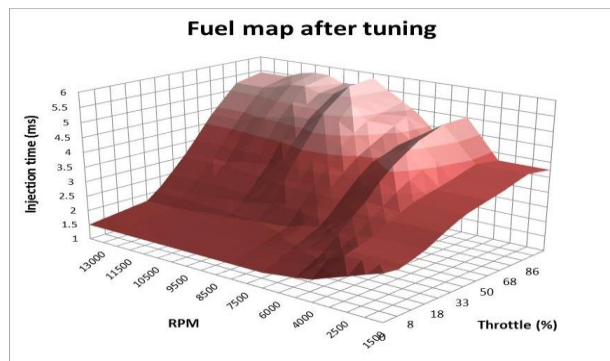# ENGINE MAPPING

Tuning before dynamometer

- Sequential injection
- End of injection synchronized with inlet valve opening
- Standard air temperature compensation
- Progressive RPM limit with ignition retard
- Start fuelling map tested with cold and hot engine
- Water temperature compensation to help cold start

Mapping on chassis dynamometer

- Injection time to aim 0.88 lambda value
- Throttle transients to keep 0.88 lambda value after tip in
- DTA ignition map kept with check on few points

	0	4	8	13	18	25	33	41	50	59	68	77	86	95
1500	2.5	2.44	2.56	2.71	2.94	3.15	3.33	3.43	3.53	3.63	3.76	3.88	3.82	3.75
2000	2.31	2.44	2.56	2.71	2.94	3.15	3.33	3.43	3.53	3.63	3.76	3.88	3.82	3.75
2500	2.11	2.44	2.56	2.71	2.94	3.15	3.33	3.43	3.53	3.63	3.76	3.88	3.82	3.75
3000	1.92	2.44	2.56	2.71	2.94	3.15	3.33	3.43	3.53	3.63	3.76	3.88	3.82	3.75
4000	1.72	2.16	2.35	2.62	2.92	3.21	3.54	3.78	3.98	4.17	4.31	4.44	4.42	4.39
5000	1.63	1.88	2.13	2.53	2.9	3.27	3.75	4.13	4.42	4.7	4.85	5	5.01	5.02
6000	1.57	1.8	2.03	2.33	2.62	3	3.47	3.87	4.18	4.38	4.54	4.64	4.64	4.69
7000	1.5	1.71	1.92	2.13	2.34	2.73	3.18	3.61	3.93	4.06	4.23	4.27	4.26	4.36
7500	1.5	1.69	1.88	2.07	2.26	2.75	3.23	3.6	3.96	4.21	4.45	4.67	4.89	4.85
8000	1.5	1.65	1.8	1.94	2.09	2.64	3.19	3.71	4.23	4.55	4.87	4.98	5.08	5.19
8500	1.5	1.64	1.77	1.91	2.04	2.6	3.15	3.77	4.39	4.86	5.33	5.39	5.44	5.5
9000	1.5	1.63	1.75	1.88	2	2.47	3.15	3.82	4.44	5.06	5.41	5.75	5.8	5.84
9500	1.5	1.62	1.73	1.85	1.96	2.39	3	3.61	4.19	4.76	5.09	5.42	5.49	5.56
10000	1.5	1.61	1.71	1.82	1.92	2.29	2.82	3.34	4.05	4.76	5.06	5.35	5.42	5.48
10500	1.5	1.6	1.69	1.79	1.88	2.26	2.77	3.28	3.95	4.61	5.07	5.52	5.61	5.7
11000	1.5	1.59	1.67	1.76	1.84	2.22	2.72	3.21	3.89	4.57	5.03	5.48	5.6	5.72
11500	1.5	1.58	1.65	1.73	1.8	2.18	2.67	3.1	3.77	4.43	4.88	5.33	5.48	5.63
12000	1.5	1.57	1.63	1.7	1.76	2.14	2.62	3.12	3.7	4.28	4.76	5.23	5.33	5.43
13000	1.5	1.57	1.63	1.7	1.76	2.14	2.62	3.12	3.7	4.28	4.76	5.23	5.33	5.43
14000	1.5	1.57	1.63	1.7	1.76	2.14	2.62	3.12	3.7	4.28	4.76	5.23	5.33	5.43

Fuel map after tuning

FUEL MAP AFTER TUNING ON CHASSIS DYNAMOMETER
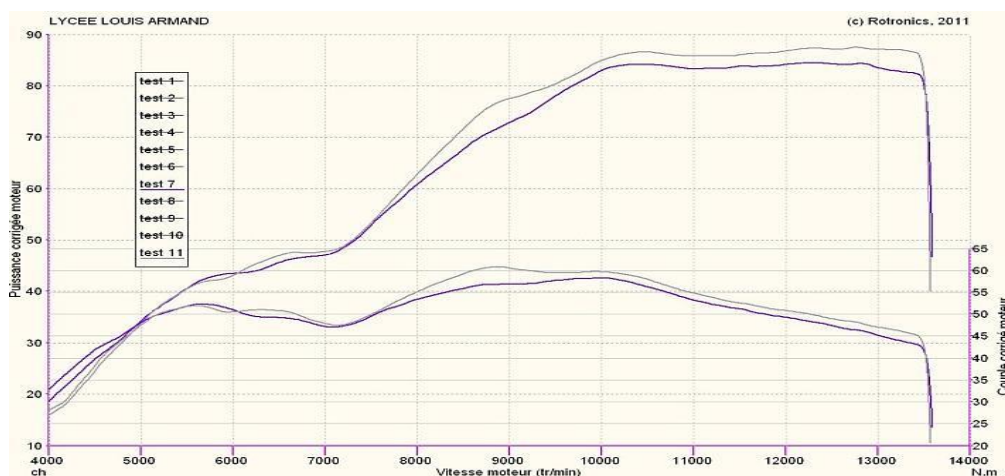
ENGINE PERFORMANCE BEFORE AND AFTER MAPPING