

P310798-01



EPA Benchmarking

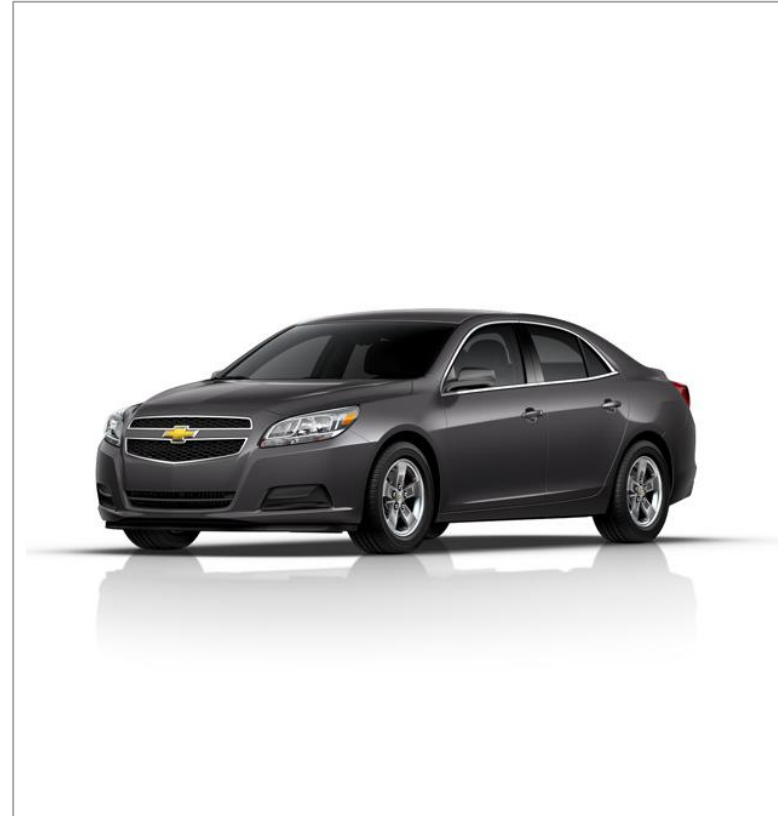
2013 Chevrolet Malibu, 2.5L [LCV] I4 GDI

Engine Dynamometer Testing Summary

Contract No. EP-C-12-014, Work Assignment 1-5

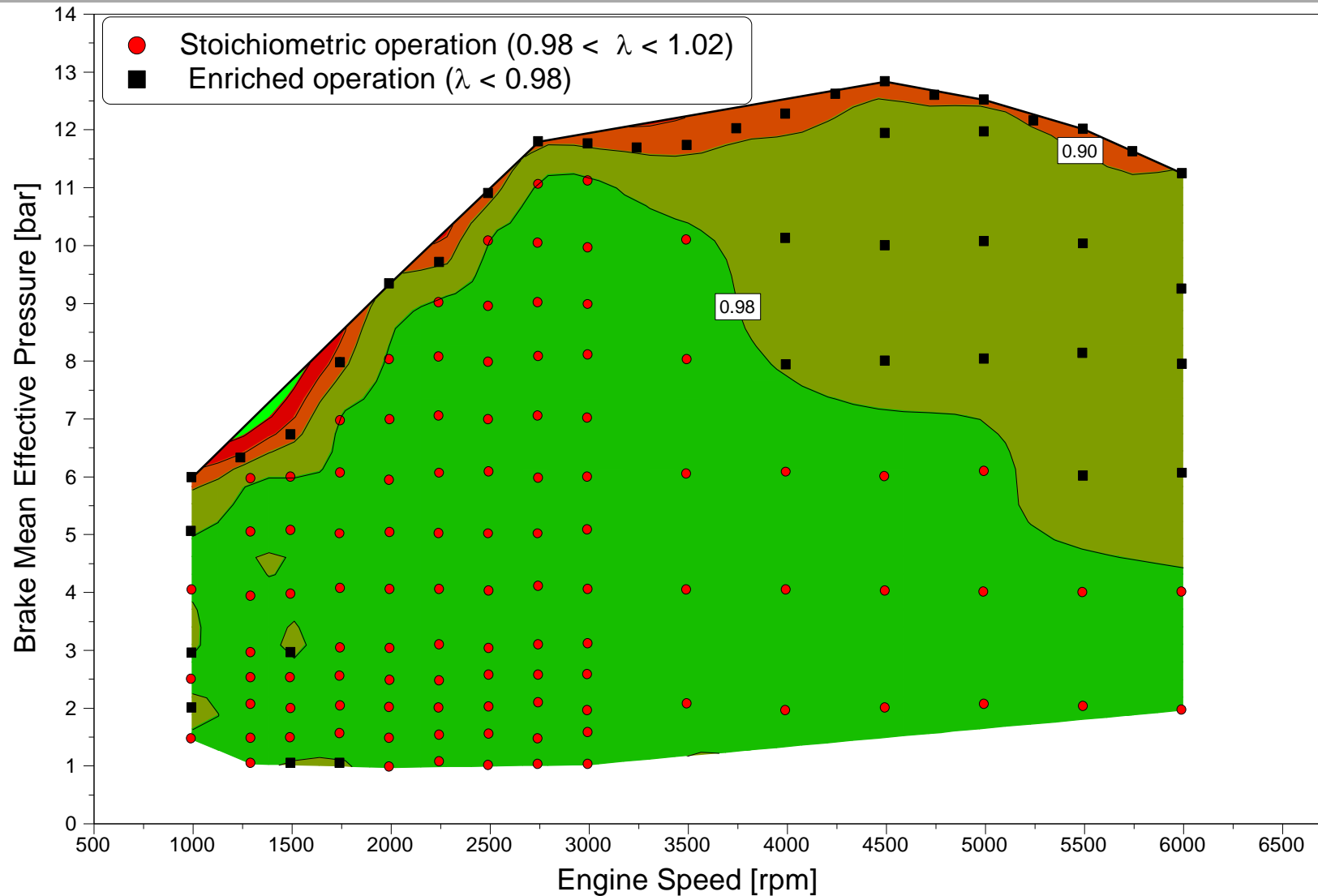
July 31st, 2013

EPA did not request a final report for this task; this presentation serves as documentation of completion for this work assignment. Further information on this project is contained in the SAE paper 2015-01-1140 "Benchmarking and Modeling of a Conventional Mid-Size Car Using ALPHA."



EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Controls Overview

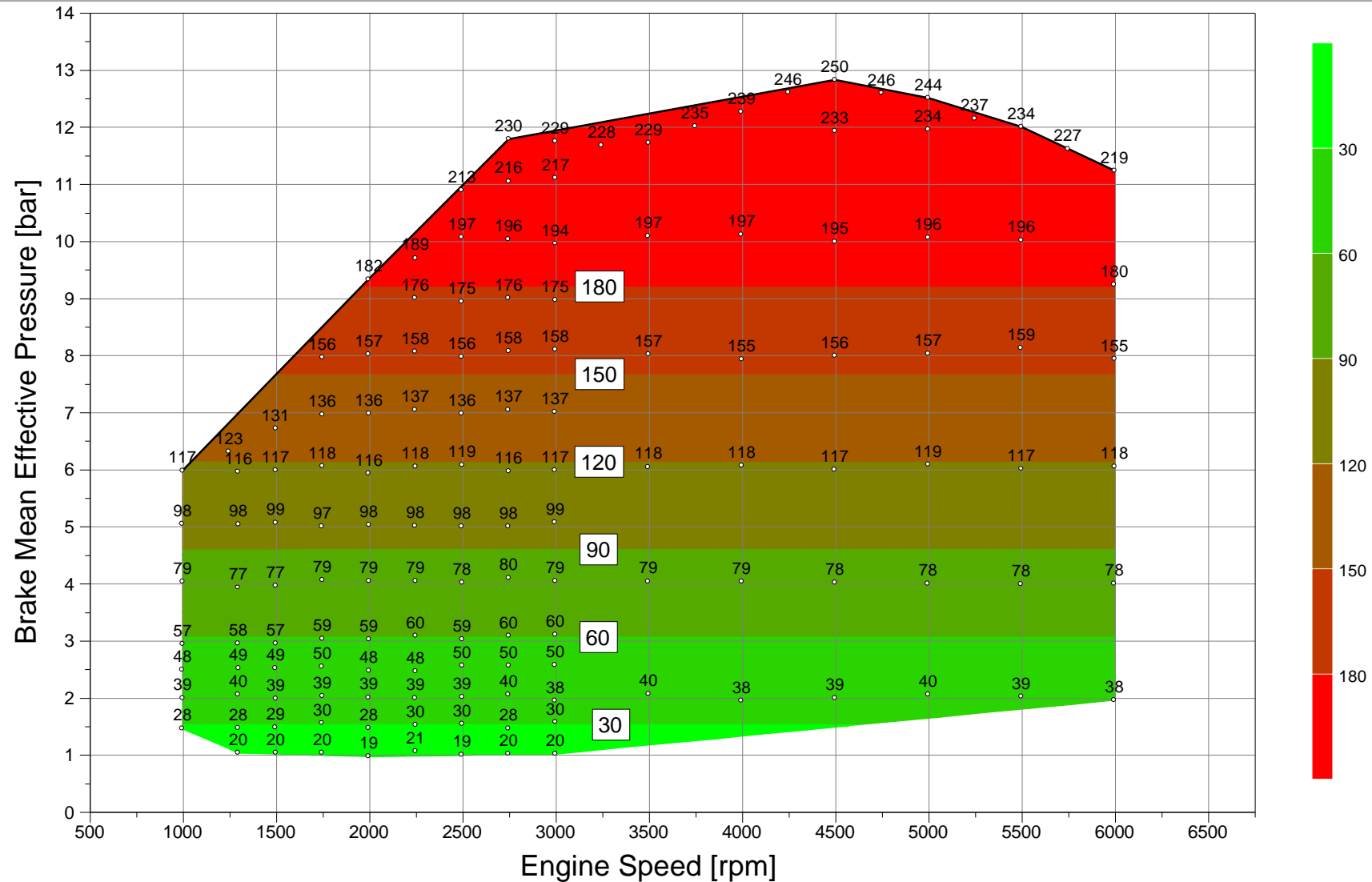
Contract No. EP-C-12-014, Work Assignment 1-5
July 31, 2013



