



## 68RFE Signature Series Installation Instructions

The Installation and drive learning process will take anywhere from 1-2 weeks. Towing, Hauling and or rough driving cannot be done during this time!

**\*\*\* Anytime the vehicle is fitted with new engine or transmission tuning the drive learn process must be redone.** You do not need to complete a relearn with a scan tool, just the drive learn cycles described below. When the engine and transmission tuning is reflashed it resets the CVI data back to factory baseline. This data must be relearned prior to ANY kind of power or hard acceleration is used.

\*\*\*Prior to removal of original transmission set your programmer or tuner to STOCK power level! All relearn procedures will be done at stock power levels, never turn up the power during relearn. Your tuned TCM or H&S Overdrive software or EFI Live with customer trans tuning must be installed prior to the relearn process beginning! Please see the included H&S Overdrive settings that must be entered into your software!

\*\*\* This transmission requires H&S OD software or flashed TCM, do not attempt to use this transmission without the required TCM / Software flash, proof of purchase is required for warranty \*\*\*\*

Purchase and Install new OEM line pressure sensor, proof of purchase required for warranty

Correct transmission fluid levels are CRITICAL and hard to obtain correctly. Fluid level must be checked when transmission is 125+ degrees. We recommend to recheck the fluid several times before and after the initial test drive! The most common amount of fluid required is 23 Quarts of ATF+4.

Prior to placing transmission into any gear, scan vehicle for any DTC trouble codes. If ANY codes are present, STOP, TURN OFF ENGINE and address the trouble codes. If you cannot resolve the code, please call Revmax before proceeding.

Connect to TCM with Chrysler Star Scan or Snap On scanner and perform transmission relearn process . Be sure that the scanner has successfully performed the relearn procedure. If TCM does not successfully relearn, stop immediately turn off engine and call Revmax prior to proceeding.

Using your scan tool please look at desired and actual line pressure in drive @ idle.

This number must be greater than 50PSI and be no more than 125PSI. If your number is lower than 50PSI or higher than 125PSI, please contact Revmax.

Record CVI values for all clutch packs and keep in a safe place. You will need to give these to us at the conclusion of the relearn process.

## **Initial Drive Learn Process**

You will now take the vehicle out for the initial test drive, do not exceed 30% throttle or 2000RPM. Allow transmission to shift all the way up to sixth gear AND back down to first at least 25 times. If full power is given, immediate transmission failure will occur and you will be responsible for repair charges.

Begin the initial drive learn cycle. You must keep throttle below 50% at all times during this cycle. Drive the vehicle for a MINIMUM of 3 days. The truck must be allowed to rest overnight and go from HOT to COLD engine and transmission temperatures. During this time period it is best to have a MINIMUM of 200 miles STOP AND GO driving. Highway driving does not count and will not drive learn the transmission.

After the initial 200 miles break in has been accomplished, use your scan tool and read desired line pressure and actual line pressure in Drive at idle. This number must be greater than 90PSI and less than 125PSI. If your number is lower than 90PSI or greater than 125PSI contact Revmax. Next, put the vehicle in D and hold one foot on the brake and quickly press the gas pedal at least 50%. Please make sure that your line pressure immediately jumps to 225PSI or higher., If any of your line pressure readings differ from the above please contact Revmax and DO NOT DRIVE THE VEHICLE!

Record CVI values again. Contact Revmax with both sets of CVI values. You must contact Revmax with these values before attempting any full throttle runs or warranty will be void!!!!

**Whenever power levels are increased please allow 30 miles of STOP AND GO city driving to occur before applying full power.**

Change both filters, pan gasket and transmission fluid every 25000 miles. Only use MOPAR filters!

Your new transmission may run significantly hotter in stop and go traffic than your stock transmission. This is due to the massive line pressure increase that your new unit has. This is totally normal and we normally see 190-210 degrees in the summer during stop and go driving.

Any transmission returned with burned overdrive clutches that occurred on the relearn will not be covered under warranty!

Extreme caution must be taken when installing the torque converter into the transmission. Failure to lube input shaft and GENTLY install the converter while supporting it from beneath will cause this seal to get cut. If this seal gets cut, you will have elevated transmission temperatures, surging at a stop and eventual transmission and converter failure. The price to replace this seal is \$350. **This seal is COMMONLY damaged by installers and is not covered under the warranty!**

## **Part B TCM Tune Installation \*\*2007.5-2009 ONLY\*\***

Please update your programmer to the latest released software and firmware and then follow the steps below.

