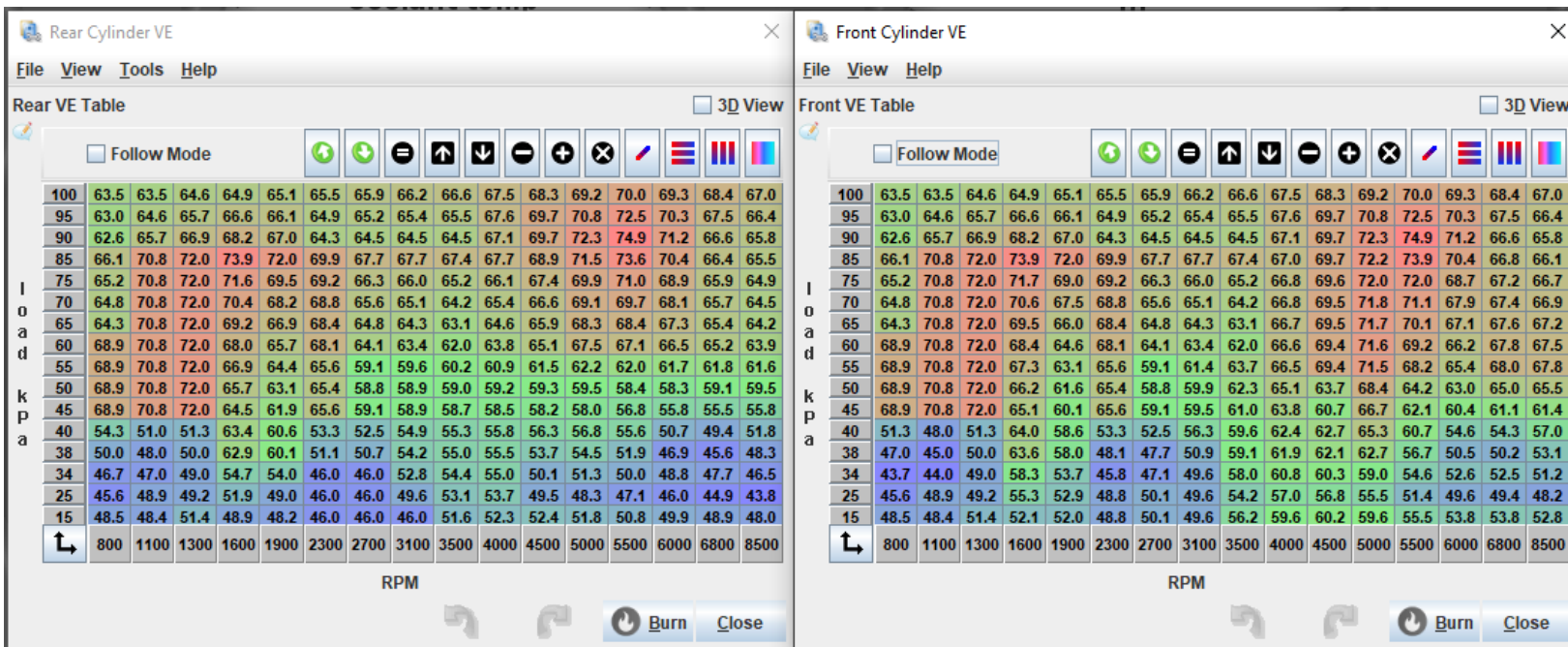


Front & Rear VE (Volumetric Efficiency) Tables



The **Front & Rear VE (Volumetric Efficiency) Tables** display the engine's volumetric efficiency values as a function of **MAP load (kPa)** and **RPM**. These values determine how much fuel is needed based on the engine's airflow characteristics at different operating points. Here's a breakdown of the table and typical values:

Typical VE Values

- **Idle Conditions:** At idle, typically around 30-50 kPa and 950-1100 RPM, most engines have VE values in the range of 30-50%. This represents the relatively low airflow when the engine is running at low RPM and without load.
- **High Load Conditions:** At high loads (e.g., 100-250 kPa) and higher RPMs (e.g., 4000-7000 RPM), VE values can range from 80-100% or even higher. Engines with forced induction may have values exceeding 100% due to the additional air being forced into the cylinders.

If you see VE values that are significantly different from these ranges (e.g., extremely high at idle or unusually low at high load), **it may indicate that the injectors haven't been correctly modeled**. This could be due to incorrect injector flow rates, dead time settings, or other calibration errors, leading to inconsistent fueling.