This lambda plot is provided to illustrate the location of the test points used to generate the remaining data plots.

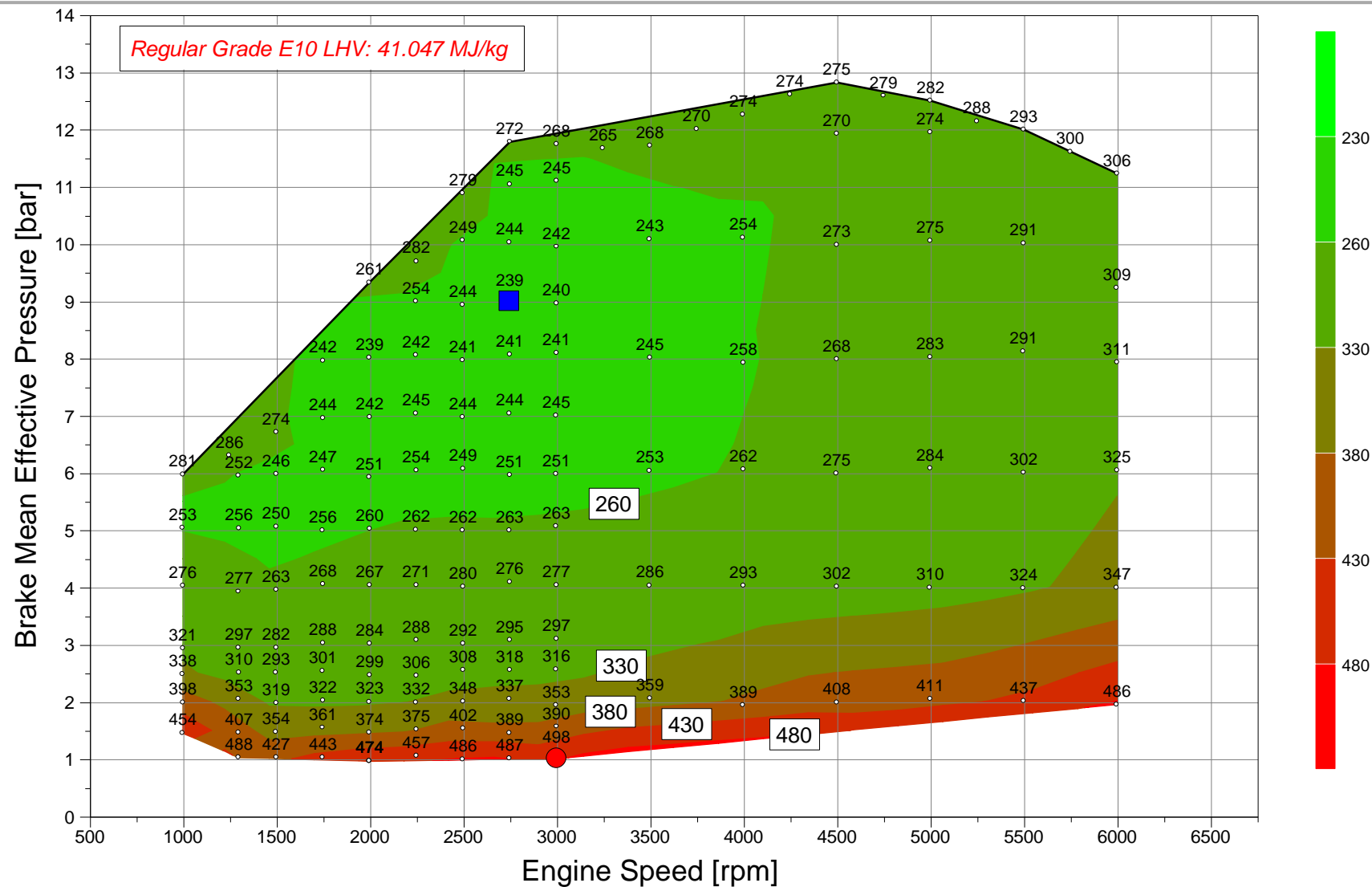
EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Measured Torque [Nm]

Contract No. EP-C-12-014, Work Assignment 1-5
July 31, 2013



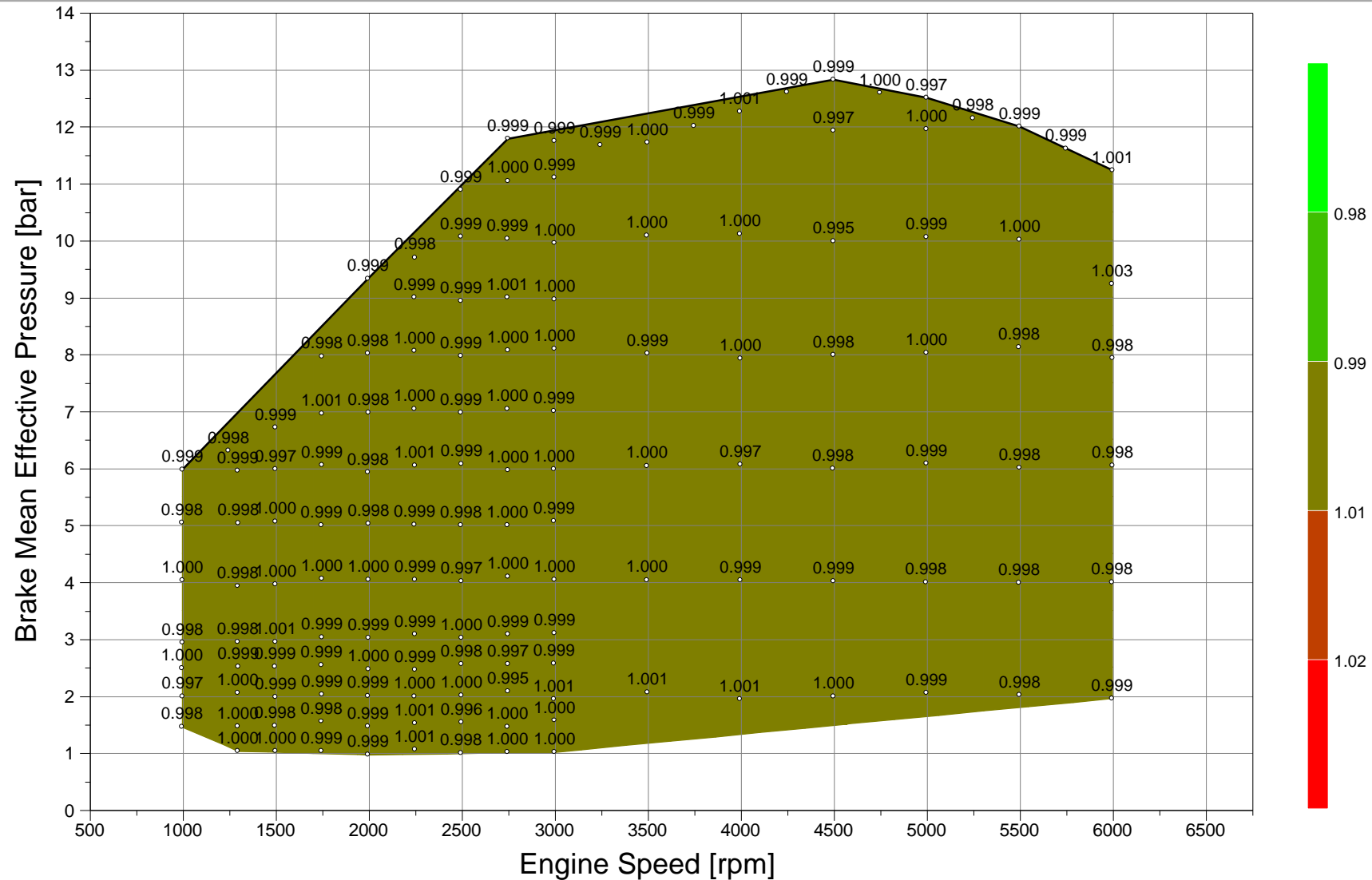
EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Measured (Raw) BSFC [g/kWhr]

