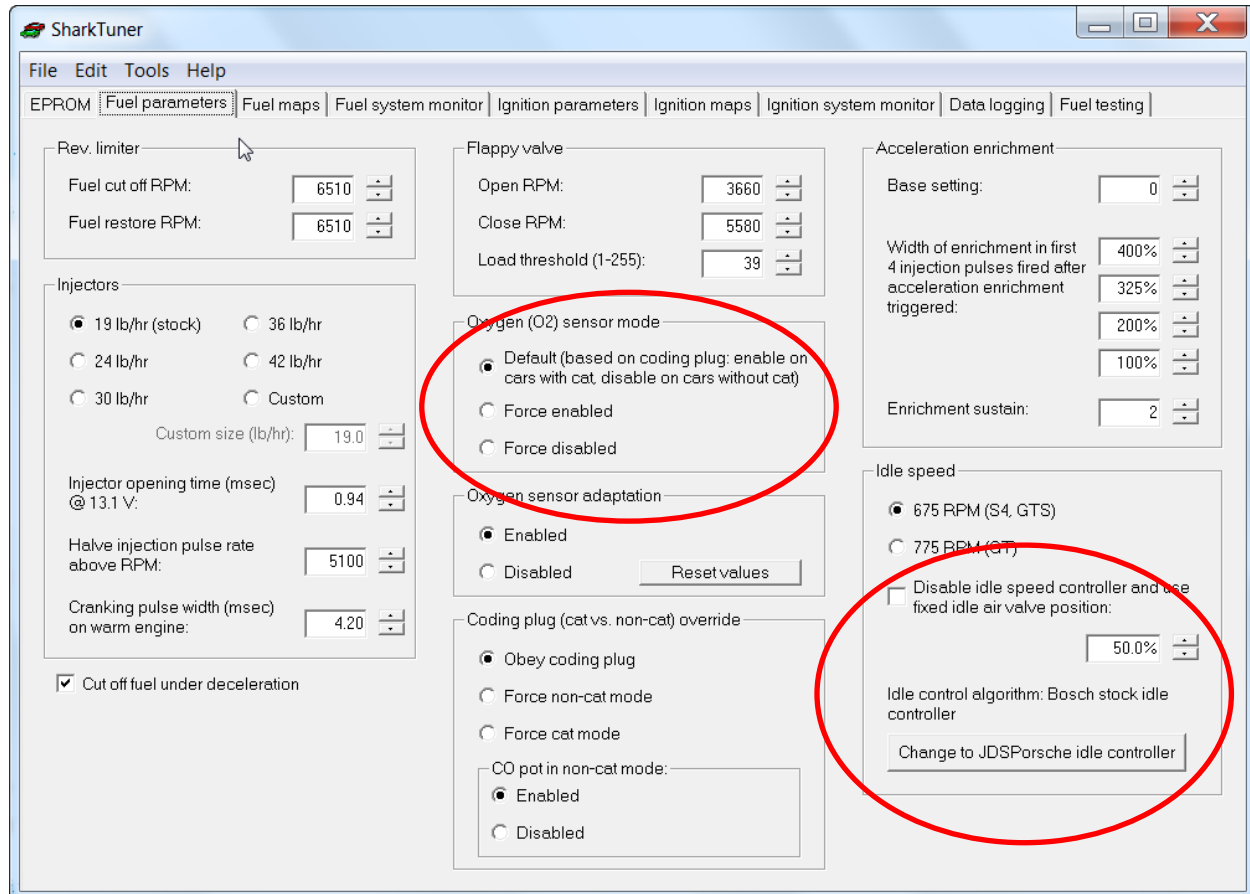


Shartuner version Alpha-25 Changes and Additions



O2-sensor mode: The O2-loop mode is now disconnected from the cat/no-cat coding plug, so that the O2-sensor can be disabled but still use the cat map, or vice versa. This is useful for tuning without having to switch maps or physically disconnect the O2-sensor signal. The second fuel map (no-cat map) can also be used with the O2-sensor as an alternate map.

Idle control: An alternate idle controller is available for modified motors that do not idle in a stable fashion with the stock Porsche/Bosch idle controller. The stock idle controller does great with stock motors, but is not tunable.

