turn the ignition to the RUN position and re-try.

Table of Contents

Section 1 – Loading Autocal

Loading A Tune File Onto The Autocal

Your Autocal comes preloaded with your tune file. Skip this step if this is a new Autocal.

If we send you a new tune file, you can load the file using the steps below.

1. You must use a Windows based computer. EFI Live's software is not compatible with Mac computers.
2. Download the tune file to out of the email we sent you. It will go to your Downloads folder. Move it to the Deskotp.
3. You will then need to download and install the EFI Live V8 software from http://www.efilive.com/latest/cat/download-efilive.
4. On their website, click the blue button that says Download. Then click the blue button that says Download V8.
5. When it is finished downloading, proceed to installation.
6. Open EFI Live Scan and Tune.

7. Plug in your Autocal to your computer using the supplied USB cable.
8. Your computer will begin to automatically install the drivers for the Autocal. This may take a minute.

9. In Scan and Tune, you should see two icons in the bottom right corner. Click the one that resembles an Autocal to apply a green check mark to it, so that the software recognizes the Autocal is connected. Refer to the picture below.
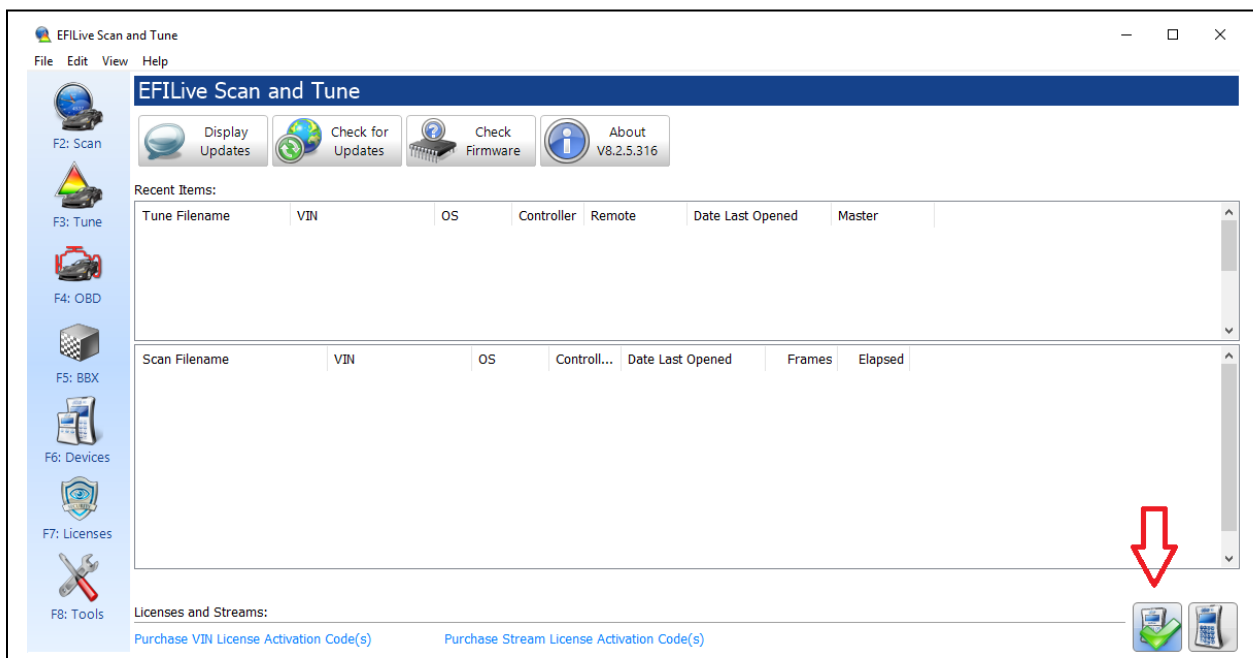
12. Make sure your V8 software and Autocal boot block, firmware, and config files are up to date. Otherwise, it will fail to flash. To update your V8 software, click Check for Updates. The software will walk you through the update process.

