

2015 Ford 2.7L EcoBoost V6 Tier 2 Fuel Cell 9 - Test Data Plots

SUGGESTED CITATION: *2015 Ford 2.7L EcoBoost V6 Engine Tier 2 Fuel Cell 9 - Test Data Package*. Version 2019-11. Ann Arbor, MI: US EPA, National Vehicle and Fuel Emissions Laboratory, National Center for Advanced Technology, 2019.

- ◆ Black diamonds indicate rated torque & power points advertised by the manufacturer
- Black dots indicate speed/load points at which steady state data was acquired
- ✗ Red Xs indicate speed/load points where data was not collected or did not meet quality standards

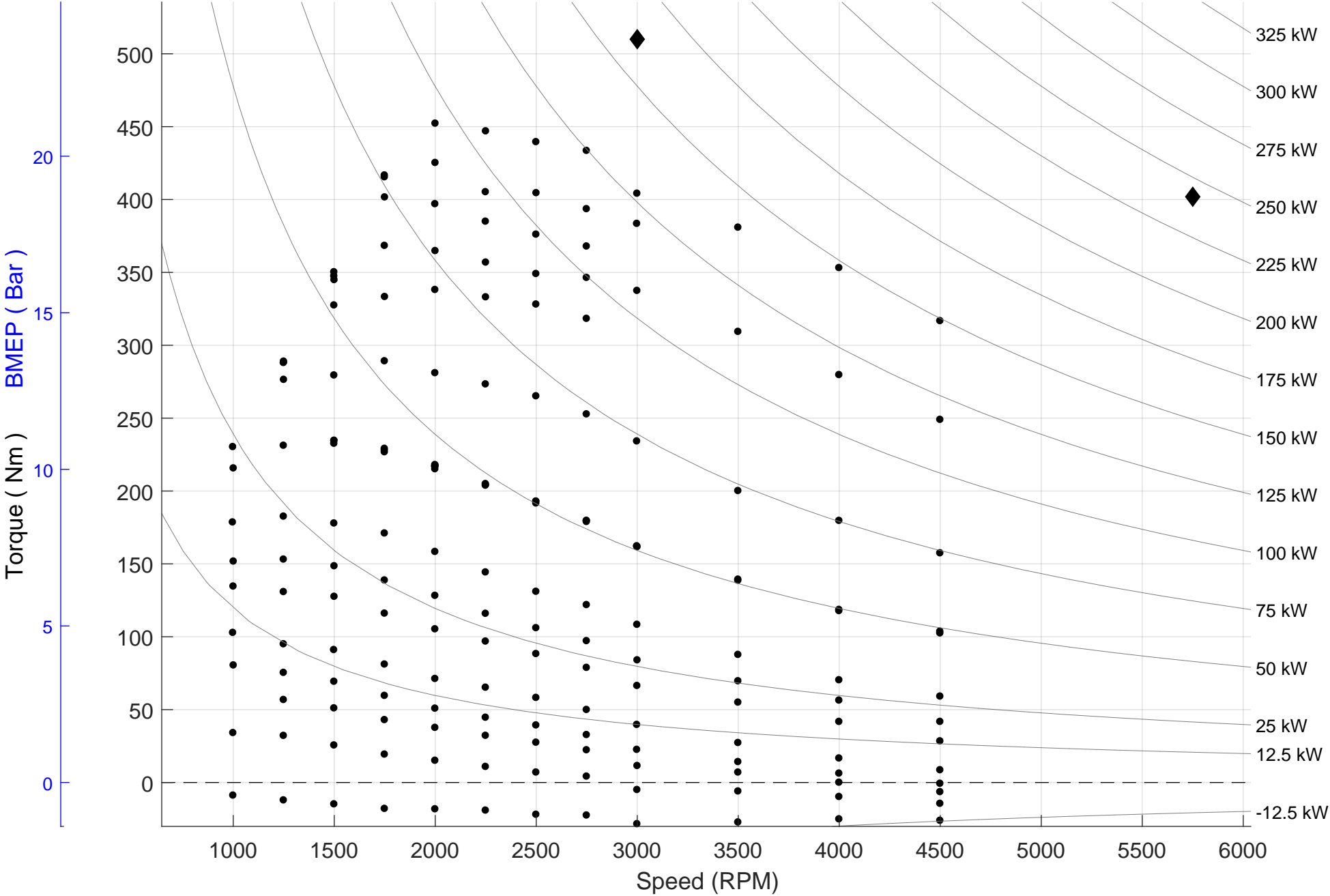
Note: In these contour plots, individual data points may be ignored or removed, using our best engineering judgment, to correct irregularities in the visual presentation of the contour lines; additional details are contained in the test report.

Published maximum torque data from:

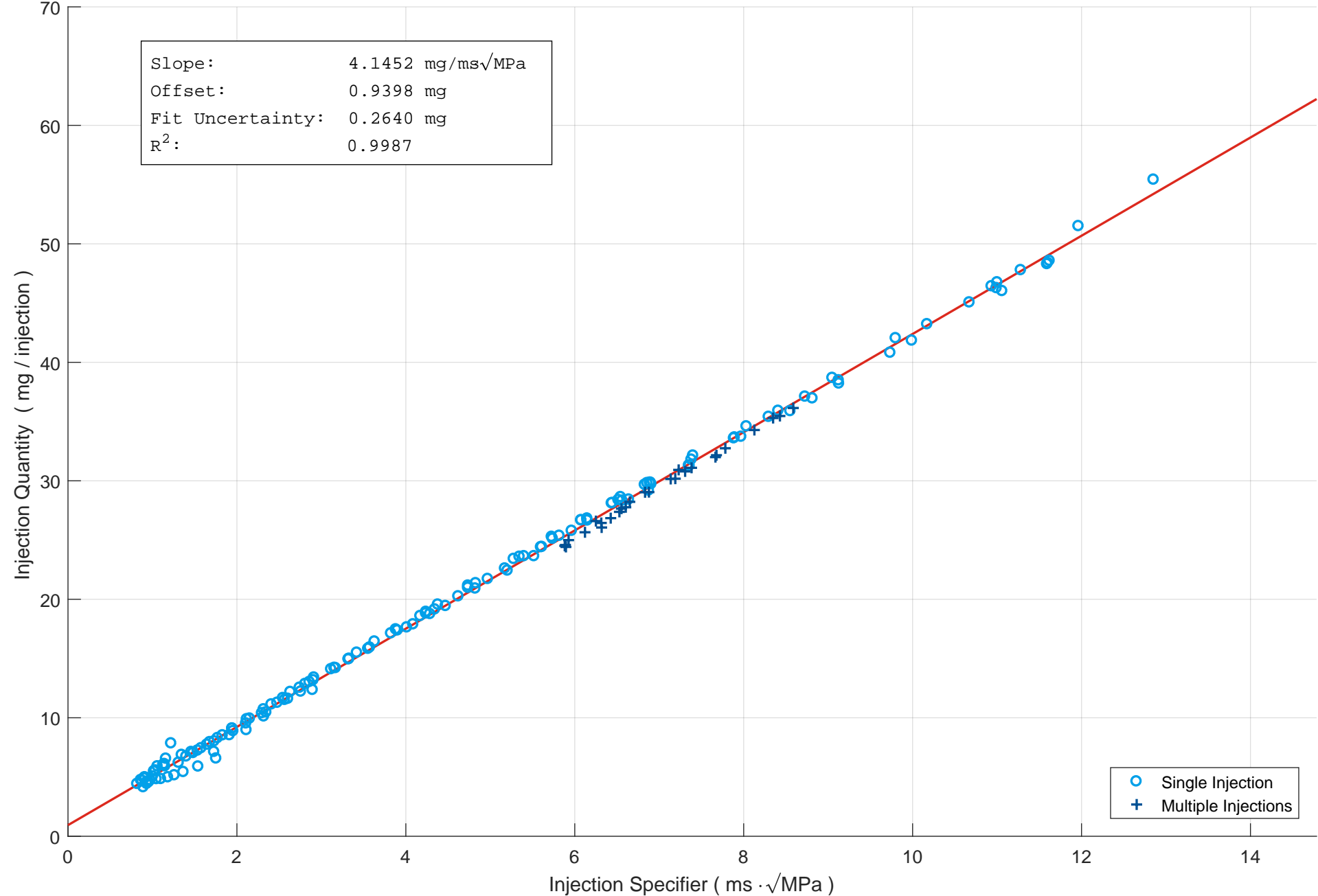
2015 FORD F-150 TECHNICAL SPECIFICATIONS. (n.d.). Retrieved from