Contract No. EP-C-12-014, Work Assignment 1-5
July 31, 2013



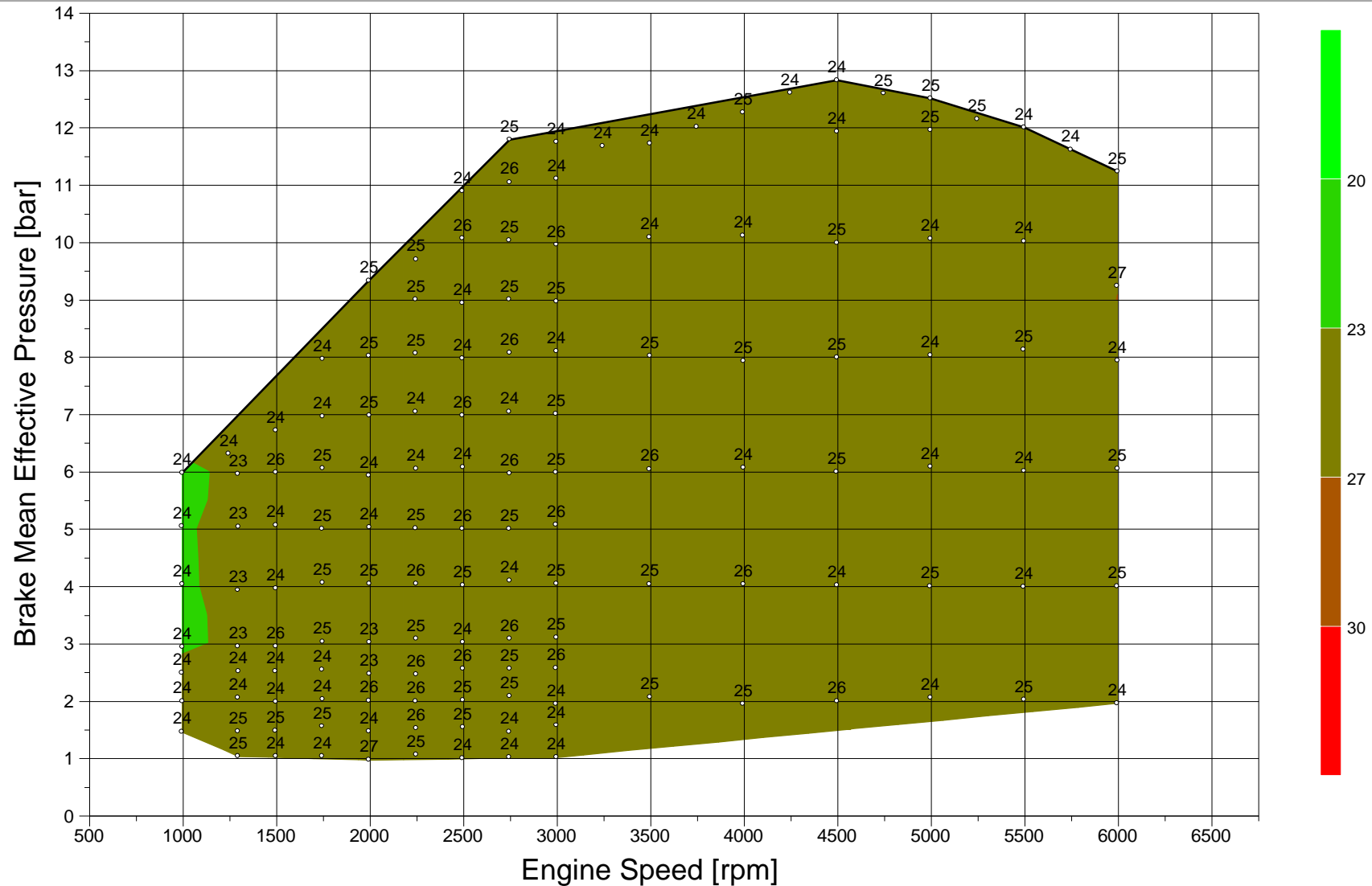


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Pressure Before Air Filter [barA]



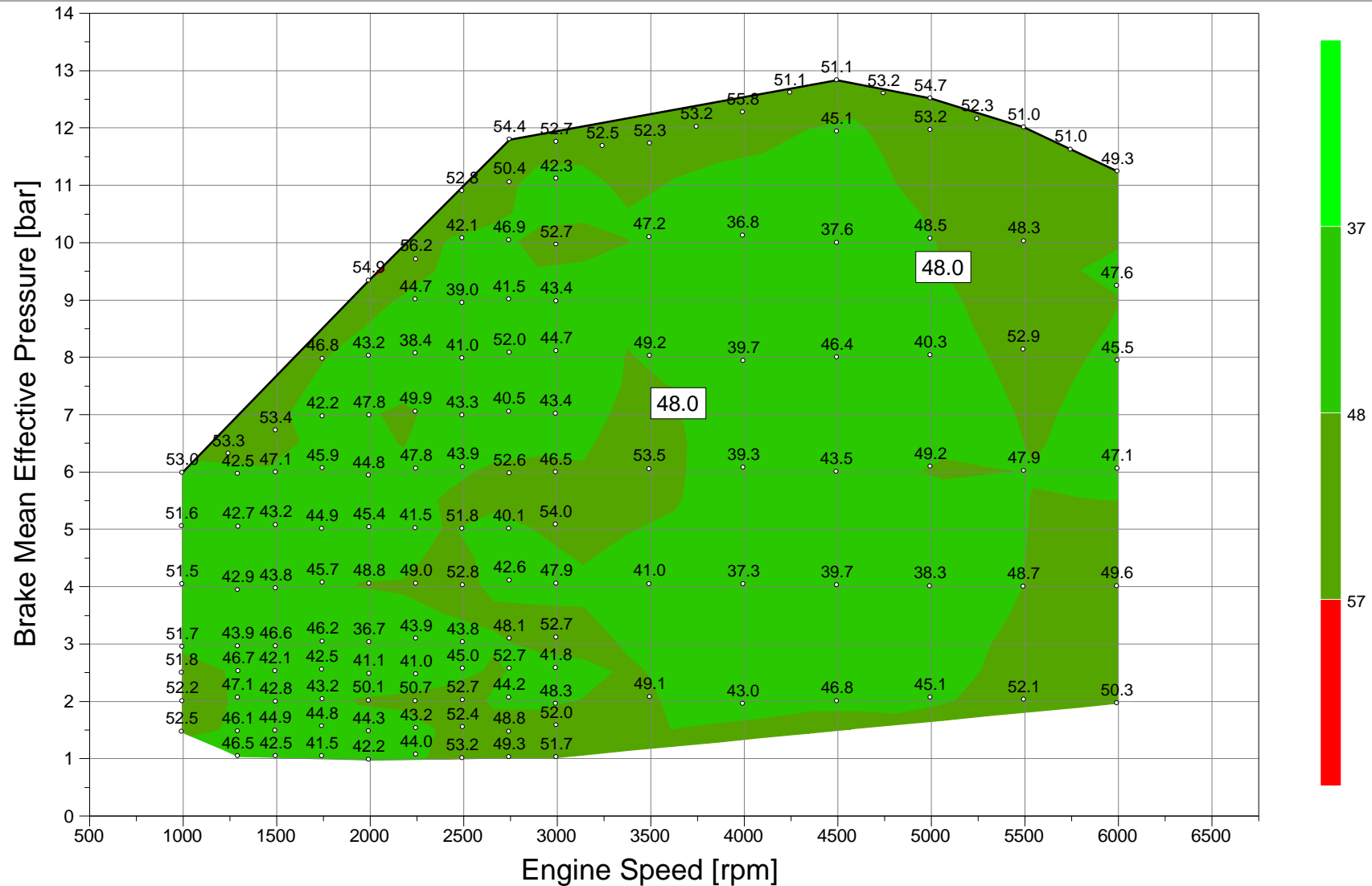


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Temperature before Air Filter [°C]