Shartuner version Alpha-25 Changes and Additions

SharkTuner

File Edit Tools Help

EPROM | Fuel parameters | Fuel maps | Fuel system monitor | Ignition parameters | Ignition maps | Ignition system monitor | Data logging | Fuel testing

Map to edit: Base fuel map (cat)

View as: ☒ Table ☐ Chart

A/F ratio / Equivalence ratio: 21.99 / 0.67

O2 sensor adj.: 0.0 %

Inj. pulse width: 0.00 ms

Normal duty cycle

Edit RPM axis points Edit MAF axis points

	500	700	990	1200	1400	1700	1800	2000	2400	2800	3300	3700	4000	4800	5600	6200
36	-4	-26	-19	-18	-16	-23	-22	-12	-5	-1	1	7	2	-10	-2	-28
52	-4	-26	-19	-18	-16	-23	-22	-12	-5	-1	1	7	2	-10	-2	-28
68	-4	-26	-19	-18	-16	-23	-22	-17	-10	-6	-4	2	-3	-10	-2	-23
84	-4	-26	-24	-24	-21	-29	-22	-17	-6	3	6	-7	-7	-11	-2	6
100	-4	-26	-26	-32	-32	-25	-25	-17	10	5	-9	-6	3	-7	20	12
116	-13	-29	-37	-36	-35	-16	-19	-9	11	-3	-4	-2	-2	7	13	35
132	-32	-19	-38	-46	-52	-11	-8	-3	3	1	-5	4	-1	-1	18	25
164	-42	-31	-37	-26	-12	5	-6	-5	-2	-1	-4	-3	-1	0	27	50
180	-31	-36	-42	-21	-4	4	-10	1	2	-3	-5	-10	6	15	45	65
196	-42	-24	-32	-9	3	-11	-1	6	0	-16	-3	0	-5	-1	50	73
212	-44	-35	-22	-3	3	-11	-1	6	0	-15	-3	-2	1	19	61	77
228	-41	-23	-11	-3	3	-11	-1	6	0	-15	-3	-2	9	12	54	96
260	-29	-30	-11	-3	3	-11	-1	6	0	-15	-3	-2	14	29	69	96
324	-29	-30	-11	-3	3	-11	-1	6	0	-15	-3	-2	14	29	69	96
420	10	10	25	33	39	38	52	120	115	100	58	58	127	107	127	127
516	10	10	25	33	39	38	52	120	115	100	58	58	127	107	127	127