On the programmer,

Press Menu

Press Install Download

Press Download H&S Tuning

**\*\*Select the engine tuning options to your liking\*\***

Adjust 5th Gear Shift Points

- Stock tires, default
- Up to 35" tires increase to highest setting
- 37" and larger tires must Re-Gear the truck or warranty will be void on transmission

Adjust 6th Gear Shift Points

- Stock tires, default
- Up to 35" tires increase to highest setting
- 37" and larger tires must Re-Gear the truck or warranty will be void on transmission

Line Pressure

- Level 4, 225PSI. This is the only approved setting unless authorized by Revmax

Shift Firmness

Do NOT adjust

## **Part C H&S TCM Tune Installation \*\*2010-2012 ONLY\*\***

Remove SD card from the programmer.

Place SD card into adapter and plug into your computer

From the email you received from Revmax, download and save a copy of the files to your desktop.

Find the downloaded files from Revmax on your desktop. Extract the file to the desktop

Click on the extracted file folder. Highlight all of the files, right click and select COPY.

Go to My Computer and find your SD card (it is normally named Mini Maxx, Black Maxx or XRT). Open the SD card and you should see a long list of files.

Left click on any one of the files you see listed. Right Click and select PASTE. You will be asked if you want to copy and keep a copy of the file or copy and replace the file. You must select COPY and REPLACE!

Now close the window you are in that shows your SD card. Remove the SD card and place it into the programmer in the truck.

On the programmer,

Press Menu

Press Install Download

Press Download H&S Tuning

**\*\*Select the engine tuning options to your liking\*\***

Line Pressure

- Level 4, 225PSI. This is the only approved setting unless authorized by Revmax

Shift Firmness

Do NOT adjust

## **Part D EFI LIVE Tune Installation \*\*2010-2015 ONLY\*\***

Your tuner will provide you with several tunes files. One of these files must be a STOCK power level file. In addition they will provide you with a custom transmission tune. This tune is automatically downloaded when you install EFI Live provided you purchased transmission tuning. Transmission tuning is mandatory and not running Revmax approved transmission tuning will immediately void your warranty. See below for a list of Authorized EFI Live transmission tuners.

1. Higher Power Performance
2. PPEI Kory Willis
3. Anarchy Diesel
4. Starlight Diesel
5. Draconian Diesel

## **Part E: Changing vehicle power levels or reflashing the vehicle with new tuning**

**All tuners who use a tuner to flash the engine with custom tuning will have this issue, it may also be an issue anytime the ECM is reflashed either with a factory flash or other aftermarket tuner.** The issue has been found using EFI Live so far, but we anticipate this to be the case with any flash or tuner . This issue may also occur with HS and other platforms as well including factory flashes, but we have not tested it and cannot be for sure, but we expect it to (more on that to come). The issue is more problematic on the 2010+ trucks as the TCM and ECM are combined and therefore when the engine is flashed the transmission side of things gets disrupted as well even though no change may have been done to the transmission. The 3rd gen trucks have separate controllers and therefore the issue only arises when the TCM is reflashed.

So, unfortunately we have found that on all 2010 and newer trucks there is a major issue that occurs when the controller is flashed. When the unit is flashed the transmission's CVI adaptive memory is erased and put back to stock. Basically, the truck thinks that it has a new transmission installed in it when it does not. An example is a truck with a performance transmission starts with a baseline OD CVI in the 45-55 range normally. After the drive learn portion this CVI number goes down to 5-25 in most cases. The controller can only adapt a point or two per shift, so if you don't give it time to adjust a failure will quickly occur. The more power and line pressure the lower the CVI number usually winds up. Hence when a high HP truck isn't given the chance to readapt the transmission can be destroyed in just one shift!

When the adaptives are reset, the transmission simply is out of sync with the controller. The transmission has X amount of wear in it while the controller is telling it has Y amount of wear. What happens is the shifting elements (clutches) are basically being applied with the incorrect amount of timing during the handoff when the off going clutch and on coming clutch are being released and applied. This can result in a flare or a bind during the shift. If this occurs at light throttle nothing bad will happen as the transmission TEACH the controller to slowly RELEARN the adaptives to where they need to be. This normally will take few dozen light throttle (less than 30%) upshift and downshift sequences and the adaptation process will be done.

If the truck is driven hard after the reflash and the transmission is not in sync with the controller, it will lead to transmission wear. In extreme cases, just one shift like this will completely destroy the transmission. The more power and throttle input the bigger the issue will be.

The next issue is CSP 5 or any other changing of power levels on the fly! When switching power levels you **MUST** allow the transmission to slowly adapt to the increased power levels. If the transmission is not given time to adapt to the new power levels you will damage the transmission in short order. Simply give the transmission 30 miles after a tune reflash to adapt in stop and go city driving before getting on it and you should be fine!