https://media.ford.com/content/dam/fordmedia/North%20America/US/2015_Specs/2015_F150_Specs.pdf

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Test Data Points



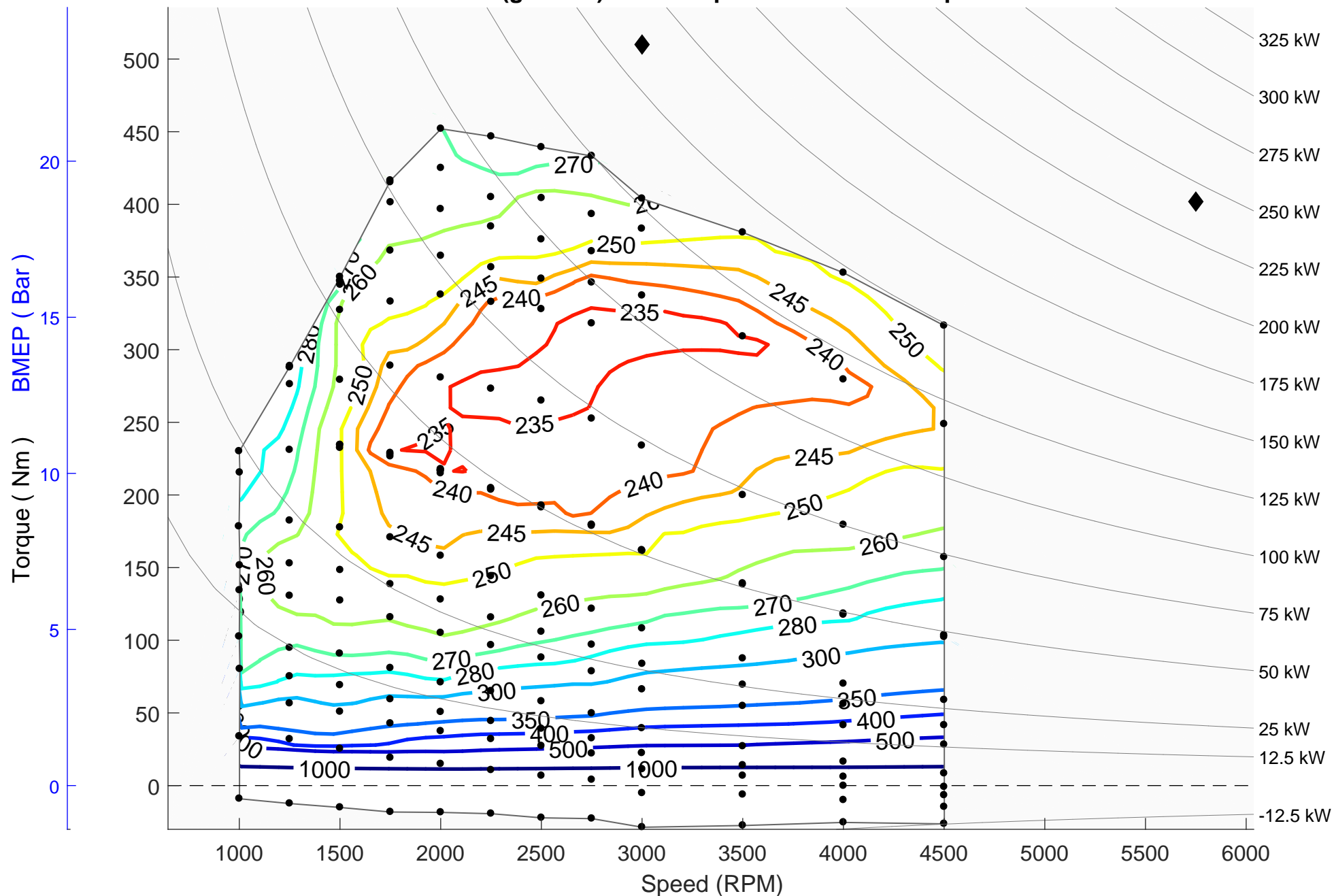
2015 Ford 2.7L EcoBoost V6 Tier 2 Fuel Cell 9 - Test Data Plots
Injector Calibration



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Steady State

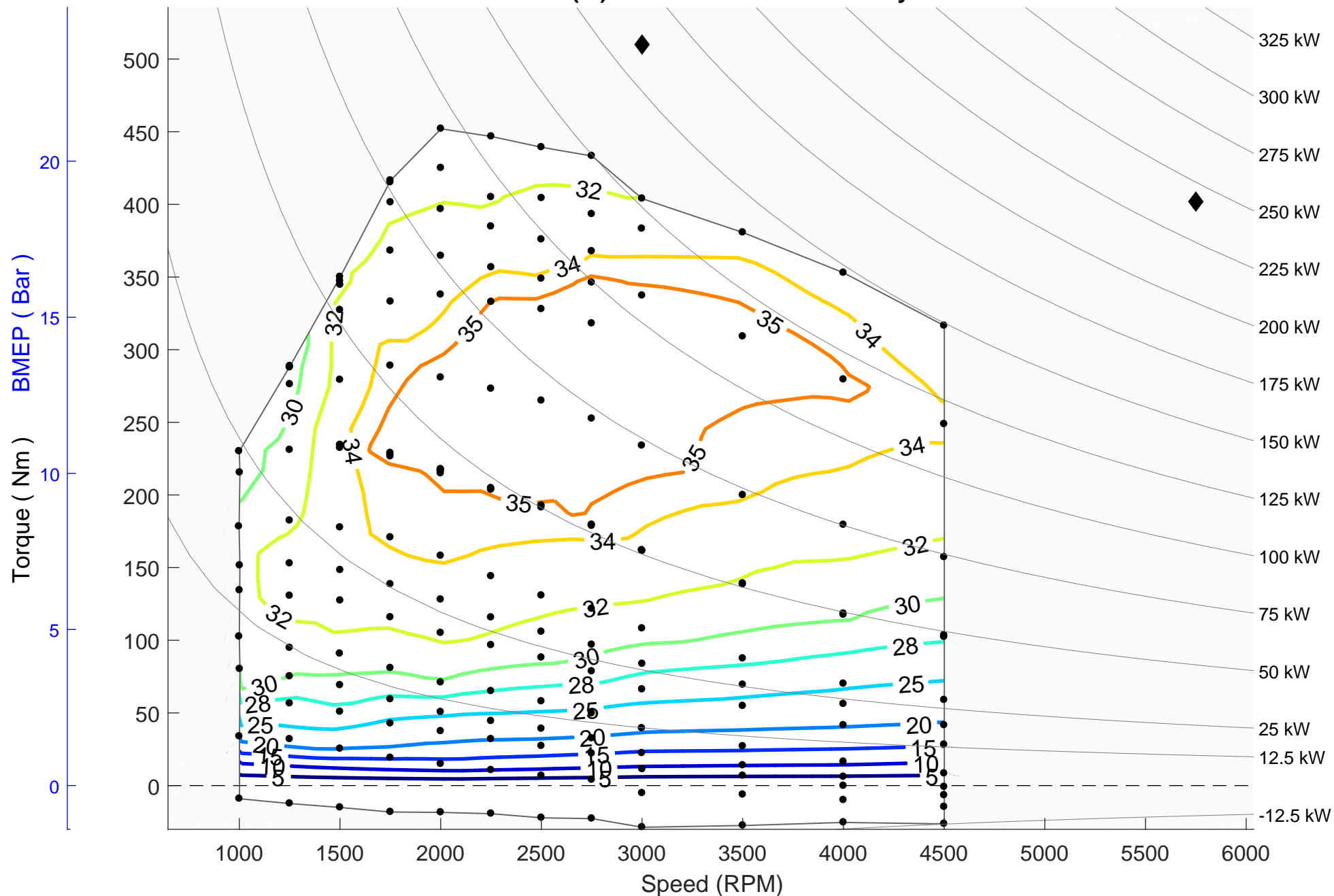
BSFC (g/kW-hr) - Brake Specific Fuel Consumption