13. To check your Autocal firmware, click Check Firmware.

Check Firmware

14. If the boot block and/or firmware is out of date, click Update.

Current Firmware:

Firmware: 2.07.109   Date: Dec 29, 2016
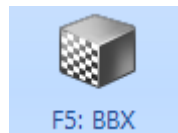
Please update to version: 2.07.113   Update Firmware

15. If the Config Files are out of date, click Update Files.

Please update config files   Update Files
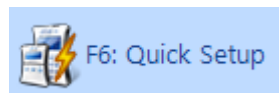
16. Once EVERYTHING is up to date, we can proceed to loading the tune file onto the Autocal.

17. Click on F5: BBX.   F5: BBX

18. Click on Quick Setup.   F6: Quick Setup

19. Click on Open Quick Setup.   Open Quick Setup
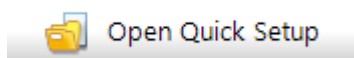
Desktop

Downloads

Documents

20. On the left side of the screen, click Desktop.

21. Select the tune file. Tune file names will vary depending on vehicle and tune type. Examples are: CMEGCSP, CMCRTowT2, DSPLMM2532, etc.

22. Click Open.

File name: TuneFile | BBX Quick Setup Files (*.bbx)

Open | Cancel
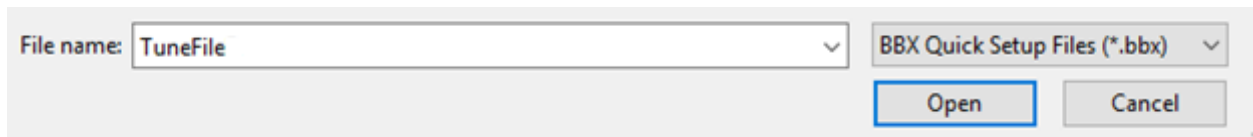
23. Click Program Quick Setup. 🔴 Program Quick Setup

24. Click Yes.

ℹ️ Re-configure FlashScan/AutoCal with the currently selected Quick Setup options?

Existing files on FlashScan/AutoCal may be overwritten during this process.

Continue?

Yes | No
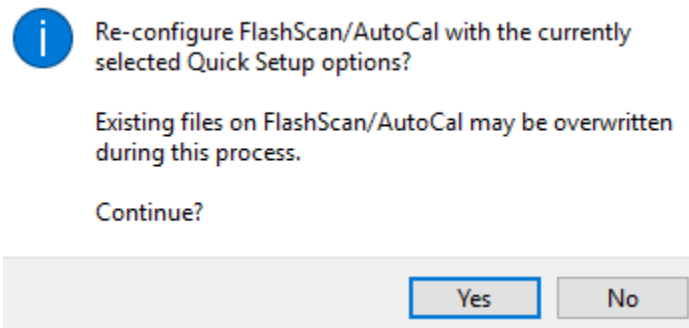
25. The file is now loading onto the Autocal. This process will take a couple minutes. Once it is complete, click OK.

Information ✕

ℹ️ Quick setup details have been programmed.

OK
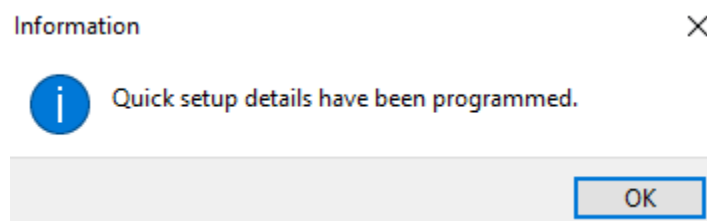
26. The Autocal has now been flashed. You can unplug it from your computer and proceed to flash the truck.

Updates And Revisions

If you requested an update or a revision, we will send you the tune file via email. Download it out of the email, save it to your desktop, and follow steps 1-26 above.

