

How to use the Advantage 3 Ford speed density calculator

Setting up the calibration in Advantage 3:

Shut off adaptive learning. This will be located in **ADAPTIVE LEARNING, SCALAR**
Change this value from 1 to 0.

Adaptive Control Switch | 1

Zero out the closed loop bias for O2 sensor/s. This will be located in **O2 SENSOR, CLOSED LOOP BIAS BANK 1** (and Bank 2 if applies). And **CLOSED LOOP FEED FORWARD BIAS BANK 1** (and Bank 2 if applies). Set the entire table to 0.

Closed Loop Bias Bank1

		RPM									
		600	800	1000	1250	1500	1750	2000	2250	2500	3500
FRAC	1.200	-0.003000	-0.003000	0.003000	0.002000	0.004000	0.002000	-0.000500	0.000000	-0.000500	-0.004490
	0.900	-0.003000	-0.003000	0.003000	0.003250	0.002490	0.002490	0.001390	-0.001000	-0.003000	-0.004000
	0.750	-0.003000	-0.003000	0.002000	0.004250	0.004990	0.003000	0.001000	-0.000500	-0.002490	-0.003440
	0.600	-0.003000	-0.003000	0.002740	0.004490	0.004000	0.007490	0.001000	-0.000250	-0.002000	-0.003590
	0.500	-0.003000	-0.003000	0.001500	0.003000	0.003500	0.004000	0.001500	0.002000	0.001000	-0.004490
	0.400	-0.002000	-0.002000	0.004990	0.007490	0.003000	0.004000	0.002490	0.002490	0.001240	-0.003250
	0.250	0.000000	0.000000	0.000000	0.007490	-0.002240	0.001500	0.000500	0.001000	0.001750	-0.002740
	0.150	-0.003000	-0.003000	-0.002490	-0.002000	-0.007000	-0.002490	-0.001090	0.000000	-0.002740	-0.005490

Grid Chart Dual Edit 3D Graph

Closed Loop Feed Forward Bias Bank1

		LBM - MIN					
		1	1.75	2.5	5	7.5	10
DEGREES:F	1300	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	1100	-0.001000	0.001000	0.001000	0.000699	0.000699	0.000000
	1000	-0.003000	0.001000	0.001000	0.001000	0.001000	0.000000
	600	0.000000	0.002000	0.002000	0.001000	0.001000	0.000000
	400	0.003000	0.003000	0.003000	0.001000	0.001000	0.000000

Grid Chart Dual Edit 3D Graph

Set the weighting factor to be sampled. This will be located **WEIGHTING FACTORS, INDIVIDUAL TABLES, SCALAR**. Set all listed to 0 except single weighting factor to be sampled. (weighting factor count will vary depending on strategy)

<input type="checkbox"/> Weighting Factor 1	1
<input type="checkbox"/> Weighting Factor 10	1
<input type="checkbox"/> Weighting Factor 11	1
<input type="checkbox"/> Weighting Factor 12	1
<input type="checkbox"/> Weighting Factor 13	1
<input type="checkbox"/> Weighting Factor 14	1
<input type="checkbox"/> Weighting Factor 15	1
<input type="checkbox"/> Weighting Factor 16	0
<input type="checkbox"/> Weighting Factor 17	0
<input type="checkbox"/> Weighting Factor 18	0
<input type="checkbox"/> Weighting Factor 19	0
<input type="checkbox"/> Weighting Factor 2	1
<input type="checkbox"/> Weighting Factor 20	0
<input type="checkbox"/> Weighting Factor 21	0
<input type="checkbox"/> Weighting Factor 22	0
<input type="checkbox"/> Weighting Factor 23	0
<input type="checkbox"/> Weighting Factor 24	0
<input type="checkbox"/> Weighting Factor 25	0
<input type="checkbox"/> Weighting Factor 26	0
<input type="checkbox"/> Weighting Factor 27	0
<input type="checkbox"/> Weighting Factor 3	1
<input type="checkbox"/> Weighting Factor 4	1
<input type="checkbox"/> Weighting Factor 5	1
<input type="checkbox"/> Weighting Factor 6	1
<input type="checkbox"/> Weighting Factor 7	1
<input type="checkbox"/> Weighting Factor 8	1
<input type="checkbox"/> Weighting Factor 9	1
<input type="checkbox"/> Weighting Factor Optimal Power	0

Flash the vehicle with intended changes with the above included.