MAF

Modify

☒ Manually selected cells

☐ Cell at current operating point

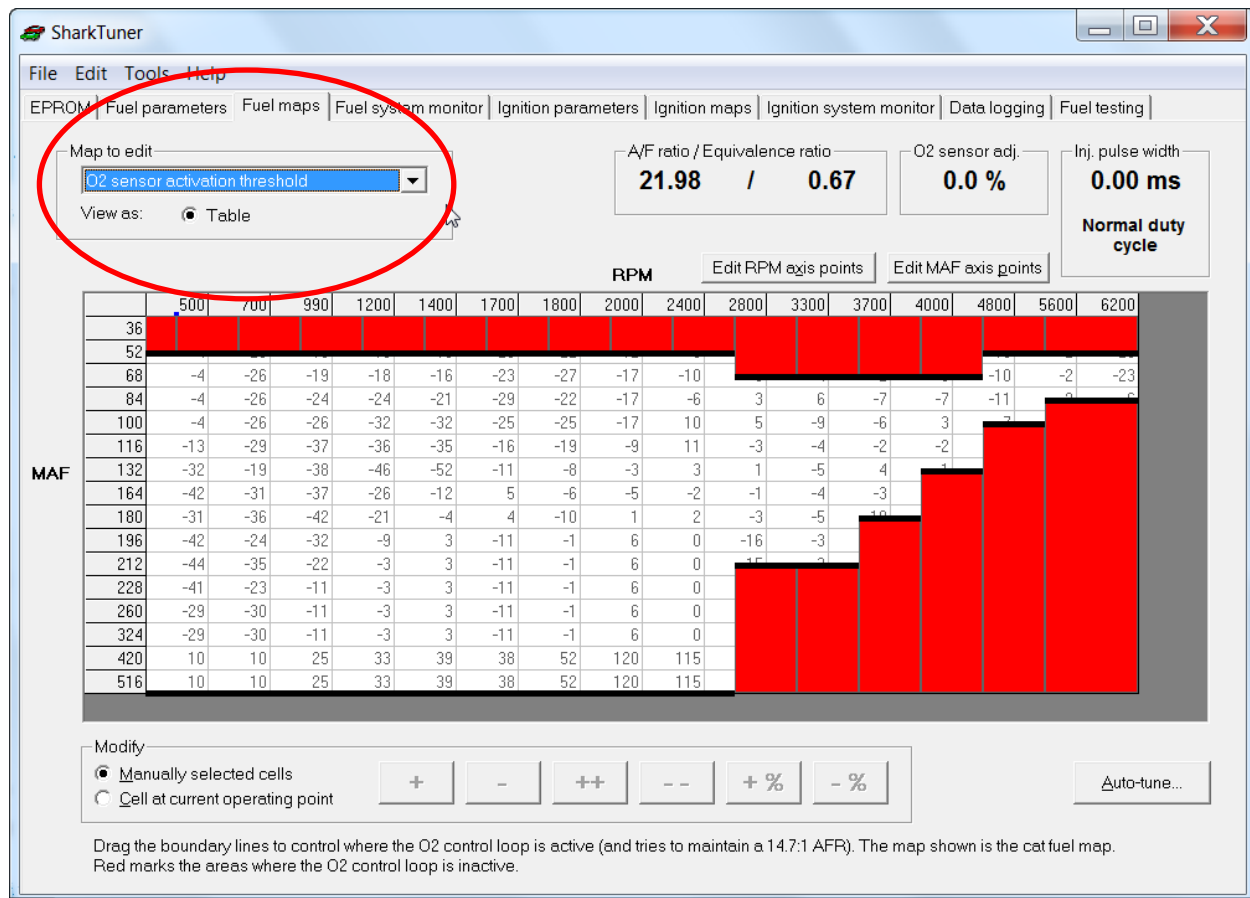
+ - ++ -- + % - %

Auto-tune...

Valid range of values for map: -128 to 127.
Changing a cell value by 1 changes fueling by about 0.2%.

Fuel maps: Buttons are provided to access the PM and load-axis values. NOTE: Map values are not scaled, this must be done manually or with Excel, etc.

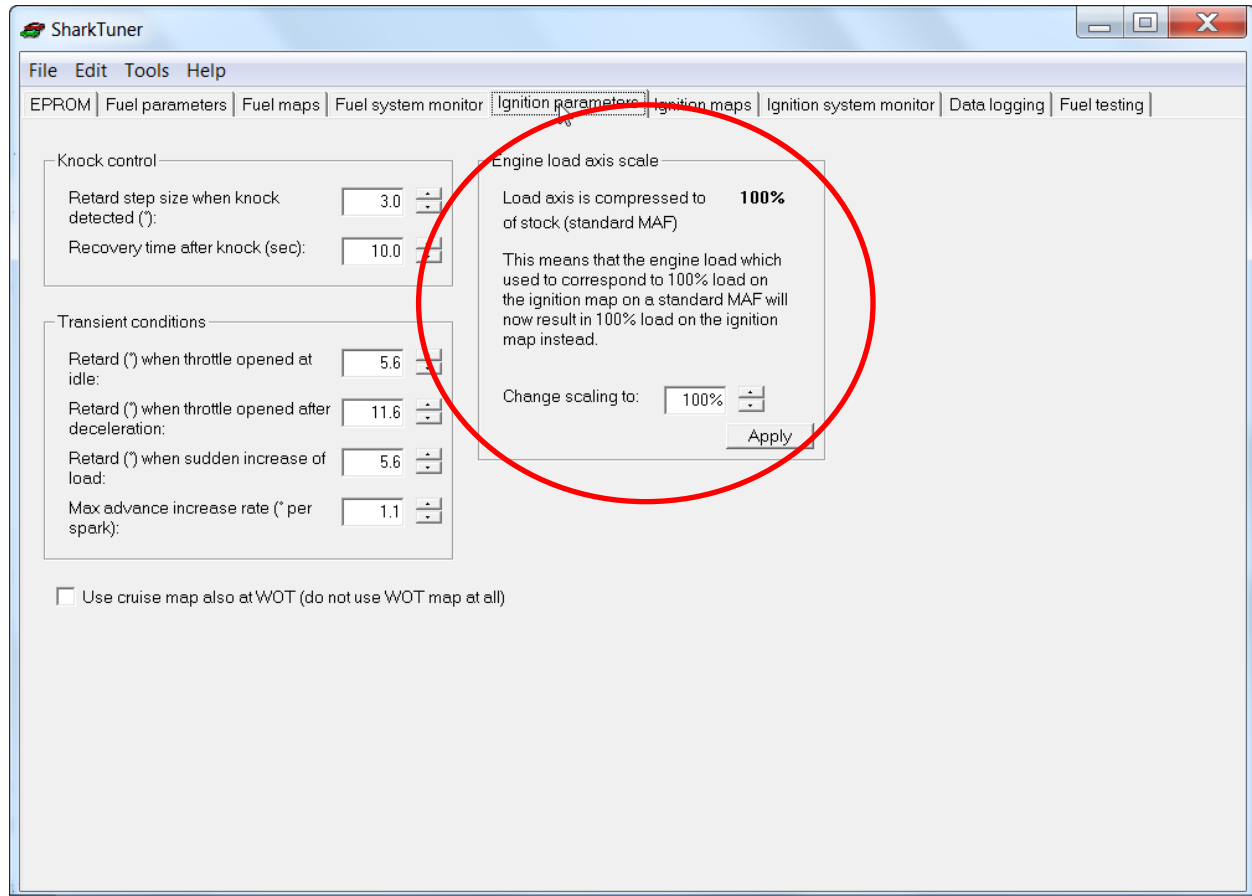
Shartuner version Alpha-25 Changes and Additions