Section 2 – '06-'07 5.9L Cummins

Installing The Tune File

1. Plug ONLY the Autocal into the OBD-II port under the dash. If you have a CSP switch, do NOT plug it in.
2. Turn the key to the RUN position.
3. On the Autocal, scroll down to Tuning Tool, and press OK.
4. Scroll down to Program Full, and press OK.
5. Select the tune file, it should start with CMB. Press OK.
6. If this is the first time flashing the truck with this Autocal, it will say "License ECU Now?". Press OK. It will then say "Are you sure?". Press OK.
7. The Autocal will say "Checking", followed by "Erasing". It will then begin to program the truck. This process will take a few minutes.

8. When complete, it will say "Ignition Off Now". Turn the key off, and click OK. It will begin a countdown. Once the countdown is complete, you may unplug the Autocal and start the truck.
9. If you have a CSP switch, you may plug it in to the OBD-II port. Refer to <u>Section 7</u> for installation.

Changing Power Levels Without A CSP Switch

You can change power levels without a CSP switch using the Autocal.

1. With the key in the RUN position, or with the engine running, plug in the Autocal.
2. Scroll down to Tuning Tool, and press OK.
3. Scroll down to Switch Tunes, and press OK.
4. Scroll and select your desired power level, and Press OK.
5. Your power level has now been changed.

Section 3 – '07.5-'09 6.7L Cummins

Patch File

If your truck has never been tuned before, you will need to install the Patch File BEFORE the Tune File. If your truck has been tuned before, proceed to <u>Installing The Tune File.</u>

1. Plug ONLY the Autocal into the OBD-II port under the dash. If you have a CSP switch, do NOT plug it in.
2. Turn the key to the RUN position.
3. On the Autocal, scroll down to Tuning Tool, and press OK.
4. Scroll down to Program Full, and press OK.
5. Select the Patch File and press OK.
6. If this is the first time flashing the truck with this Autocal, it will say "License ECU Now?". Press OK. It will then say "Are you sure?". Press OK.
7. The Autocal will say "Checking", followed by "Erasing". It will then begin to program the truck. This process will take a few minutes.
8. When complete, it will say "Ignition Off Now". Turn the key off, and click OK. It will begin a countdown. Once the countdown is complete, follow the <u>Installing The Tune File</u> steps below.

Installing The Tune File

1. Plug ONLY the Autocal into the OBD-II port under the dash. If you have a CSP switch, do NOT plug it in.
2. Turn the key to the RUN position.
3. On the Autocal, scroll down to Tuning Tool, and press OK.
4. Scroll down to Program Full, and press OK.
5. Select the tune file, it should start with CMC. Press OK.
6. The Autocal will say "Checking", followed by "Erasing". It will then begin to program the truck. This process will take a few minutes.
7. When complete, it will say "Ignition Off Now". Turn the key off, and click OK. It will begin a countdown. Once the countdown is complete, you may start the truck.
8. If you have a CSP switch, you may plug it in to the OBD-II port. Refer to Section 7 for installation.
9. If you purchased a tuned TCM, you **MUST** perform the 68RFE Relearn Process provided on Page 1.

Changing Power Levels Without A CSP Switch

You can change power levels without a CSP switch using the Autocal.

1. With the key in the RUN position, or with the engine running, plug in the Autocal.
2. Scroll down to Tuning Tool, and press OK.
3. Scroll down to Switch Tunes, and press OK.

4. Scroll and select your desired power level, and Press OK.

5. Your power level has now been changed.

Section 4 — '10-'12 6.7L Cummins

Patch File

If your truck has never been tuned before, you will need to install the Patch File BEFORE the Tune File. If your truck has been tuned before, proceed to Installing The Tune File.

1. Plug ONLY the Autocal into the OBD-II port under the dash. If you have a CSP switch, do NOT plug it in.
2. Turn the key to the RUN position.
3. On the Autocal, scroll down to Tuning Tool, and press OK.
4. Scroll down to Program Full, and press OK.
5. Select the Patch File and press OK.
6. If this is the first time flashing the truck with this Autocal, it will say "License ECU Now?". Press OK. It will then say "Are you sure?". Press OK.
7. The Autocal will say "Checking", followed by "Erasing". It will then begin to program the truck. This process will take a few minutes.