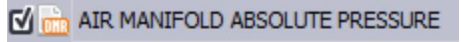
Setting up data logging in Livelink:

MAP Based:

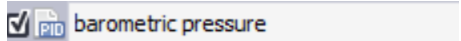
RPM



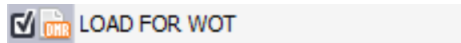
Air Manifold Absolute Pressure



Barometric Pressure



Load For WOT (can substitute with Load For WOT Based On Mapping if LOAD At WOT not available)



Short Term Fuel Trim Bank 1



Blowthrough Enabled:

Air Exhaust Back Pressure

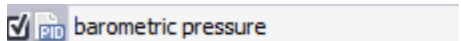


MAF Based:

RPM



Barometric Pressure



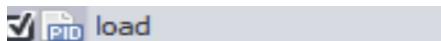
Load At WOT (can substitute with Load At WOT Based On Mapping if LOAD At WOT not available)



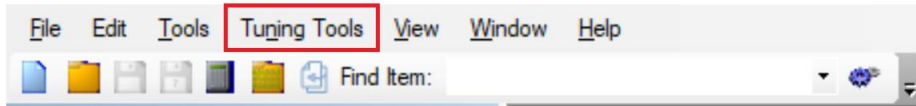
Short Term Fuel Trim Bank 1



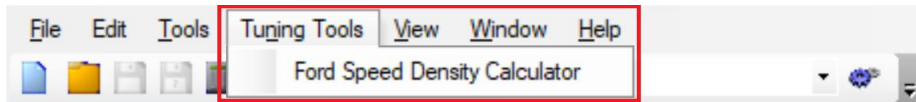
Load



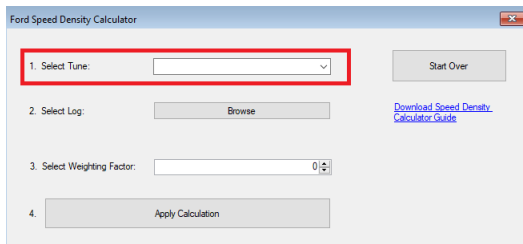
After gathering a data log of test desired. Go back to Advantage 3 tune file that was used for testing. Open the new tab at the top **Tuning Tools**.



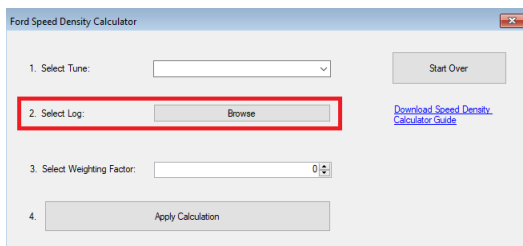
Then select **Ford Speed Density Calculator**.



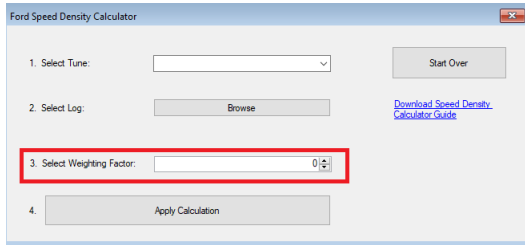
Then select the tune file to be applied to from the drop down menu.



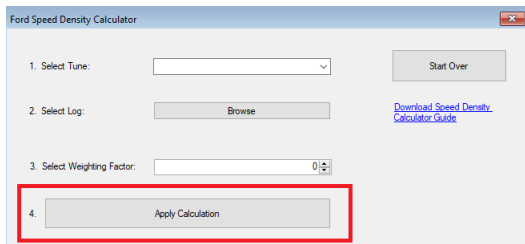
Then select the log file to be processed.



Then select the weighting factor to apply calculation to. Keep in mind this is an index format. If 0 is not displayed in the calibration file for the first weighting factor then 0 in calculator will equal weighting factor 1 in the calibration and so on.

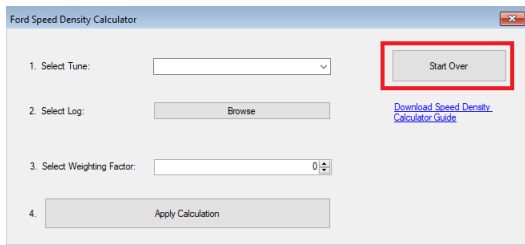


Lastly select **Apply Calculation**



The calculation is directly applied to the applicable tables related to the calculation.

If you want to stop at any point before selecting **Apply Calculation**, you can select **Start Over**. That will take you back to the beginning.



After you are done, reload stock **ADAPTIVE LEARNING**, **CLOSED LOOP BIAS BANK 1 (2 IF APPLIES)**, **CLOSED LOOP FEED FORWARD BIAS BANK 1 (2 IF APPLIES)**, **WEIGHTING FACTORS** that apply.