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Steady State

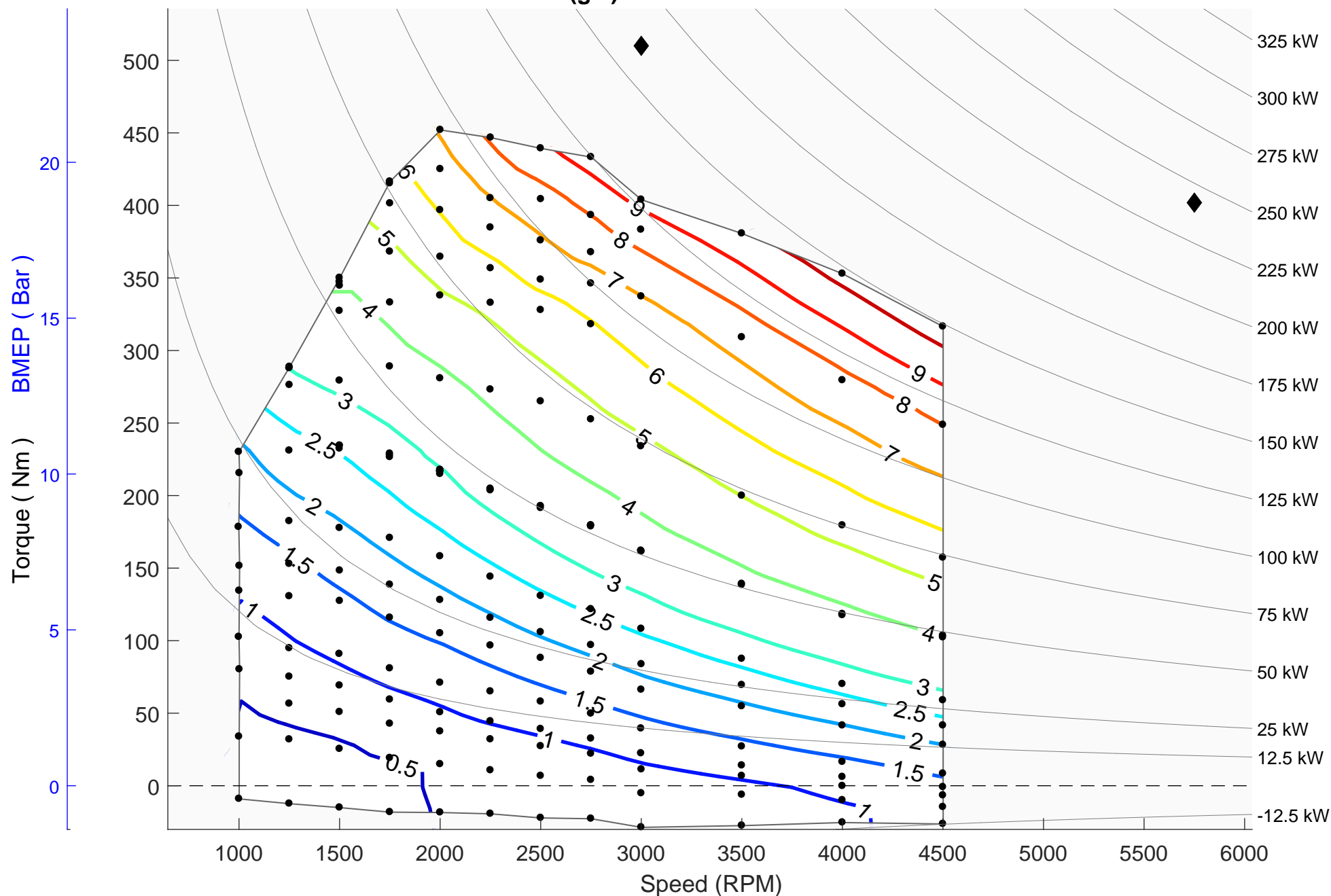
BTE (%) - Brake Thermal Efficiency



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Steady State

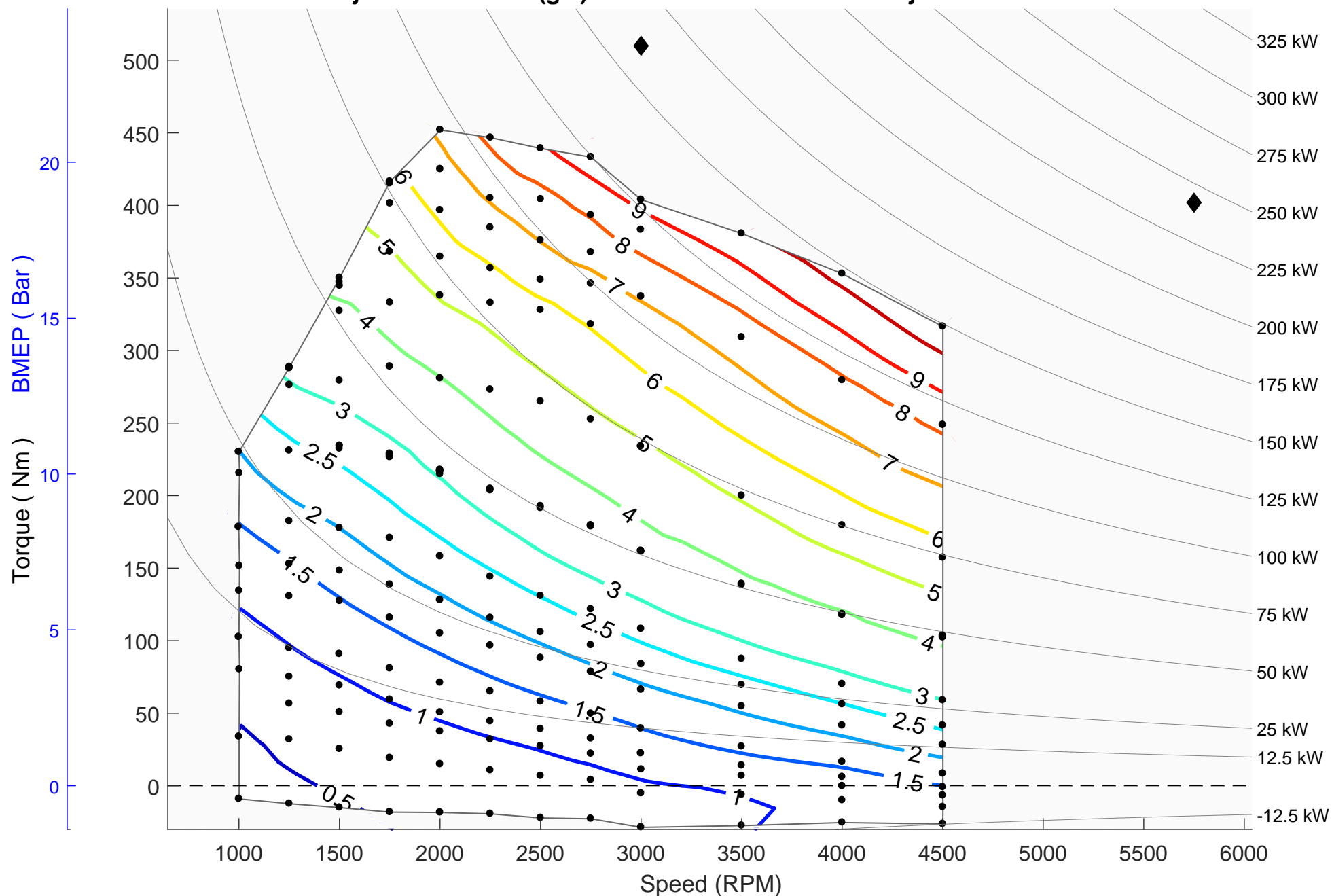
