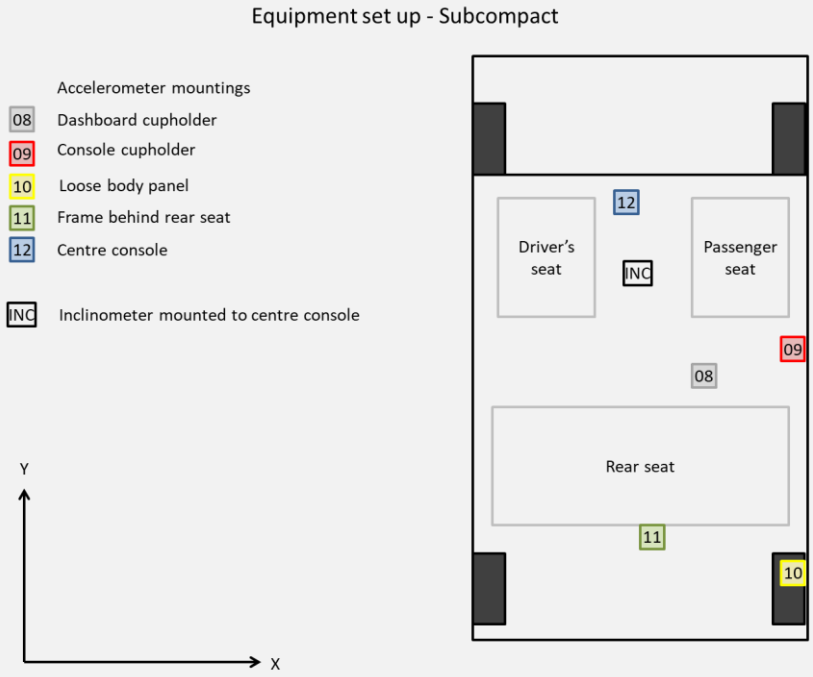
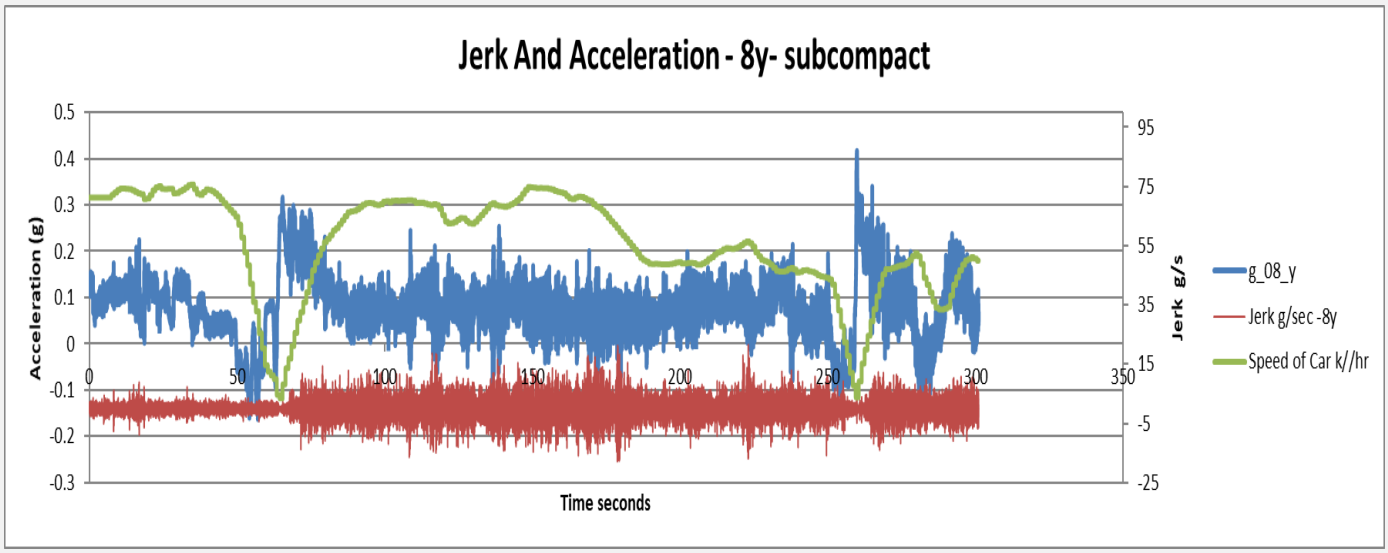
ACCELERATION and JERK

DIV. 5002019 ONTARIO LTD

V.A.S.E PRO





THE MATH – So what is acceleration - α? Assume at time = 0 seconds that acceleration is 0.
Acceleration, α , is the change of speed divided by change in time. Mathematically we write $\alpha = dv/dt$ where dt approaches zero.
If acceleration, α , is constant , α is the same at all times of interest.

If acceleration, α ,increases linearly with time we get $\alpha = jt$. That is $j=d\alpha/dt$.

We call j, the Jerk, and it is the change in acceleration with time. You will note that at times of "constant" velocity, acceleration is near zero.

Note that the jerkiness briefly goes almost quiet in times of deliberate acceleration or slowing representing the driver's intent to speed up or slow down at a constant rate.

The rest of the jerkiness curve shows apparent micro corrections to acceleration the driver makes.

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