# TunerPro editing software - XDF usage for an LS1 type PCM

#### **Preamble**

To edit parameters in an LS1 type PCM using TunerPro editing software requires an "XDF" file. An XDF file is a road map (or means of translating) alphanumeric data input by the user, into hexadecimal data (which is used by the PCM).

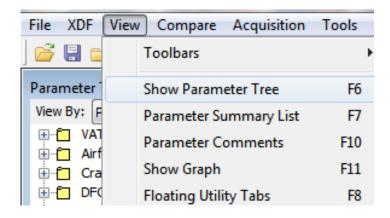
An LS1 type PCM could have been programmed with many different Operating Systems (OS). Editing each OS requires a specific (unique) XDF file.

## **Getting Started**

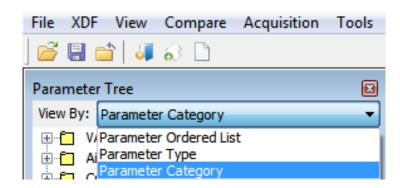
TunerPro has a default Checksum Plug-in that is able to accurately calculate the checksums of the respective calibration segments. It cannot calculate the OS segment checksum. This requires the use of an additional Checksum Plug-in.

First, save the attached "512Kb PCM OS Checksum Plugin.dll" file to your computer. It should be saved in the C:\My Documents\TunerPro Files\Plugins folder.

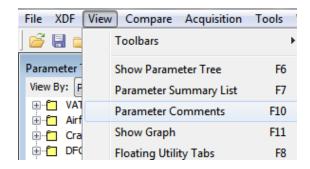
Next, open the TunerPro software. The "Parameter Tree" will likely be displayed by default; it is at the left of the screen. If it is not displayed, go to the "View" menu and select "Show Parameter Tree".



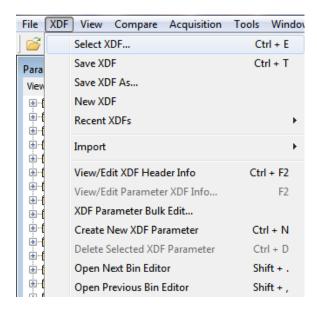
The attached XDF file is easiest to use if the "Parameter Category" view is selected in the "Parameter Tree" menu.



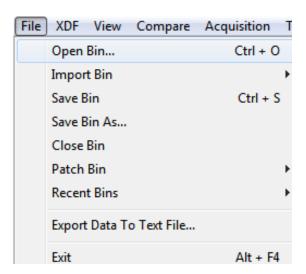
Next, go to the "View" menu and select "Parameter Comments". This will open the Parameter Comments box at the bottom of the screen.



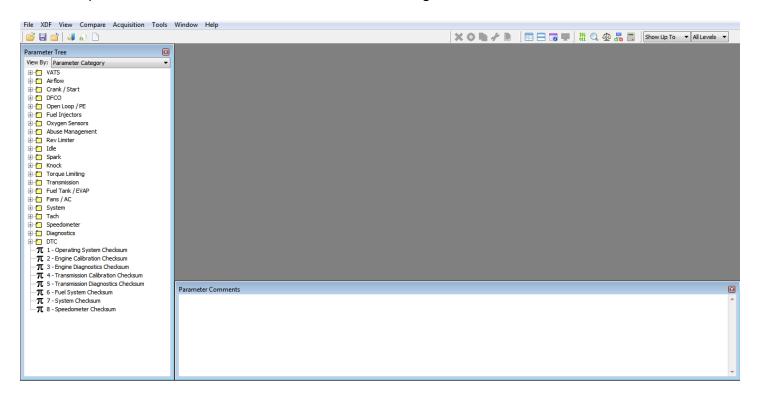
Next, open the XDF file you wish to use. Go to the "XDF" menu and select "Select XDF ...".



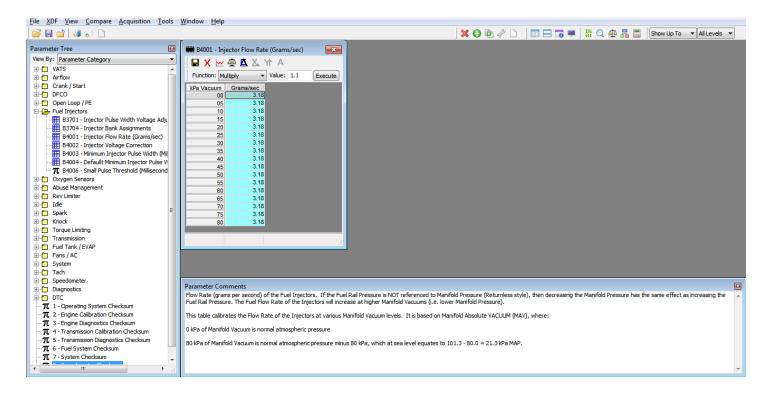
Next, open the calibration file that has been read from the PCM, and saved as a BIN file. Go to the "File" menu and select "Open BIN ...".