Fuel Meter Flow (g/s) - Fuel Flow Measured with Flow Meter



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Steady State

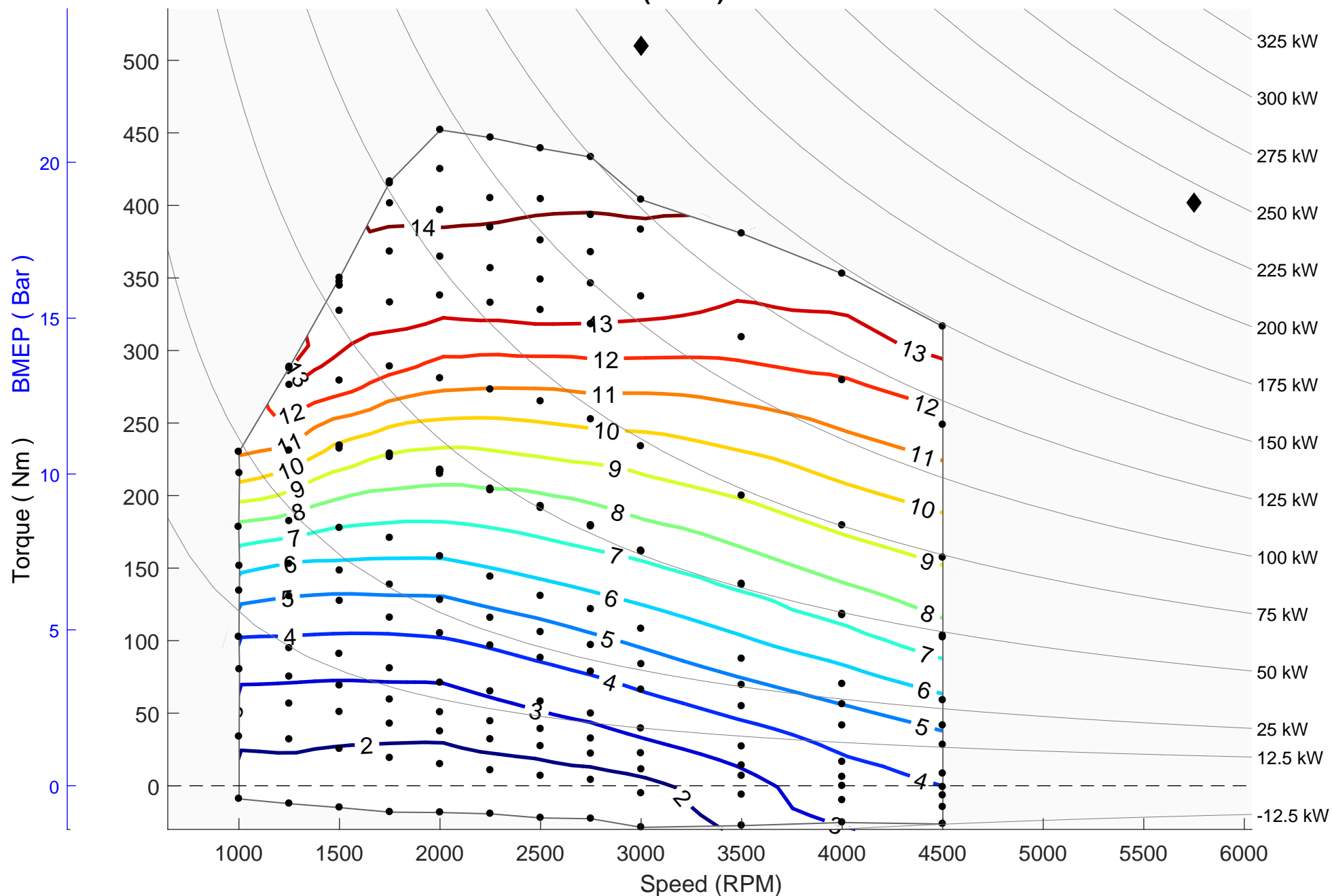
Injector Fuel Flow (g/s) - Fuel Flow Estimate from Injector Calibration