8. When complete, it will say "Ignition Off Now". Turn the key off, and click OK. It will begin a countdown. Once the countdown is complete, follow the <u>Installing The Tune File</u> steps below.

Installing The Tune File

1. Plug ONLY the Autocal into the OBD-II port under the dash. If you have a CSP switch, do NOT plug it in.
2. Turn the key to the RUN position.
3. On the Autocal, scroll down to Tuning Tool, and press OK.
4. Scroll down to Program Full, and press OK.
5. Select the tune file, it should start with CMD. Press OK.
6. The Autocal will say "Checking", followed by "Erasing". It will then begin to program the truck. This process will take a few minutes.
7. When complete, it will say "Ignition Off Now". Turn the key off, and click OK. It will begin a countdown. Once the countdown is complete, you may start the truck.
8. If you have a CSP switch, you may plug it in to the OBD-II port. Refer to <u>Section 7</u> for installation.
9. If you purchased transmission tuning, you **MUST** perform the 68RFE Relearn Process provided on Page 1.

Changing Power Levels Without A CSP Switch

You can change power levels without a CSP switch using the Autocal.

1. With the key in the RUN position, or with the engine running, plug in the Autocal.
2. Scroll down to Tuning Tool, and press OK.
3. Scroll down to Switch Tunes, and press OK.
4. Scroll and select your desired power level, and Press OK.
5. Your power level has now been changed.

Section 5 – '13-'19 6.7L Cummins

Bypass Cable

The 2018-2019 models must use the Bypass Cable before the ECM can accept the tune file. If you did not purchase one, you will not be able to flash the ECM. The installation of the bypass cable is described at the end of this manual.

Installing The Tune File

1. Plug ONLY the Autocal into the OBD-II port under the dash. If you have a CSP switch, do NOT plug it in.
2. Turn the key to the RUN position.
3. On the Autocal, scroll down to Tuning Tool, and press OK.

4. Scroll down to Program Full, and press OK.

5. Select the tune file, it should start with CME. Press OK. If this is the first time flashing the truck with this Autocal, it will say "License ECU Now?". Press OK. It will then say "Are you sure?". Press OK.

6. The Autocal will say "Checking", followed by "Erasing". It will then begin to program the truck. This process will take a few minutes.

7. When complete, it will say "Ignition Off Now". Turn the key off, and click OK. It will begin a countdown. Once the countdown is complete, you may start the truck.

8. If you have a CSP switch, you may plug it in to the OBD-II port. Refer to <u>Section 7</u> for installation.

9. If you purchased transmission tuning, you **MUST** perform the 68RFE Relearn Process provided on Page 1.

Changing Power Levels Without A CSP Switch

You can change power levels without a CSP switch using the Autocal.

1. With the key in the RUN position, or with the engine running, plug in the Autocal.

2. Scroll down to Tuning Tool, and press OK.

3. Scroll down to Switch Tunes, and press OK.

4. Scroll and select your desired power level, and Press OK.

5. Your power level has now been changed.

Note: The '13-'19 Cummins is only capable of 4 power levels with EFI Live.

Section 6 – '01-'16 Duramax

Installing The Tune File

1. Plug the Autocal into the OBD-II port under the dash.
2. Turn the key to the RUN position.
3. On the Autocal, scroll down to Tuning Tool, and press OK.
4. Scroll down to Program Full, and press OK.
5. Select the tune file. Depending on year model, tune name will vary.
6. If this is the first time flashing the truck with this Autocal, it will say "License ECU Now?". Press OK. It will then say "Are you sure?". Press OK.
7. The Autocal will say "Checking", followed by "Erasing". It will then begin to program the truck. This process will take a few minutes.
8. When complete, it will say "Ignition Off Now". Turn the key off, and click OK. It will begin a countdown. Once the countdown is complete, you may unplug the Autocal and start the truck.

Changing Power Levels

Unlike the Cummins, the Duramax can only change power levels with a DSP switch, and not with the Autocal or V2. If you purchased a DSP tune file, you must use a DSP switch to change power levels.