The "O2 sensor activation threshold" map defines the limits where the o2-loop being active (if O2-sensor is active, engine is warmed up, etc). Click and drag the black horizontal bars.

NOTE that the RPM and load thresholds are mid-cell. The cursor is active here, and the values are the Cat map.

Shartuner version Alpha-25 Changes and Additions



The Ignition Parameter page provides a load-scaling option, to change the EZK load scale relative to the MAF load signal. This does not rescale the ignition advance [Verify].

Shartuner version Alpha-25 Changes and Additions

SharkTuner

File Edit Tools Help

EPROM Fuel parameters Fuel maps Fuel system monitor Ignition parameters **Ignition maps** Ignition system monitor Data logging Fuel testing

Map to edit: Cruise map (98 octane cat)

View as: ☒ Table ☐ Chart

Warning! This map is not being used by the ECU!

RPM

Load

	560	680	870	1200	1400	1900	2400	3000	3200	3400	3900	4200	4800	5300	5800	6200
0 %	16.6	12.8	13.4	14.7	15.7	19.9	23.4	25.8	26.0	26.3	26.4	26.6	27.4	27.5	27.6	27.8
7 %	16.6	12.8	13.4	14.7	15.7	19.9	23.4	27.6	27.9	28.1	28.3	28.5	29.2	29.4	29.5	29.7
13 %	16.6	12.8	13.4	14.7	15.7	19.9	25.7	29.9	30.1	30.4	30.5	30.7	31.5	31.6	31.7	31.9
20 %	16.6	12.8	13.4	14.7	15.7	19.9	25.7	33.6	33.9	34.1	34.3	35.2	36.4	37.2	37.3	37.5
27 %	17.7	14.6	16.4	19.6	20.6	24.1	32.4	36.6	38.0	36.4	39.5	40.1	41.2	42.5	42.6	42.8
33 %	15.8	17.6	19.4	23.7	25.5	28.2	30.6	34.8	35.0	36.4	37.3	38.6	40.5	42.5	42.6	42.8
40 %	14.7	16.5	18.7	21.9	24.7	25.9	29.4	32.5	32.8	34.1	35.4	36.7	38.2	40.6	40.3	41.3
47 %	14.7	16.9	19.8	23.0	23.6	26.3	28.7	30.6	30.9	33.4	34.3	34.9	36.4	38.0	38.5	39.4
53 %	12.8	14.6	16.8	20.0	21.7	25.2	27.6	28.8	29.0	31.1	33.5	34.1	35.2	36.5	37.0	37.9
60 %	3.8	6.8	8.5	14.0	18.7	23.3	24.6	24.6	27.1	27.4	28.3	29.6	32.2	34.6	35.1	35.7
67 %	2.7	6.8	7.8	13.2	16.8	22.6	23.4	23.5	23.8	25.1	24.9	26.2	29.2	31.6	32.1	32.7
73 %	2.7	4.9	7.8	13.2	16.8	22.6	23.4	18.6	18.5	21.8	20.4	21.4	28.5	29.0	29.1	30.8
80 %	2.7	4.9	7.8	13.2	16.8	22.6	23.4	17.1	17.4	21.0	17.4	18.7	25.9	28.2	28.0	28.9
87 %	2.7	4.9	7.8	13.2	16.8	22.6	23.4	17.1	17.4	21.0	15.5	16.1	25.9	26.0	26.8	27.0
93 %	2.7	4.9	7.8	13.2	16.8	22.6	23.4	17.1	17.4	21.0	15.5	16.1	25.9	25.2	26.5	26.7
100 %	2.7	4.9	7.8	13.2	16.8	22.6	23.4	17.1	17.4	21.0	15.5	16.1	25.9	25.2	26.5	26.7

