

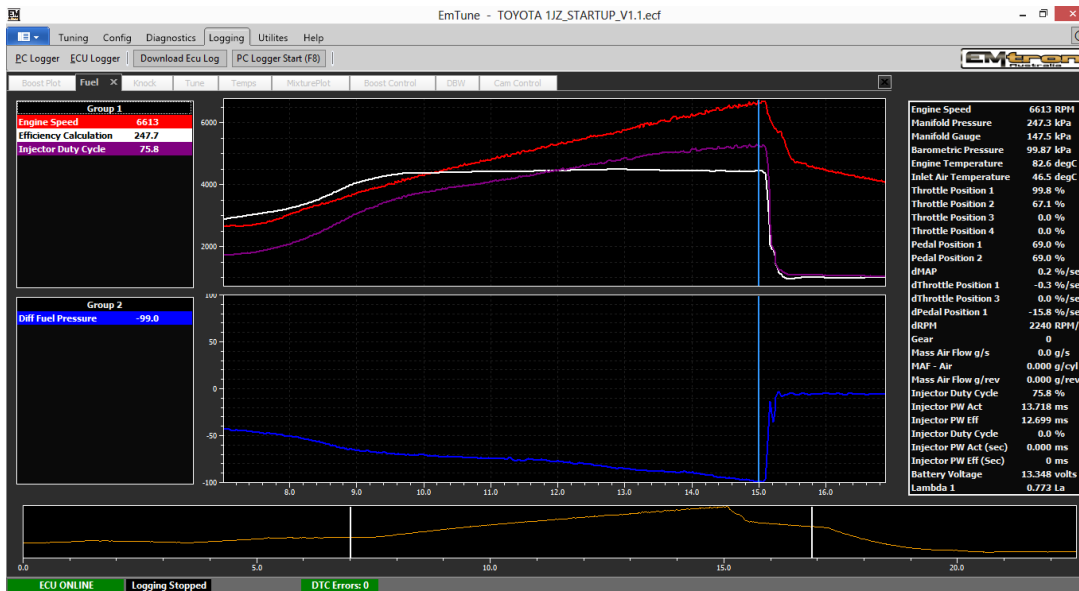


Emtron Fuel Model Continued.....

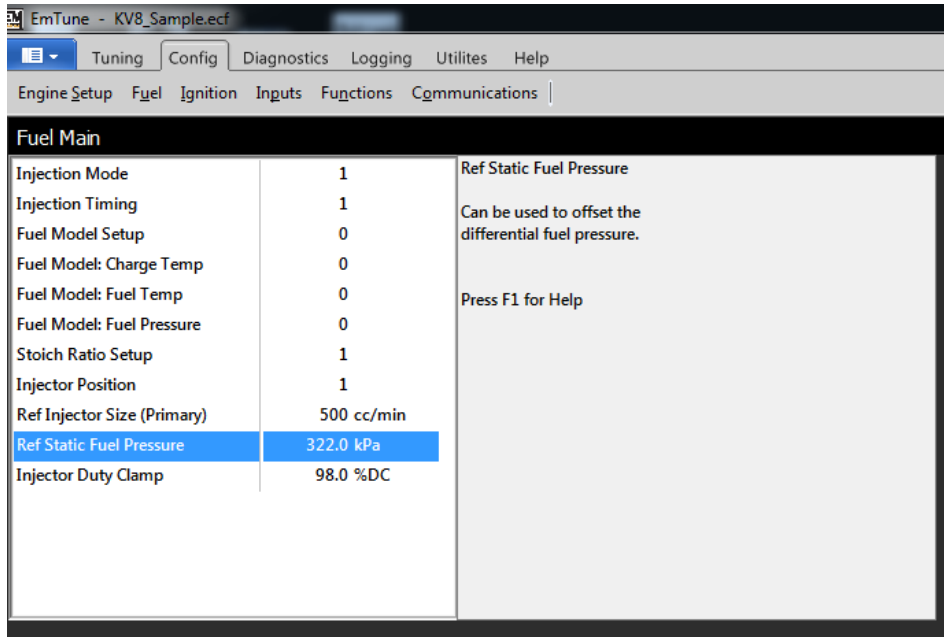


In the last article we looked at some of the settings which generate the "Fuel Model". Here we will concentrate on the Differential Fuel Pressure and how it can adversely affect the fueling accuracy.

In the below example log screenshot is a common case of the fuel pressure not tracking the expected differential pressure. The Blue line displayed is actually the "differential fuel pressure" which has been offset to display a value of "0 Kpa" in a perfect world under all conditions. In this case the pressure has fallen nearly 100kpa below the expected pressure based on this manifold pressure. The injector now flows much less than expected. The ECU will automatically correct the injector speed pulse width if "Fuel Model: Fuel Pressure" is selected to "1"(ON). Provided there is enough fuel flow to match the consumed air mass the fuel mixture will remain consistent.



When turning this function on it is important that the ECU knows the “Ref Static Fuel Pressure” as pictured below :



It is advisable to have failsafes configured through reducing boost, RPM limit and Boost limit in order to protect an engine from damage in the event of extreme differential fuel pressure droppage. In most situations 100kpa below the expected pressure is considered unacceptable.