Section 7 – CSP/DSP Switches

CSP and DSP switches are used to change power levels on the fly. Position #1 (all the way counter-clockwise) is the lowest power level. The further clockwise you go, the more power the truck will have.

Installation

To install your CSP (Cummins) switch, mount the switch in your desired location and plug into the OBD-II port.

The chart below is a quick reference to which pins the DSP (Duramax) switch needs to be wired in to. For LB7-LMM, either color wire can go into either pin hole. Wire color/pin location does not matter. For more details, refer to the instructions provided with your switch.

Engine Designation	ECM Connector	Pin Location
LB7	Blue Connector	49,69
LLY	Grey Connector	32,50
LBZ/LMM	Connector 1 (Larger)	46,54
LML	Grey Connector	11,35

Verifying Switch Function

To verify that your switch is functioning properly, **after** you have performed your transmission relearn (if applicable), go wide open throttle in switch position #1. While still wide open throttle, turn the switch to #5 (#4 if '13-'18 Cummins), and you should feel a power difference. This test should be performed on a closed course with no traffic. Always obey all traffic laws.

Section 8 – Datalogging

If you feel you have a tune related issue, sometimes a datalog may be required so that we can evaluate what the truck is doing to resolve a potential issue.

Recording A Datalog

1. With the key in the RUN position, or engine running, connect your Autocal to the truck via the OBD-II port.
2. Scroll down to Scan Tool and press OK.
3. Scroll down to Select PIDs and press OK.
4. Select your engine designation. Refer to the chart below to determine your engine designation.

|	
'06-'07 5.9L Cummins	CMB
'07.5-'09 6.7L Cummins	CMC
'10-'12 6.7L Cummins	CMD
'13-'18 6.7L Cummins	CME
'01-'04 6.6L Duramax	LB7
'04.5-'06 6.6L Duramax	LLY
'06.5-'07 6.6L Duramax	LBZ
'07.5-'10 6.6L Duramax	LMM
'11-'16 6.6L Duramax	LML

5. Once you have selected your engine designation, scroll down to Record Data and press OK. This will begin the datalog. Drive the truck and allow the datalog to capture the issue you're experiencing. Datalogs need to be kept short – generally no more than 15-20 seconds.
6. One you have reproduced the issue and are finished datalogging, press the up arrow on the Autocal until it returns to the main menu.

Sending A Datalog

1. Connect your Autocal to your computer and open EFI Live Explorer.

EFILive V8
Explorer

2. Make sure you have a green check mark on the Autocal icon in the bottom right corner of the page. If a green checkmark does not appear and the Autocal is plugged in, click on the icon and the green checkmark should appear.
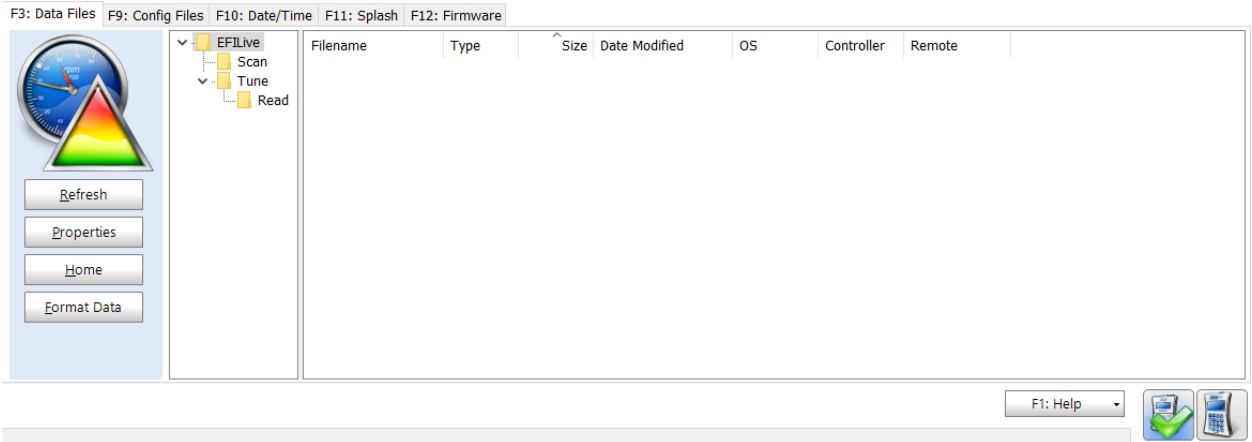
3. Click on the Scan folder. You should then see the datalog file(s) appear.
4. Drag and drop the selected file(s) to the desktop.
5. Attach the datalog(s) in an email along with a description of what the truck is doing. Please include any pertinent information about the truck. Send the email to SUPPORT@CTTTUNING.CA and please allow us at least 72 hours to review it and give further instruction.