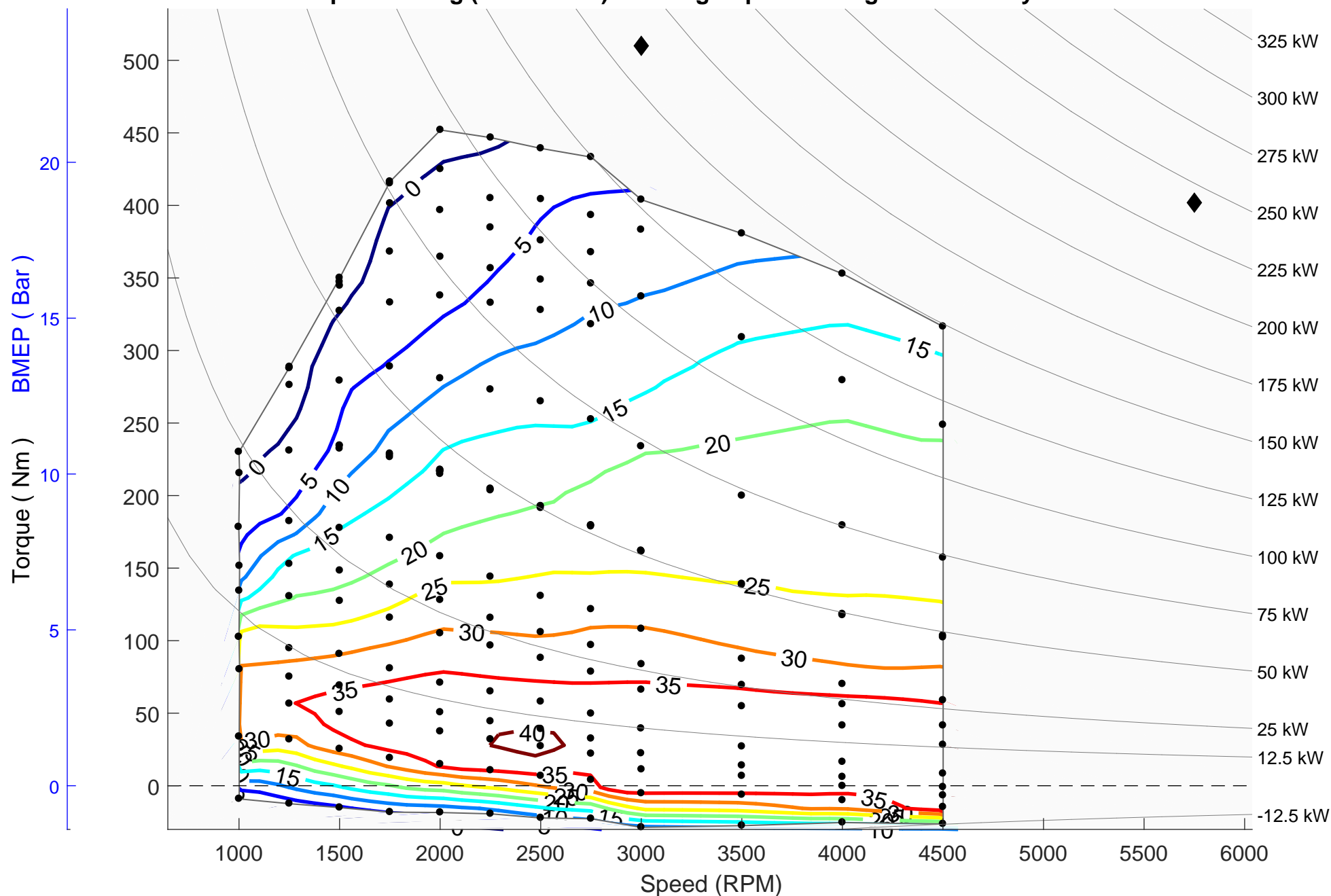
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Steady State

Fuel Rail Press (MPaG) - Fuel Rail Pressure*



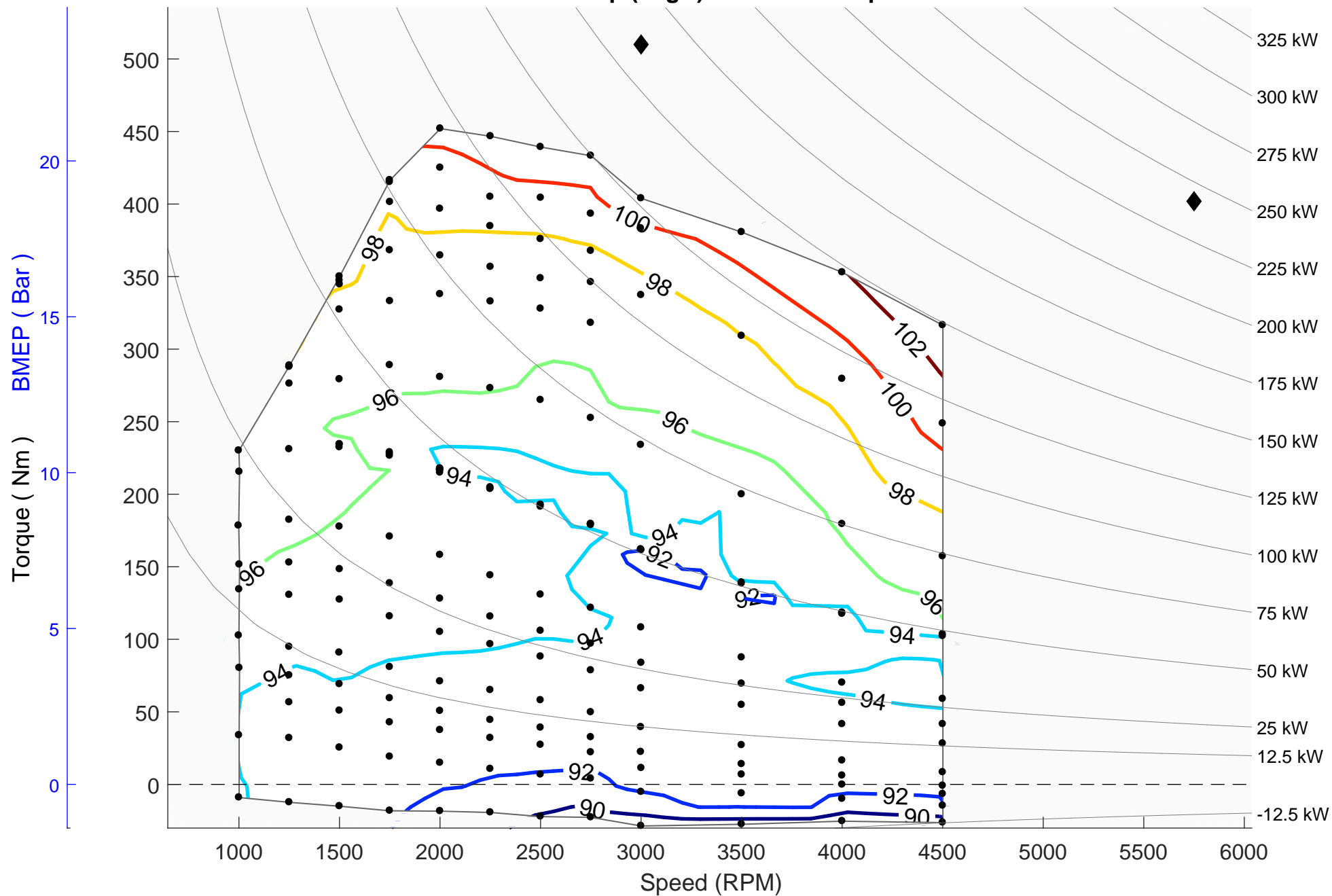
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Steady State
Spark Timing (CAD BTDC) - Average Spark Timing Across all Cylinders*



