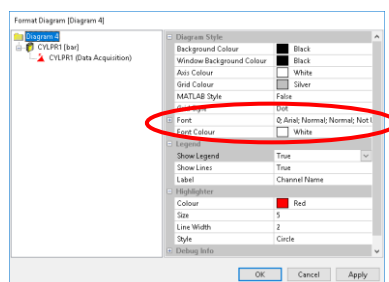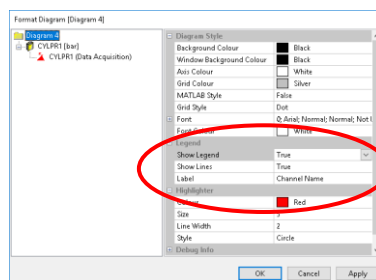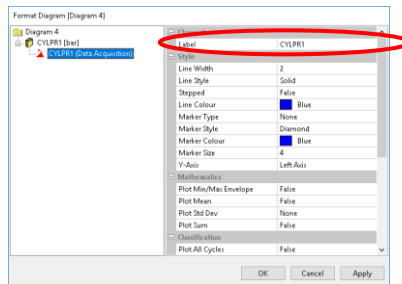**catoolRT 16.12 Release Notes**

- Ability to configure missing data for CANbus and low speed DAQ as zero or hold last value
- Add new parameter "Number of Statistics Cycles". Indicates how many cycles have been used to calculate the current statistical values.
- BUGFIX: Output CAN signals in Motorola byte order fixes
- Fix an issue where the PEAK CAN output would not initialise
- Support extended (29-bit) CAN identifiers for CAN input and output
- BUGFIX: Correctly unpack negative integer CAN signals
- BUGFIX: Generate full crash dumps if requested
- BUGFIX: Fix a crash that could occur if the user was able to close the application more than once
- Ability to acquire low speed DAQ on specific segment edge
- Improvements to trigger faster data analysis after data is acquired and subsequently faster CAN output after the analysis is complete.
- BUGFIX: Could not select new channel as its own start of combustion, i.e. Injector, Coil channels.
- BUGFIX: Fixed some crashes/assertions when the engine database was empty
- Diagrams can now change the font face and size. The default font can be configured in "File" -> "Properties"

- Diagrams can show a legend without cursors and select if a line sample is shown with the legend

- Legend label can now show channel name, filename or a custom value

- "Format Diagram" layout tweaks
- BUGFIX: Fix some crashes in "Format Diagram"
- BUGFIX: Fix a crash whilst recording cycle data
- Improvements to cycle misfire/knock classification
- BUGFIX: Minimum statistic not calculated when all values are same
- BUGFIX: Waterfall plot background not drawn correctly
- BUGFIX: Plotting all cycle points on a crank angle plot included buffer cycles
- BUGFIX: Crash when plotting waterfall plot of file data during DAQ when number of cycles differed
- BUGFIX: Changing multiple channel abscissa had no effect if the abscissa was the same as the first channel.
- BUGFIX: Data list would not show correct value during DAQ when in the buffer cycles
- Edit CAN channel checks for valid start bit and length
- Adding a coil current channel will auto configure its start of combustion
- Changing a channel's cylinder will update the description text
- BUGFIX: Low speed logging would not log at cycle rate after buffer full
- TDC Determination: Ensure 1 bar delta pressure for cycles included in TDC determination
- BUGFIX: DAQ status not updating when waiting for DAQ to begin
- Add "Import & Export" feature, currently single cylinder data pasted from TFX one cycle per file