Ignition advance
6.0°

Knock counter
0

Reset

Edit RPM axis points

Modify

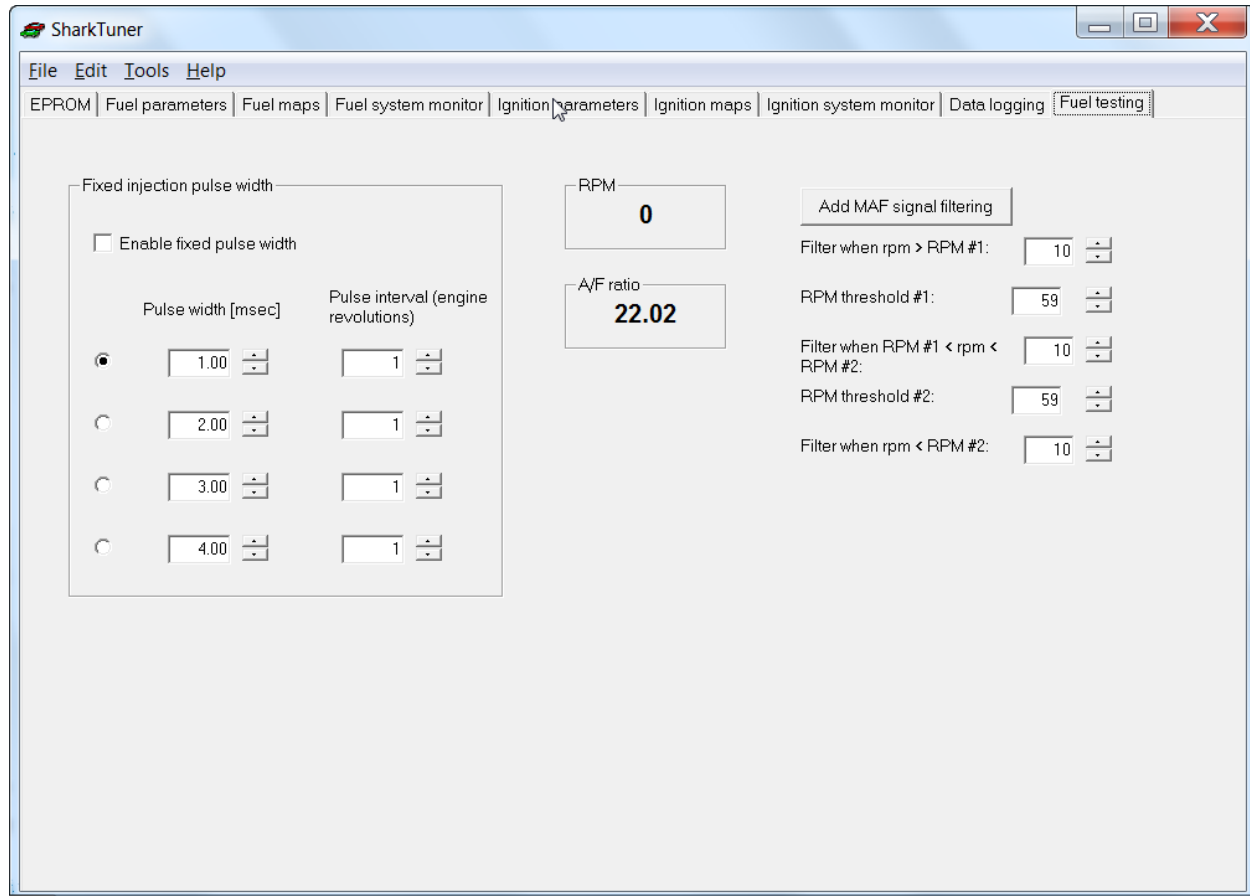
☒ Manually selected cells

☐ Cell at current operating point

+ - ++ --

The ignition map page provides a button to edit the RPM axis values, which does rescale the ignition advance values [verify].

Shartuner version Alpha-25 Changes and Additions



A new (and experimental) “Fuel Test” page provides two functions:

- 1) Manual control over injector pulses, for doing tests including a determination of injector opening-time. Instructions are needed, a how-to video is here:
<https://www.youtube.com/watch?v=xWtj8iPHHac>
- 2) An experimental control for the degree of filtering of the MAF signal is provided. To enable, click the “Add MAF signal filtering” (ignition on, engine stopped), then enter the various parameters. The numbers are meaningless before the filtering is enabled. (Note: There is no “undo”, load a saved bin-file to reverse this).

There are three filter levels: Suitable starting values might thresholds at 1800 and 3200, and filter values of 1 for <1800, 2 for 1800-3200, and 4 for >3200. The filtering algorithm sums 2^n RPM-sampled points. This is appropriate only when there is noise (e.g. intake turbulence) in the MAF signal, and excessive filtering will slow down transient response. {Verify > and < for threshold #1/2]