Your computer screen should now look similar to the image below:



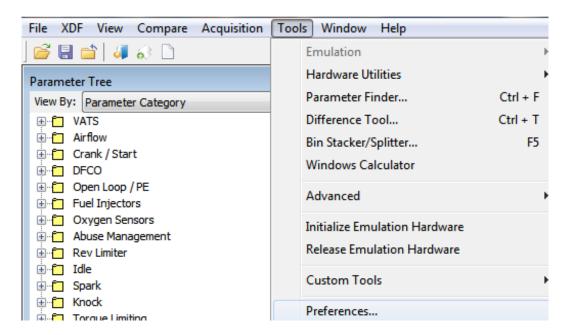
As a further example, if you open the "Fuel Injectors" tab in the Parameter Tree, and double click on "Injector Flow Rate", your computer screen should now look similar to the image below:



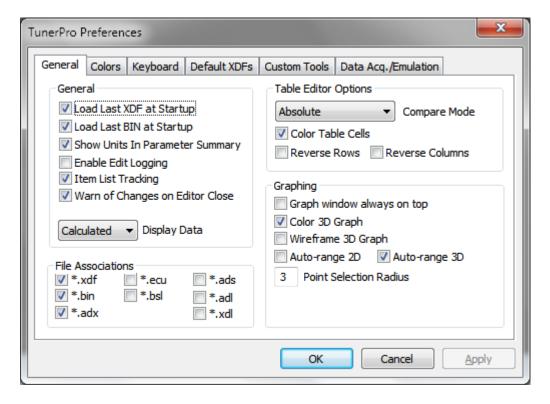
## Suggestions for ease of use

Upon startup, TunerPro can be configured to always open the last XDF and BIN that was being used.

Go to the "Tools" menu and select "Preferences ...".



The following submenu should popup.



Configure the settings as above.

#### **Parameter Range Limits**

Many of the parameters in the XDF have had safe upper and lower limits imposed, to help prevent inadvertent damage to the PCM during a flash. As an example, a parameter may have safe limits between the values of 10 and 50. If a value of 0 (zero) was entered, and the file was saved, upon reopening the file you would notice that the value had been set to 10 (the lower limit). If a value of 60 was entered, and the file was saved, upon reopening the file you would notice that the value had been set to 50 (the upper limit).

## Displayed items that should NEVER be altered

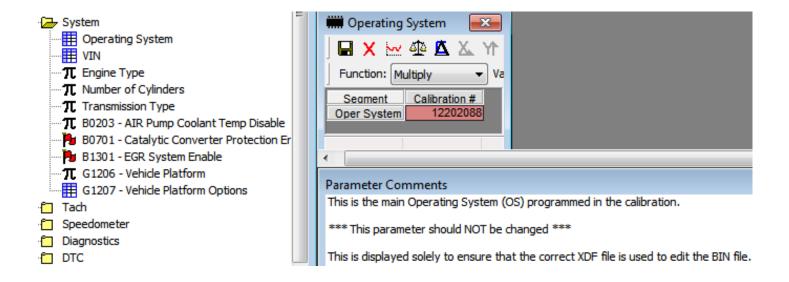
There are several parameters in the XDF that should be considered as for informational purposes only. These are found in the "System" folder of the XDF. Parameters that should not be altered include:

- the Operating System (OS)
- the Vehicle Identification Number (VIN)
- the Engine Type
- the Number of Cylinders
- the Transmission Type

These are displayed to assist with identifying the original vehicle / drive train from which the PCM originated.

The Operating System (OS) has been displayed for the sole purpose of assisting with selecting the correct XDF file to use for editing the BIN file.

If you attempt to change the Operating System (OS) value, it will be set to all zeros (00000000) by the XDF, rendering the BIN file unusable.



Lastly, always keep a backup copy of the original (not altered) BIN file. The "Save as" feature should be used to name a working copy of your BIN, the first time that the original BIN is opened.