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Steady State

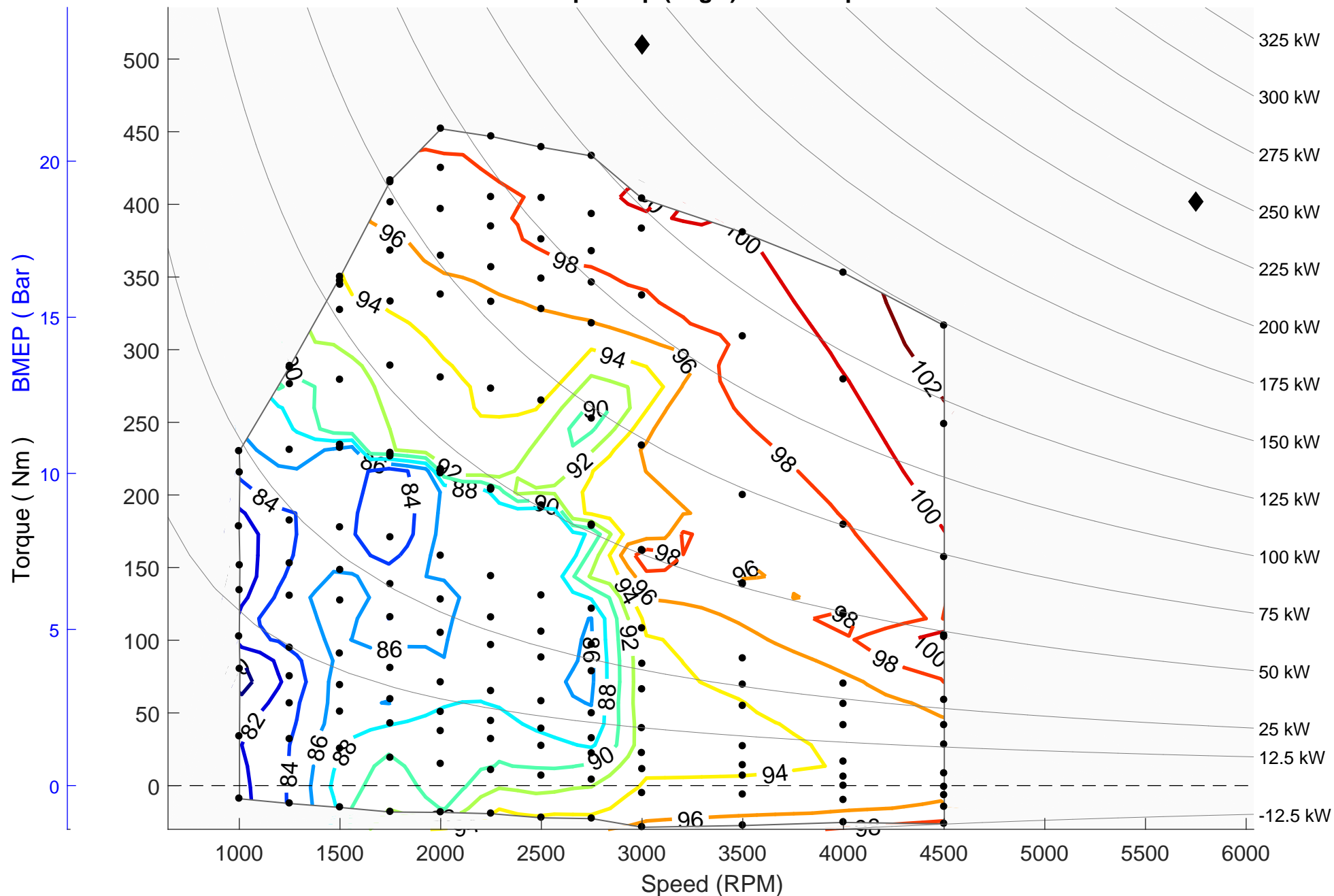
Coolant Temp (degC) - Coolant Temperature