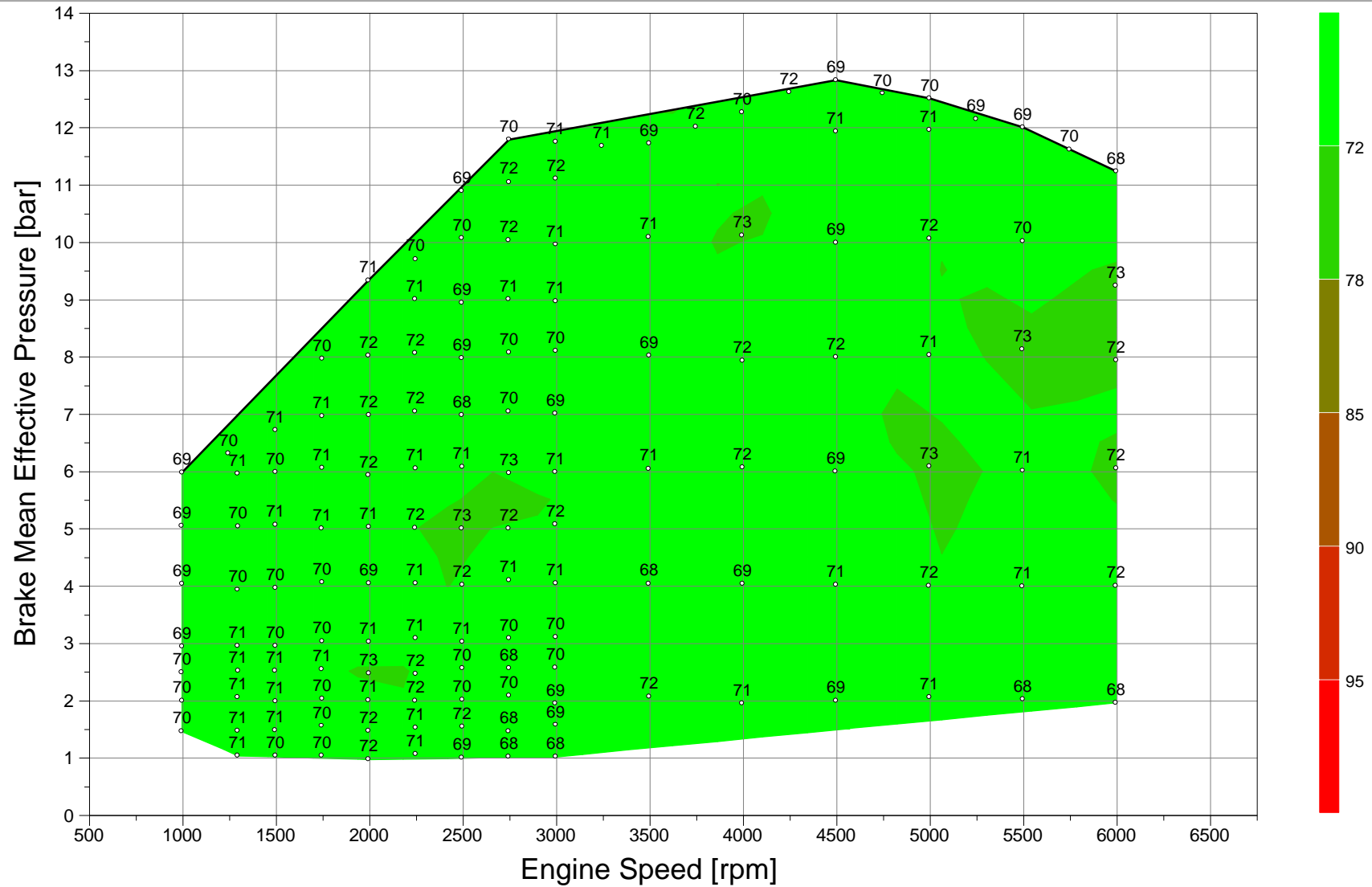


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Absolute Humidity [grains / lb]



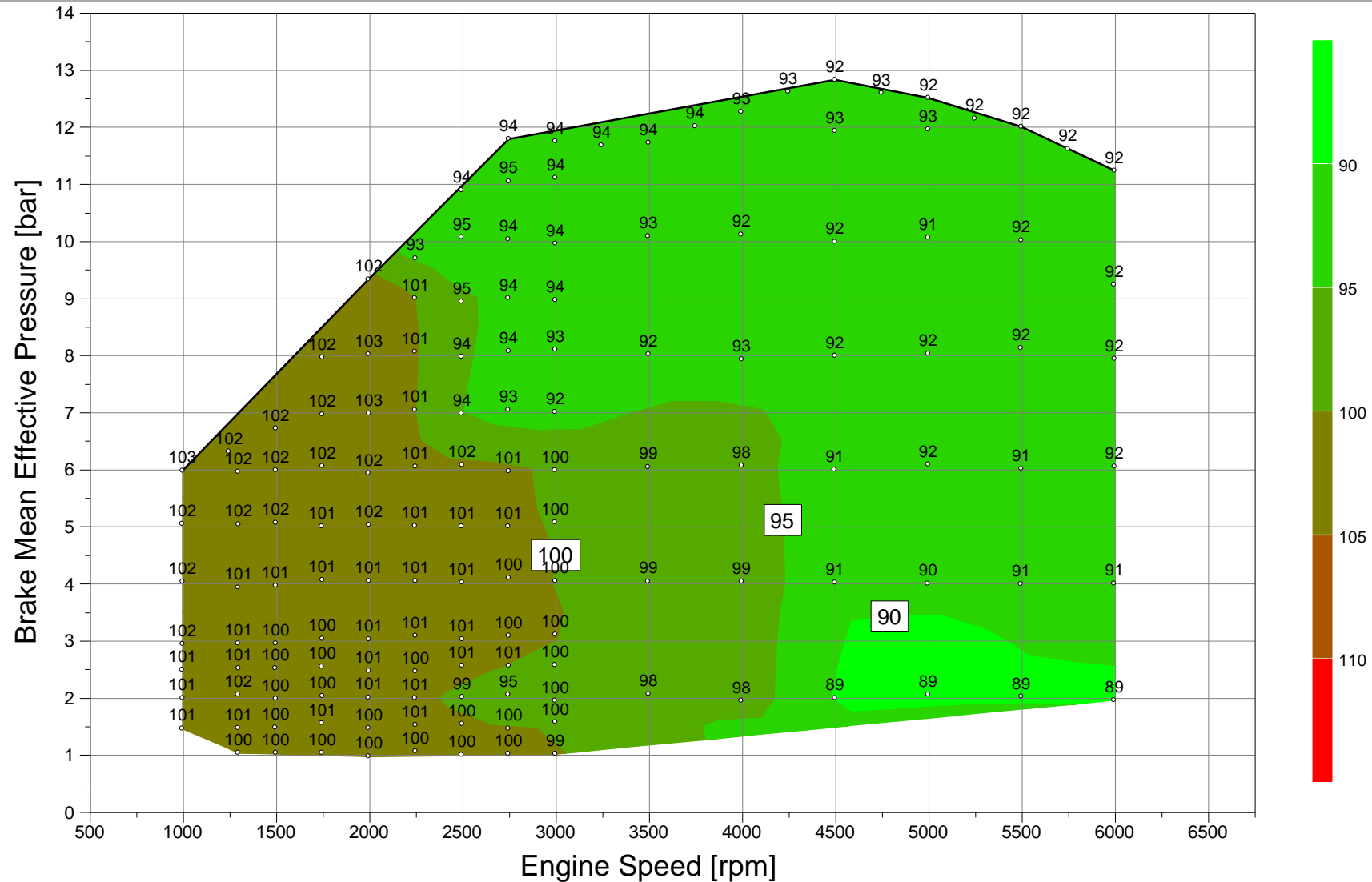


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Coolant Inlet Temperature [°C]



