



#1 in Dodge Cummins Performance

Smarty tuning instruction for the *REVO_{lution} TNT-R* software

For the first time the Cummins engine performance tuning software can now be customized by the customer.

**Today we bring you a whole new tuning concept with a handheld tuner.
The *REVO_{lution}* starts here!**

How does it work?

If you prefer **Smarty's** default software configuration, simply skip the "Adjust Options" menu and choose the **CaTCHER** level you prefer. If you want to change the default setting of any (or all...) of the customizable items, you can enter the "Adjust Options" menu, navigate with the ">" and "<" keys to the item you want to customize and enter your choice. Done! **Smarty** will do the rest. Once the end of the item list is reached, **Smarty** will store your selections in its memory. In this way, your preferred selections will be applied every time you program your truck. As a simple example, if you set the Speed-limiter to "100", **Smarty** will always use that value for all ECM updates, until you change the value again or return the truck back to stock. When you enter the "ECM update" menu you will find the chapter: "Adjust Options". Once entered, this menu allows you to choose among following items and levels of customization.

Foreword:

The **REVO TNT-R** software has been written for trucks with extensive modifications. The horsepower levels start around 130 hp on **CaTCHER** # 1 and reach 260 additional hp on **CaTCHER** # 9. These hp gains are referred to a "close to stock" engine but depending on your modifications can be more. With correctly modified and tuned engines we have seen gains in the 400+ hp range above the stock software. On the higher settings a stock engine can NOT take full advantage of it because the fuel and air supply from the stock parts are simply not enough. Aftermarket, turbo, injectors, lift pump, injection pump, automatic transmission AT LEAST are required! Also a good insurance against valve float at high boost levels is a good set of stiffer valve springs. If you need valve springs or not depends upon several factors like max boost pressure reached, rev range and of course the mileage of the stock springs.

Speed-limiter:

From 25 to 250 mph in one mile increments

Torque Management:

- # 0 - Default**
- # 1 - Stock**
- # 2 - Mild**
- # 3 - Moderate**
- # 4 - Wild** (aftermarket clutch / AT Transmission recommended)

Then higher the # you choose then less torque management remains and then more aggressive the throttle response becomes.

Shift defuel:

- # 0 - Stock** (On)
- # 1 - Off**

Often called erroneously "torque management", this function disables the stock software engine power de rate during automatic transmission shifts or boosted launch. Please note that the shift light indicator on the dash will also become disabled.

ATTENTION! The use of this feature is potentially DANGEROUS even for the best build aftermarket transmission!!!

Do not even THINK to use it with a stock transmission or a simple valve body! Full billet is a must here!



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Injection Timing:

- # 0 - Default**
- # 1 - Stock**
- # 2 - Wild**
- # 3 - Advanced** (less than level # 2)
- # 4 - Moderate** (less than level # 3)

The odd numbered SW's (1,3,5,7 & 9) use the advanced timing and the even numbered SW's (2,4,6 & 8) use the stock timing.

This is only true if you do not adjust the options! With the Revo you can choose ANY timing you want, no matter if the **CaTCHER** you'll download is odd or even! You CAN, add timing to the software's that have none, or use the stock timing in the odd # ones. Your pleasure... By definition for all adjustable options the default is # 2. EXCEPT for the timing. The timing has two defaults. # 1 for the even numbered SW's (stock timing) # 2 for the odd numbered SW (advanced timing). To avoid confusion and to help the customer in returning all levels to default (if need be), key # 0 is used to return **Smarty** back to the default levels. This is most important for the timing. When **Smarty** is set back to default with key # 0, the even numbered software's will use the stock timing and the odd numbered ones the advanced timing.

The injection timing is critical for the engine responsiveness and overall performance. The difference between one timing level and the next one can be as much as 85 hp! Which is the right one? That depends upon the mods done to the engine.... The only valid way to find out is a dyno. Boost pressure readings "per se" just don't do the trick. A more advanced timing will typically produce less boost than a more retarded one but that does not mean that the more advanced timing provides less power.

Rail pressure:

- # 0 - Default**
- # 1 - Stock**
- # 2 - Mild**
- # 3 - Moderate**
- # 4 - Wild***

* In order to avoid damage to the injection system, do not use for prolonged time.

Wastegate: (for the 2004.5 and up trucks with the electronic wastegate only)

- # 0 - Stock** (On)
- # 1 - Off** (for aftermarket turbo)