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Steady State

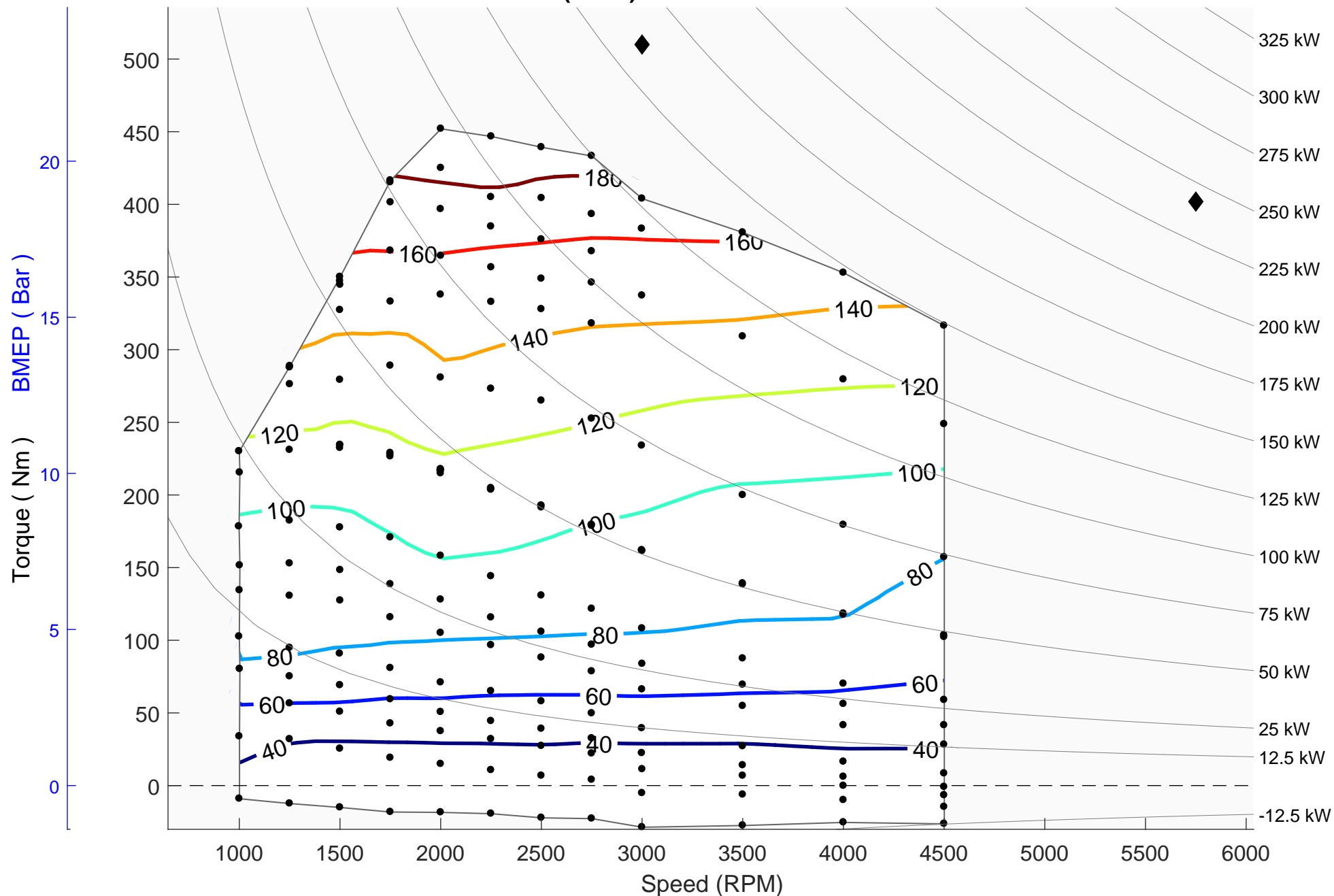
Oil Sump Temp (degC) - Oil Temperature



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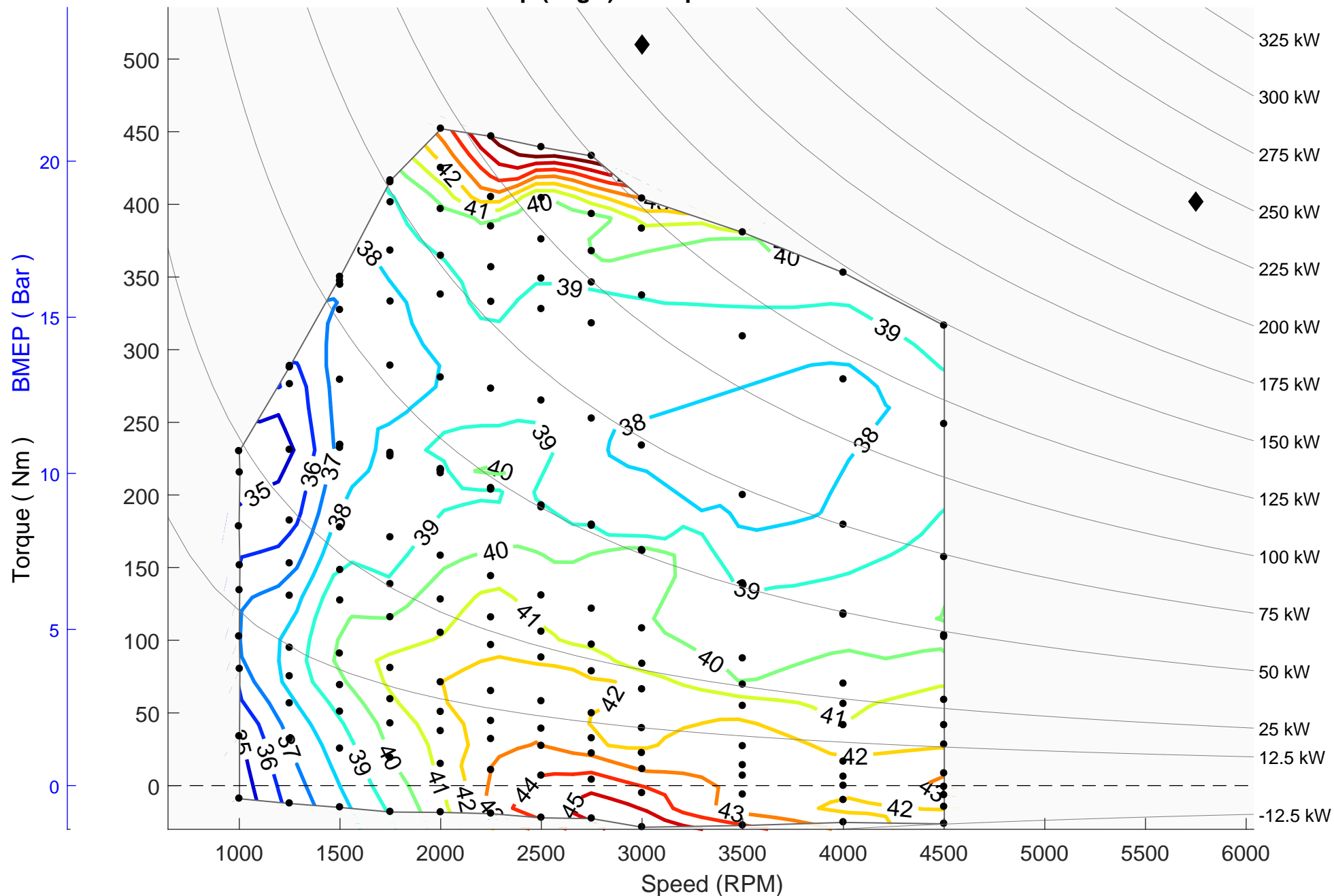
Intake Manifold Press (kPaA) - Pressure Measured in the Intake Manifold



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Steady State

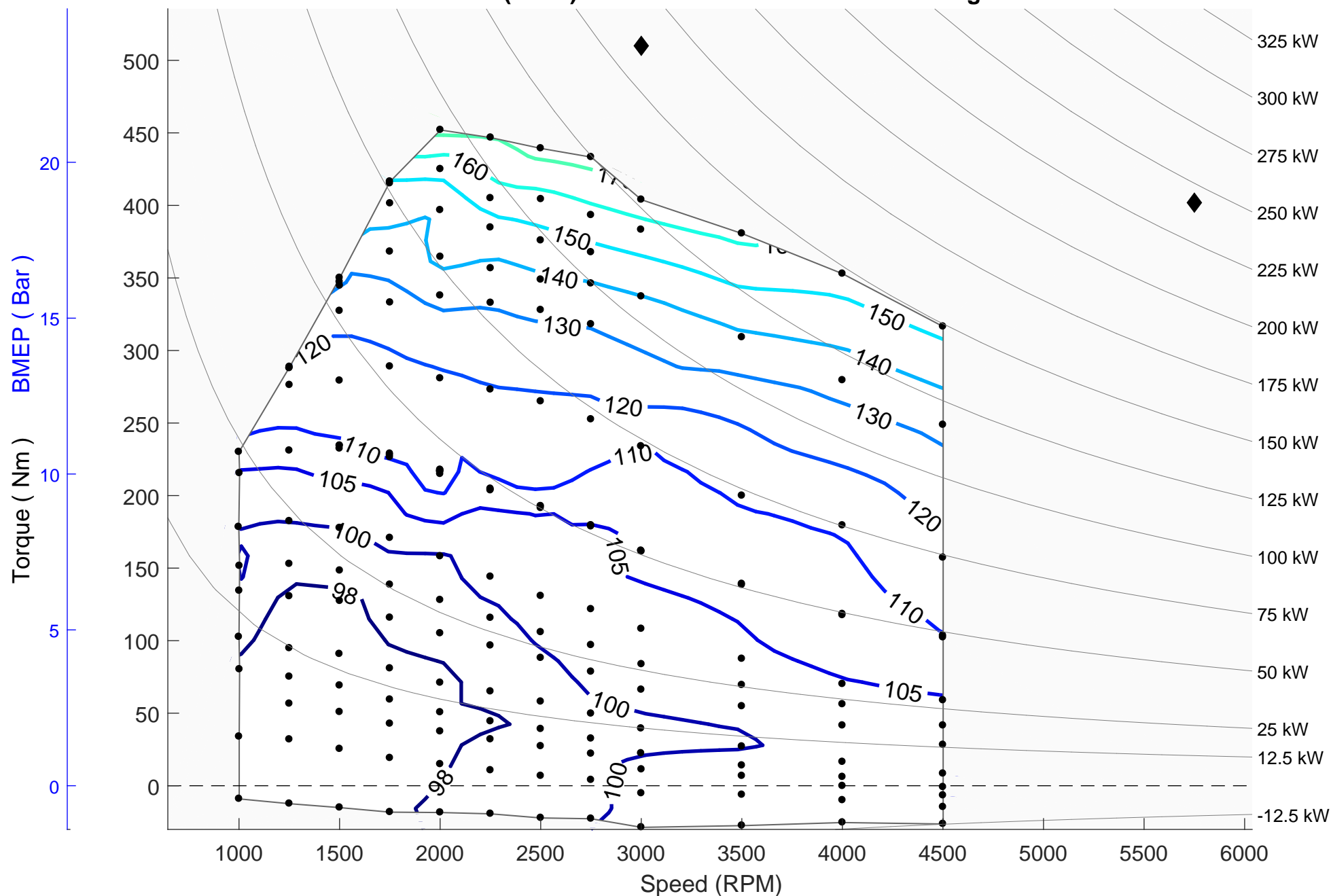
Intake Manifold Temp (degC) - Temperature Measured in the Intake Manifold