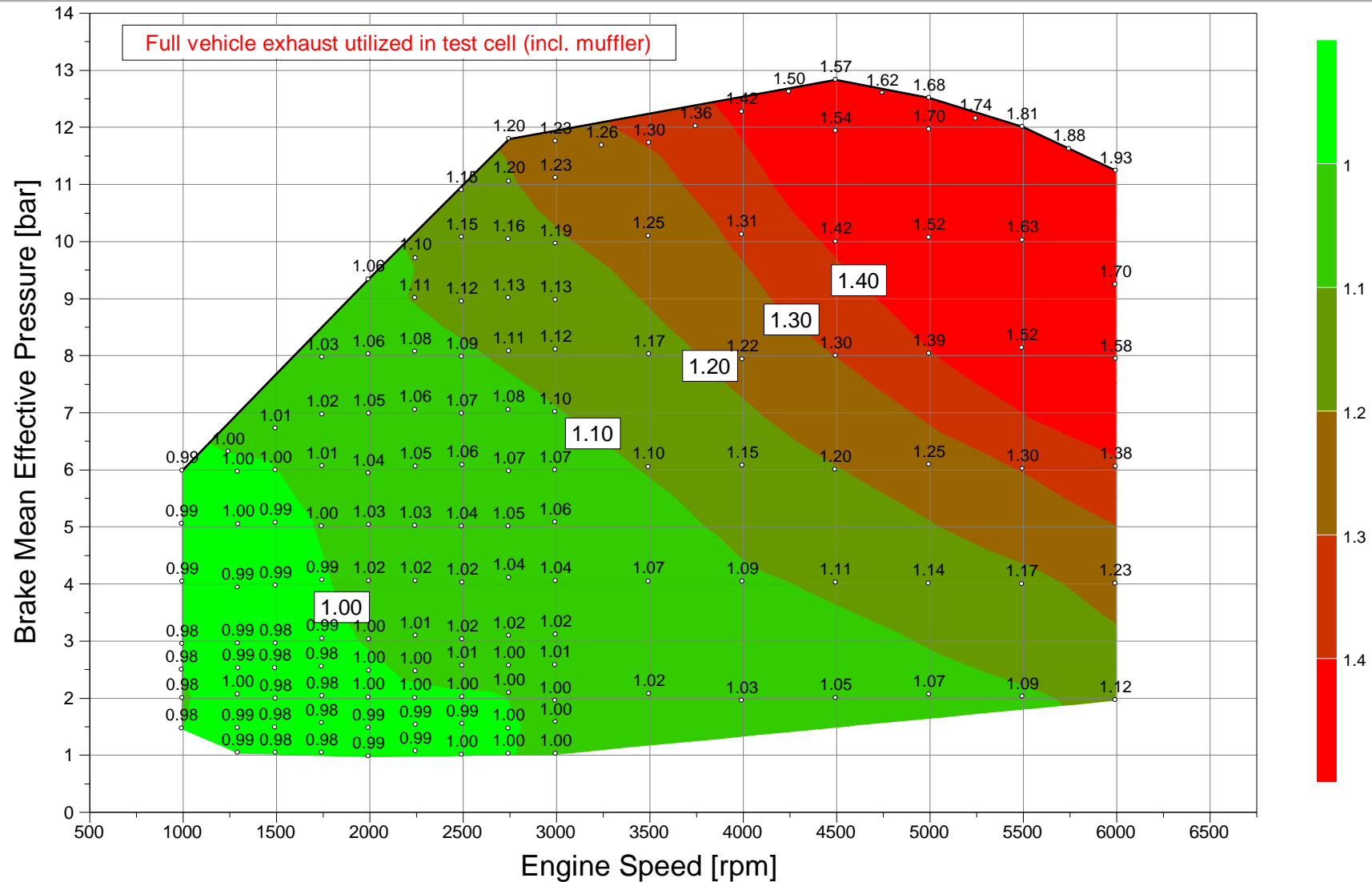


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Coolant Outlet Temperature [°C]



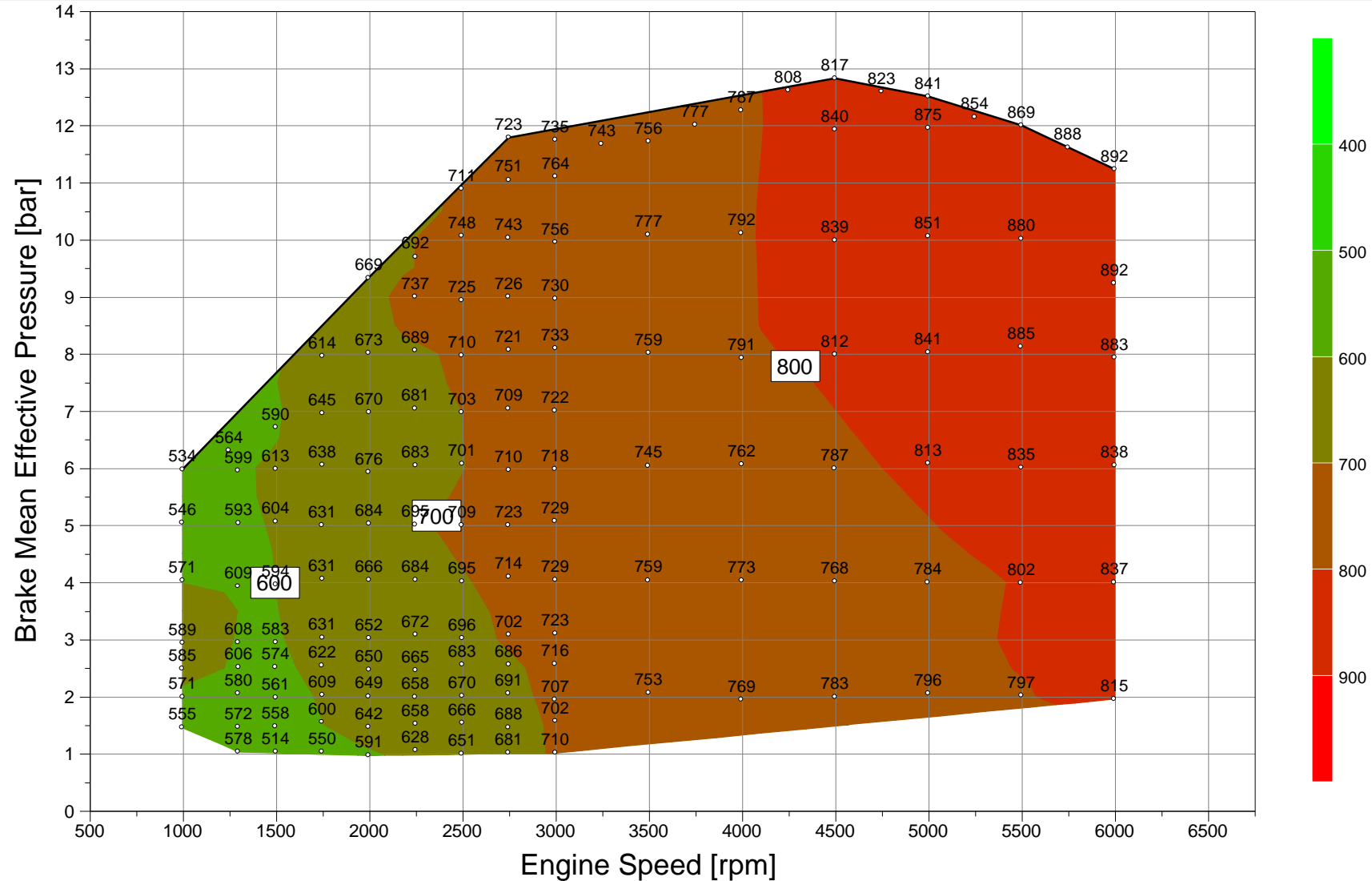


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Exhaust BP before Catalyst [barA]