Section 9 – Diagnostics

The Autocal is capable of reading and clearing diagnostic codes or DTCs.

Reading And Clearing Codes

1. Plug in the Autocal to the OBD-II port under the dash.
2. Without cranking the engine, turn the key to the RUN position.
3. Scroll down to Trouble Codes, press OK.
4. Scroll down to Display ALL DTCs, press OK.
5. If codes are present, scroll down to see the codes. Write them down and let us know what they are.
6. Scroll to the top until you see Exit then press OK.
7. Scroll down to Clear Codes and press OK to clear them.

2018+ Ram EFI Bypass Cable
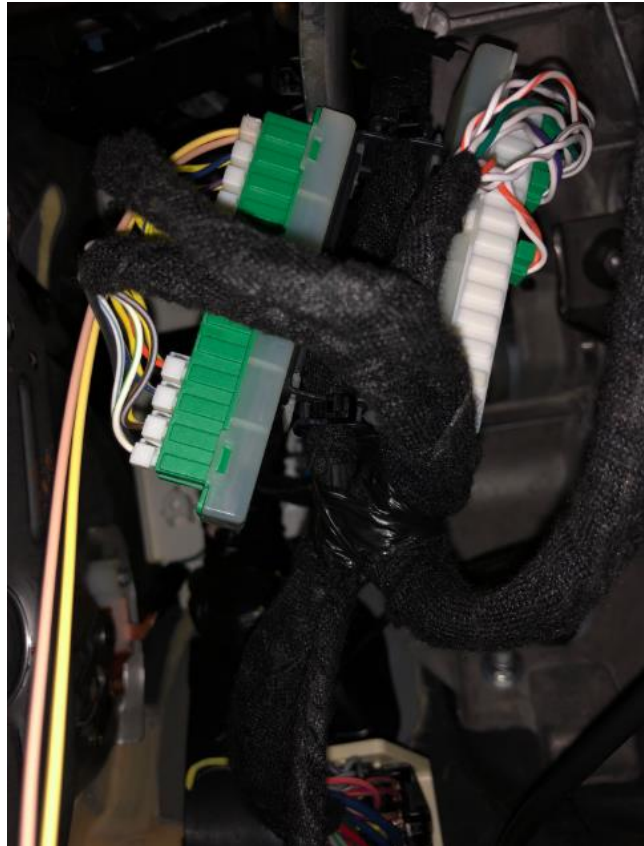
PRIOR to installing EFI Live, you MUST install the 2018 Ram EFI Bypass Cable. The white connector on the bypass cable plugs into a blank port on the STAR module located under the dash, near the parking brake (reference the picture above). The two pins on the other end of the bypass cable install into pins #6 and #14 on your OBD-II connector. You will have to CAREFULLY disassemble the OBD-II connector to remove the existing wires in the #6 and #14 slot, and insert the wires of the bypass cable into those locations. If the bypass cable, the OBD-II connector, or the associated wiring gets damaged, the installer is responsible. CTT Tuning, EFI Live, and the manufacturer of the bypass cable, ARE NOT RESPONSIBLE for any damage that may occur during the installation process. The bypass cable wires match the colors of the factory wiring. The tan wire in your bypass cable goes to the tan wire in the OBD-II connector (that you just removed), and the yellow wire in the bypass cable goes to the yellow wire in the OBD-II connector (that you just removed). Once installed, you may now proceed to flashing the ECM.