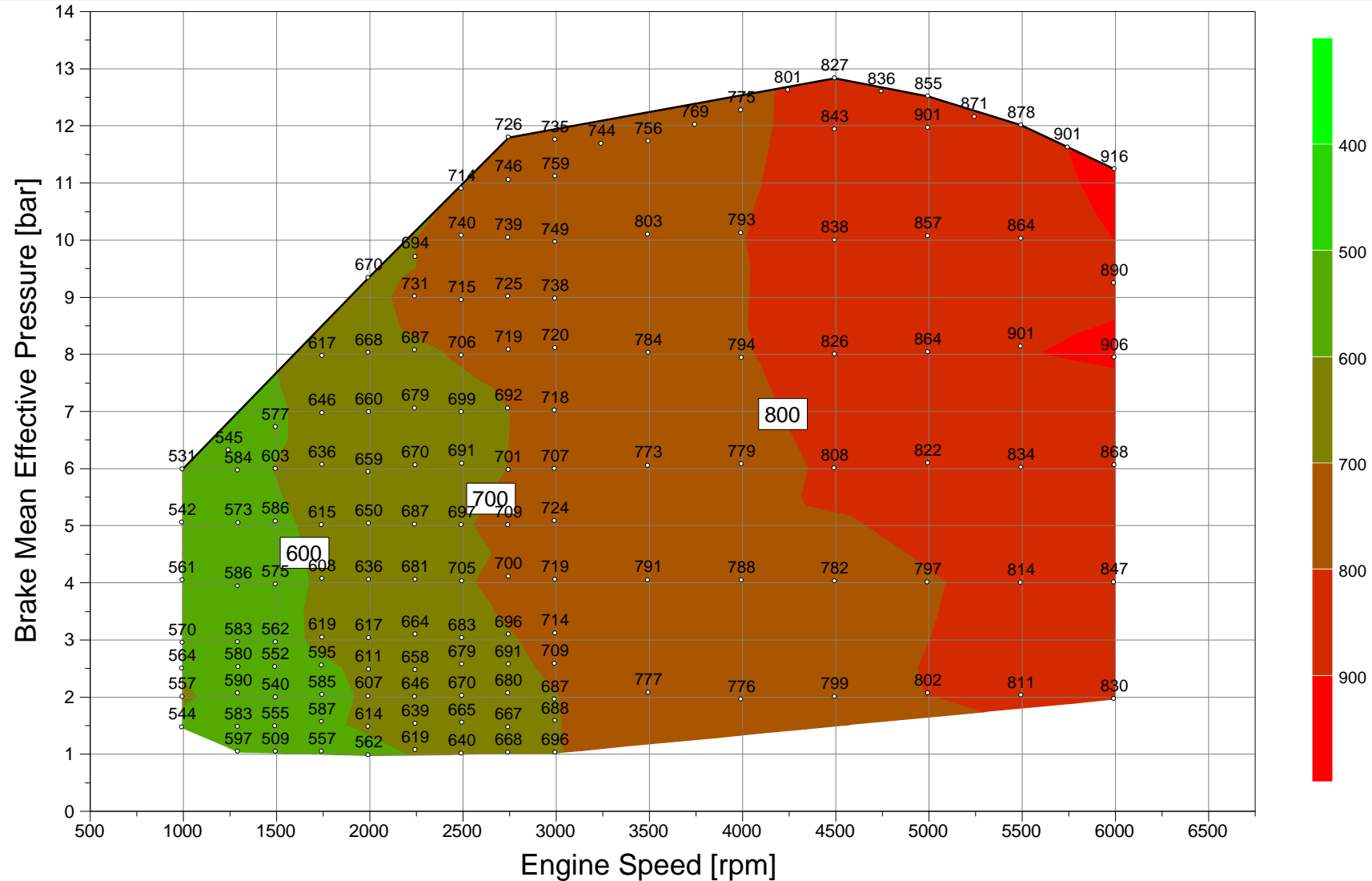


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Exhaust Port 1 Temperature [°C]



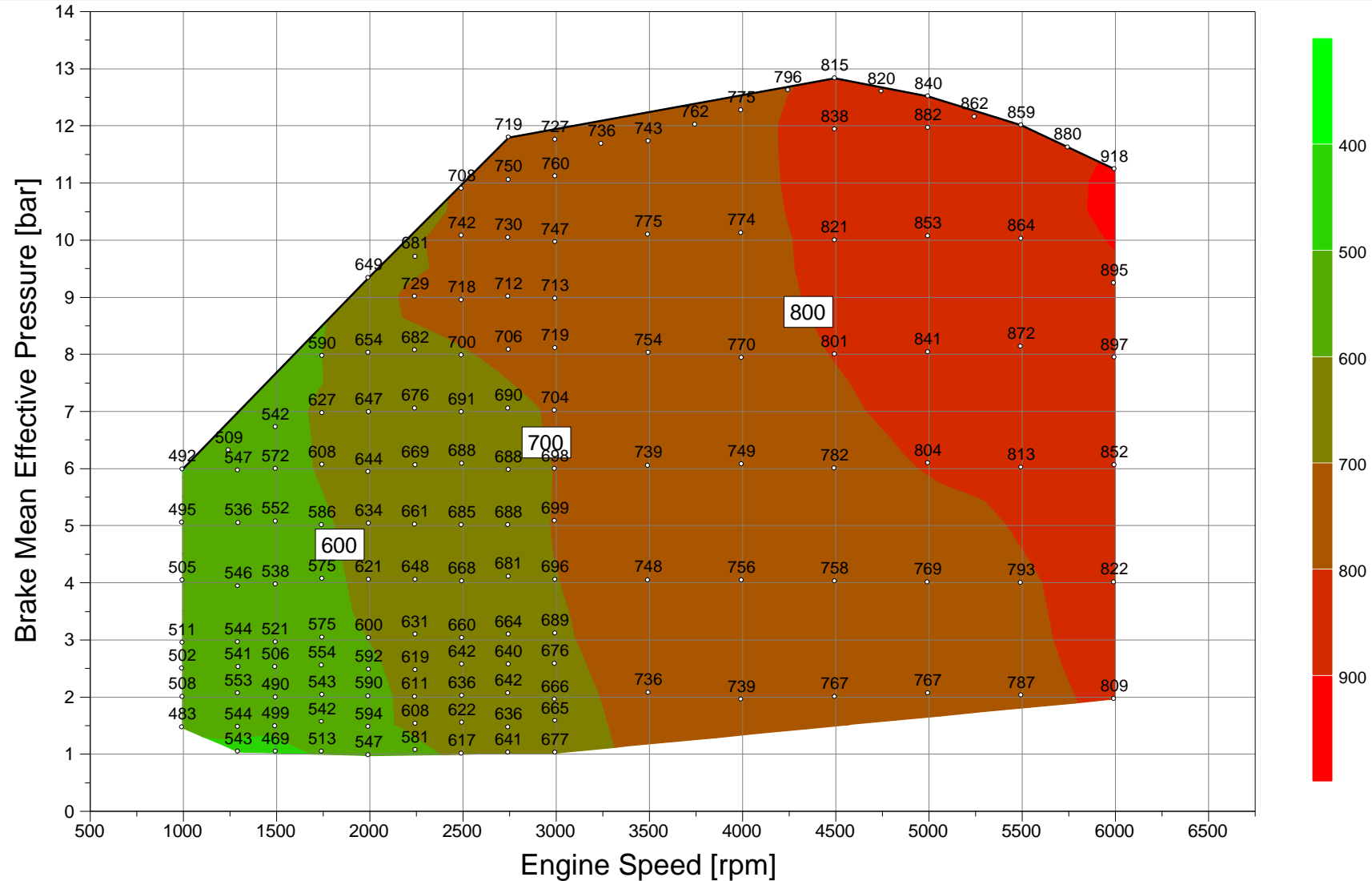


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Exhaust Port 2 Temperature [°C]



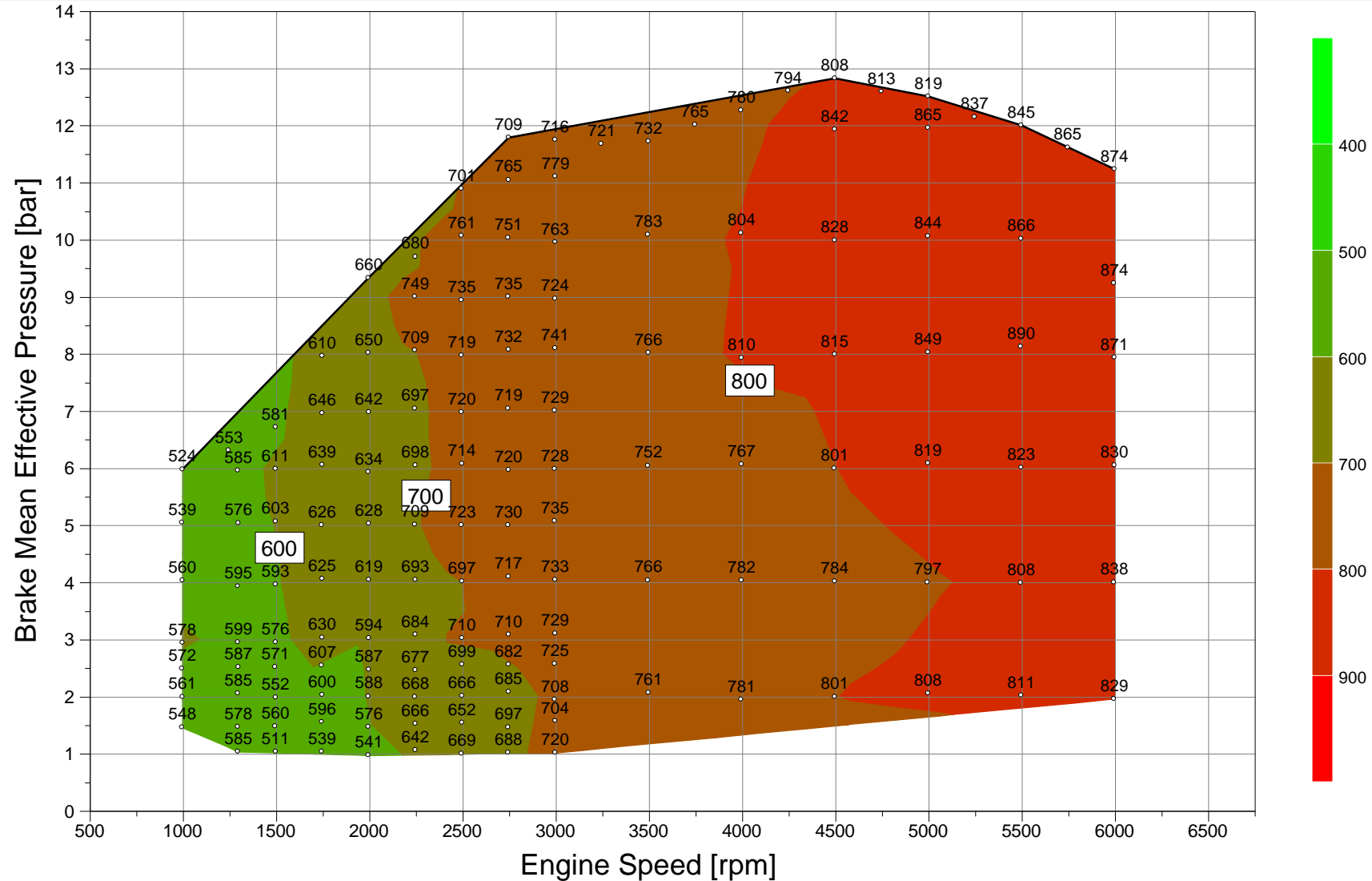


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Exhaust Port 3 Temperature [°C]



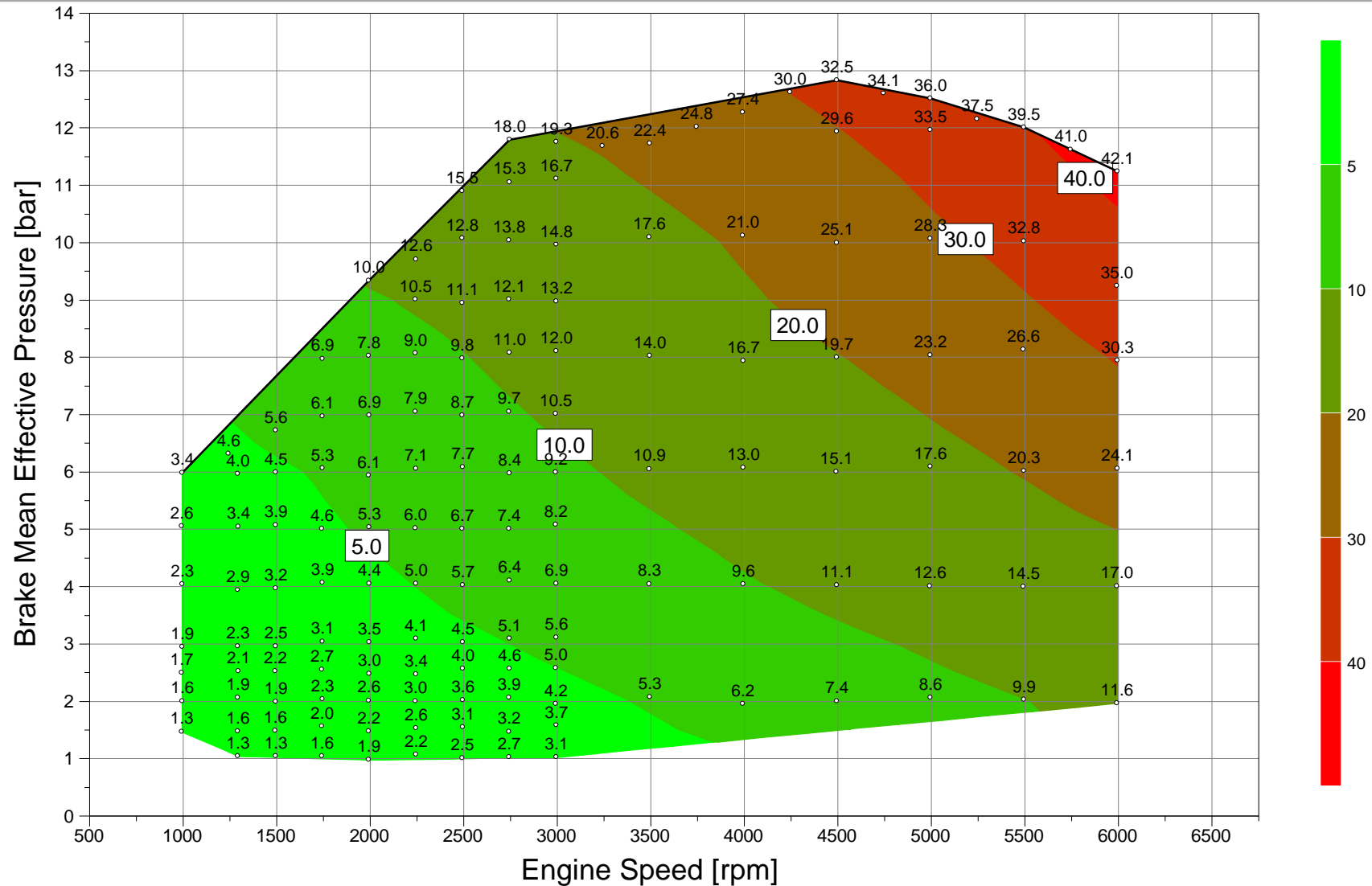


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Exhaust Port 4 Temperature [°C]



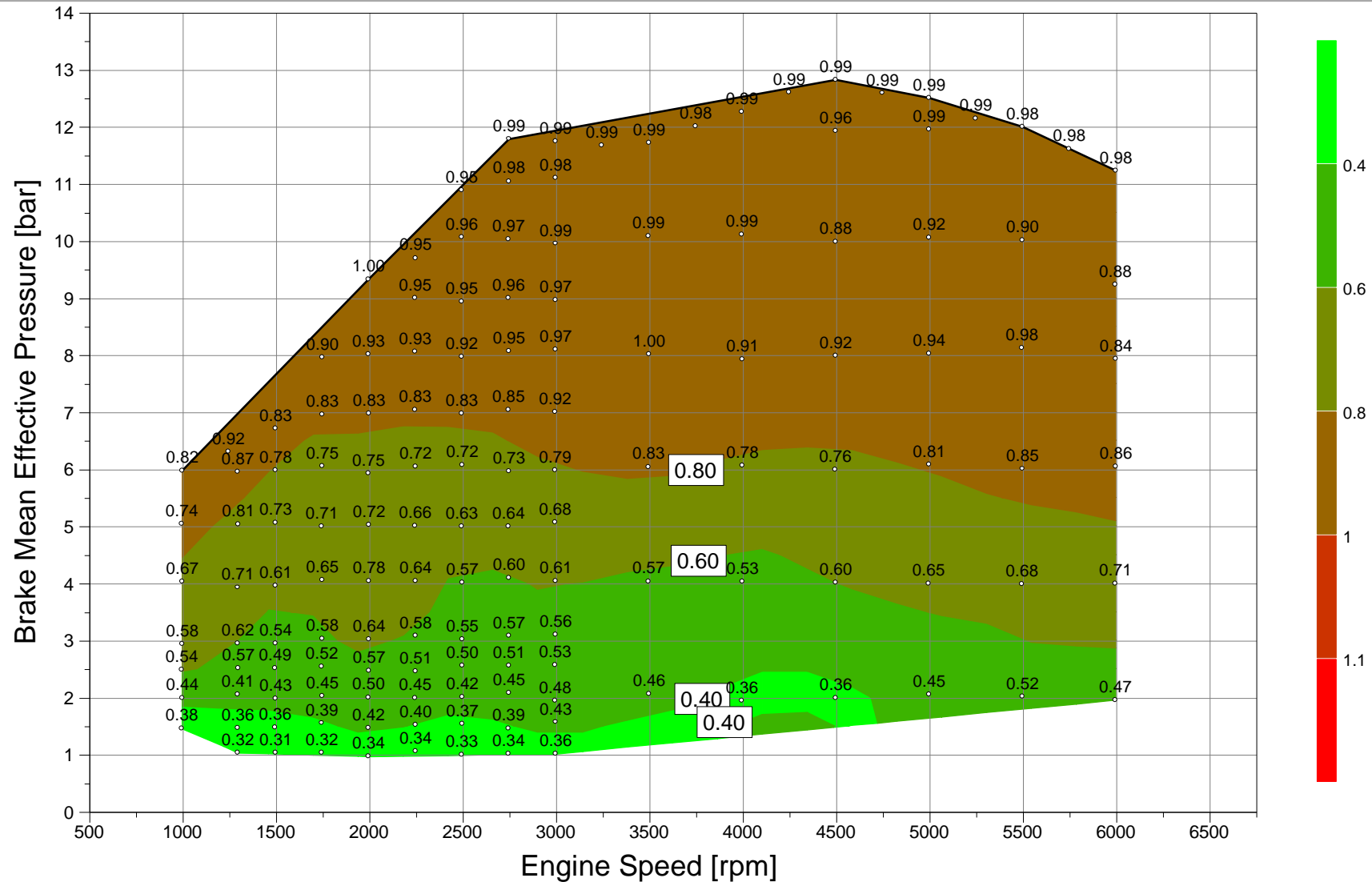


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Flow Rate of Fuel [kg/hr]



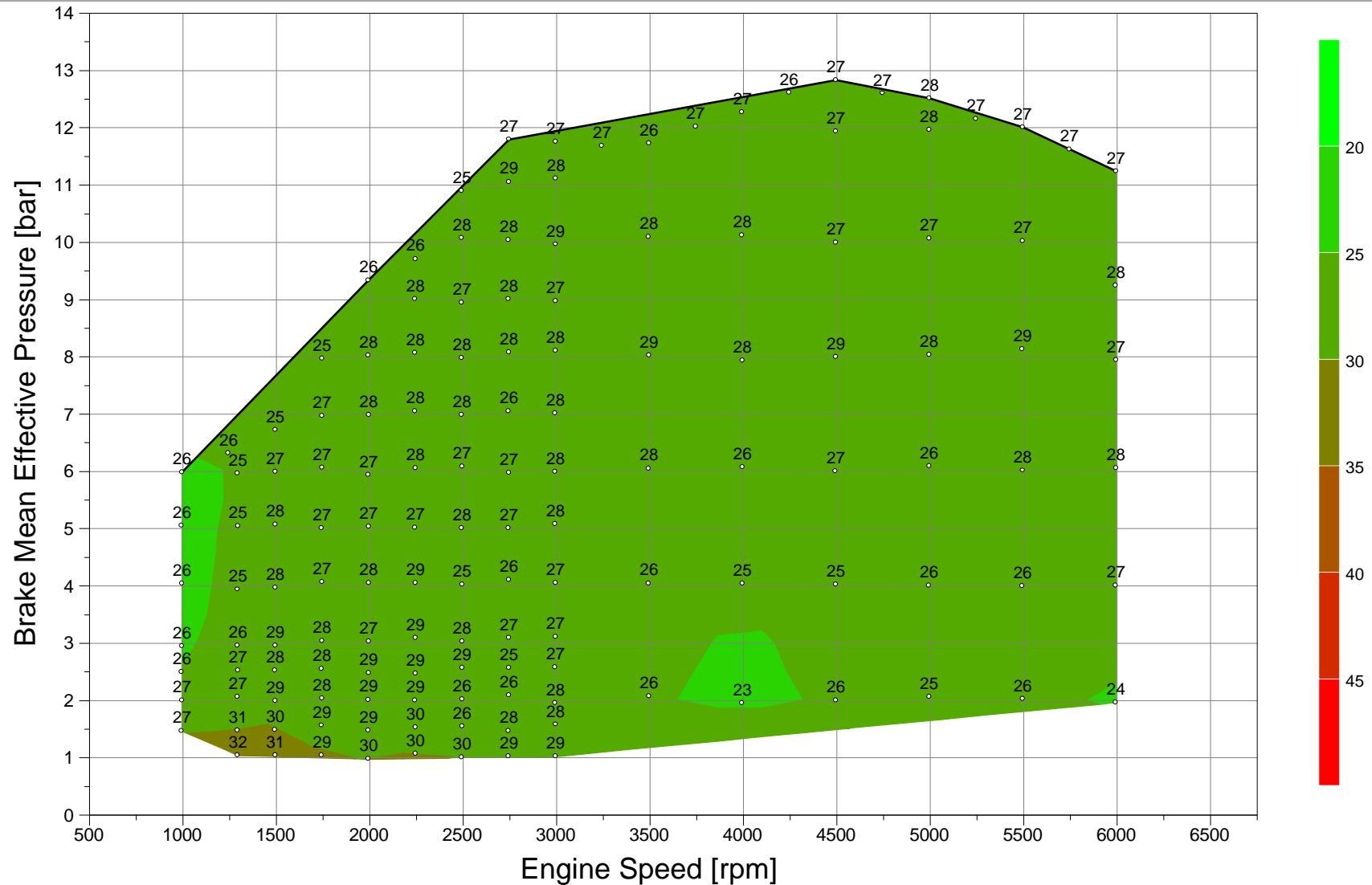


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Pressure in Intake Manifold [barA]



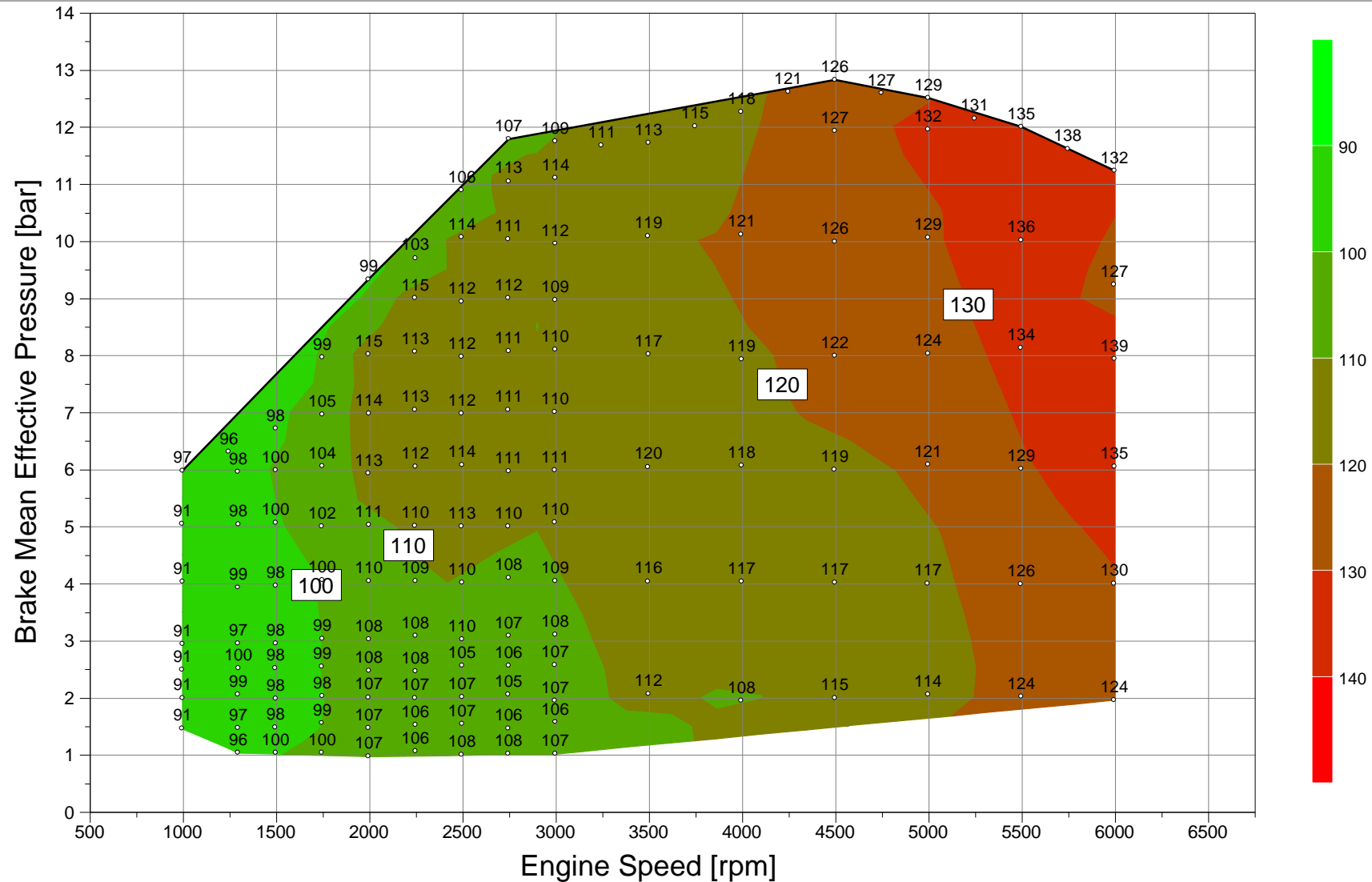


EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Temperature at Intake Manifold [°C]





EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Oil pan Temperature [°C]





EPA Benchmarking: 2013 Chevrolet Malibu 2.5L I-4 16V GDI [LCV] Engine Dyno Testing - Mapping: Throttle Position [% open]