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Steady State

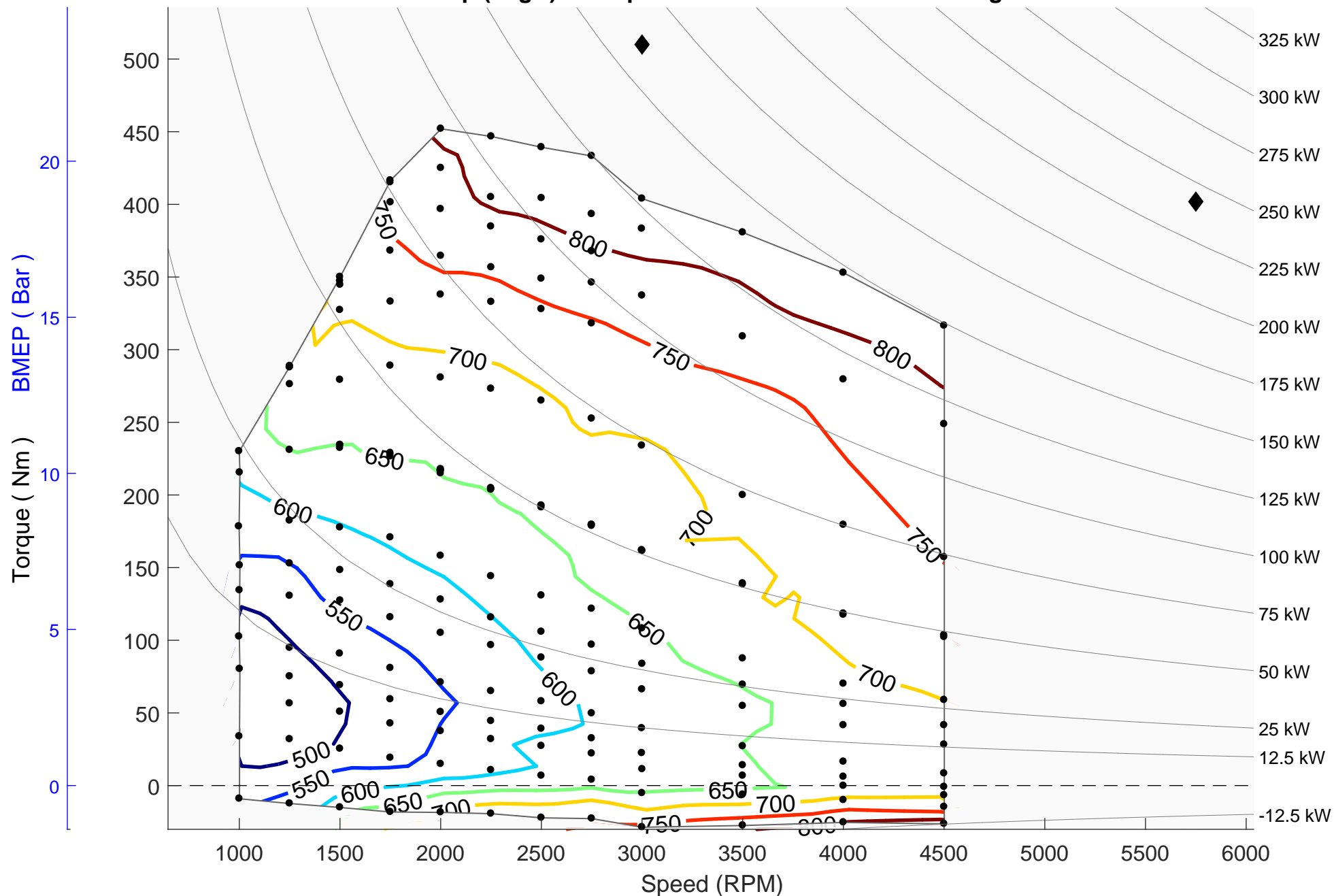
Turbine Inlet Press (kPaA) - Pressure Measured at Turbocharger Turbine Inlet



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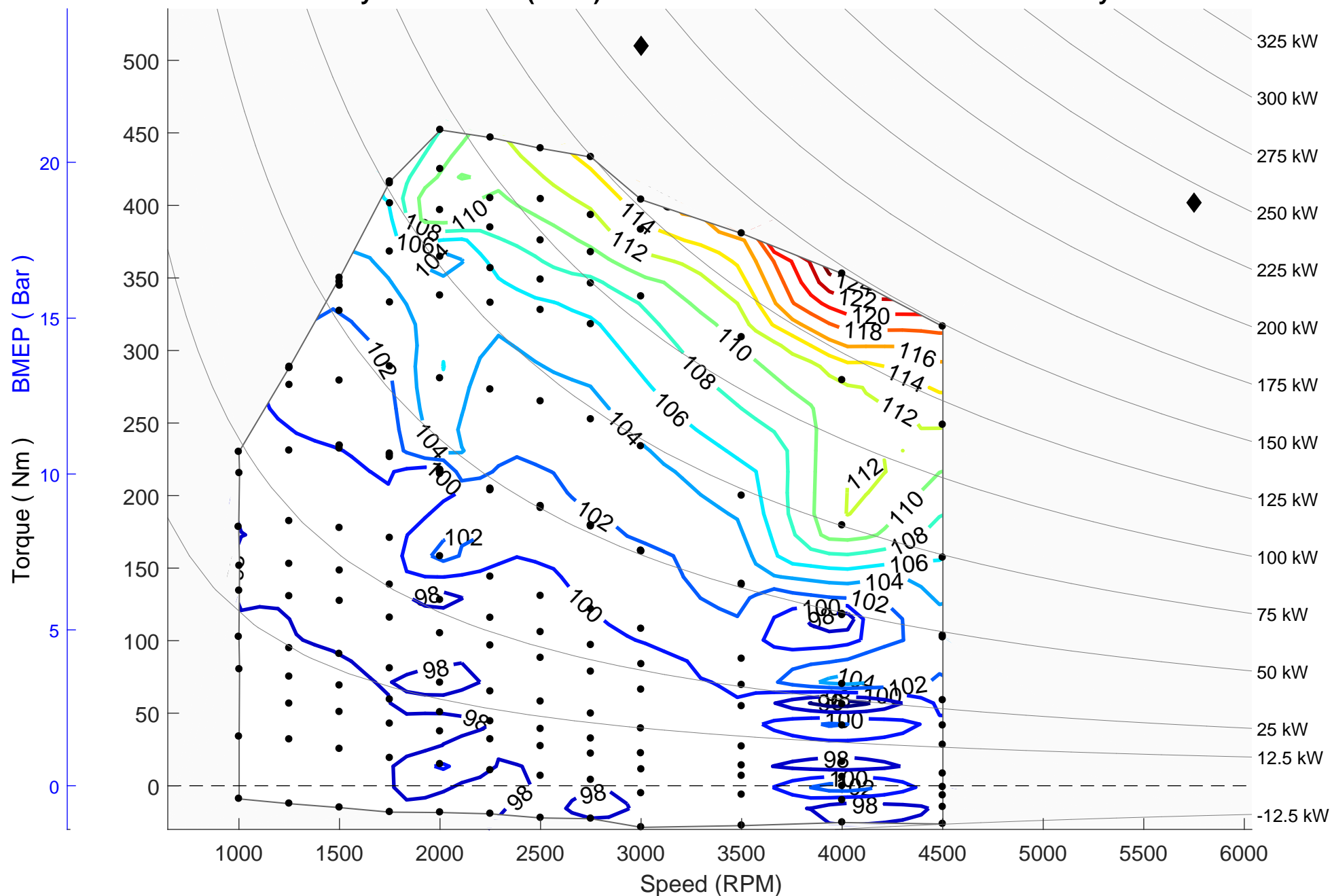
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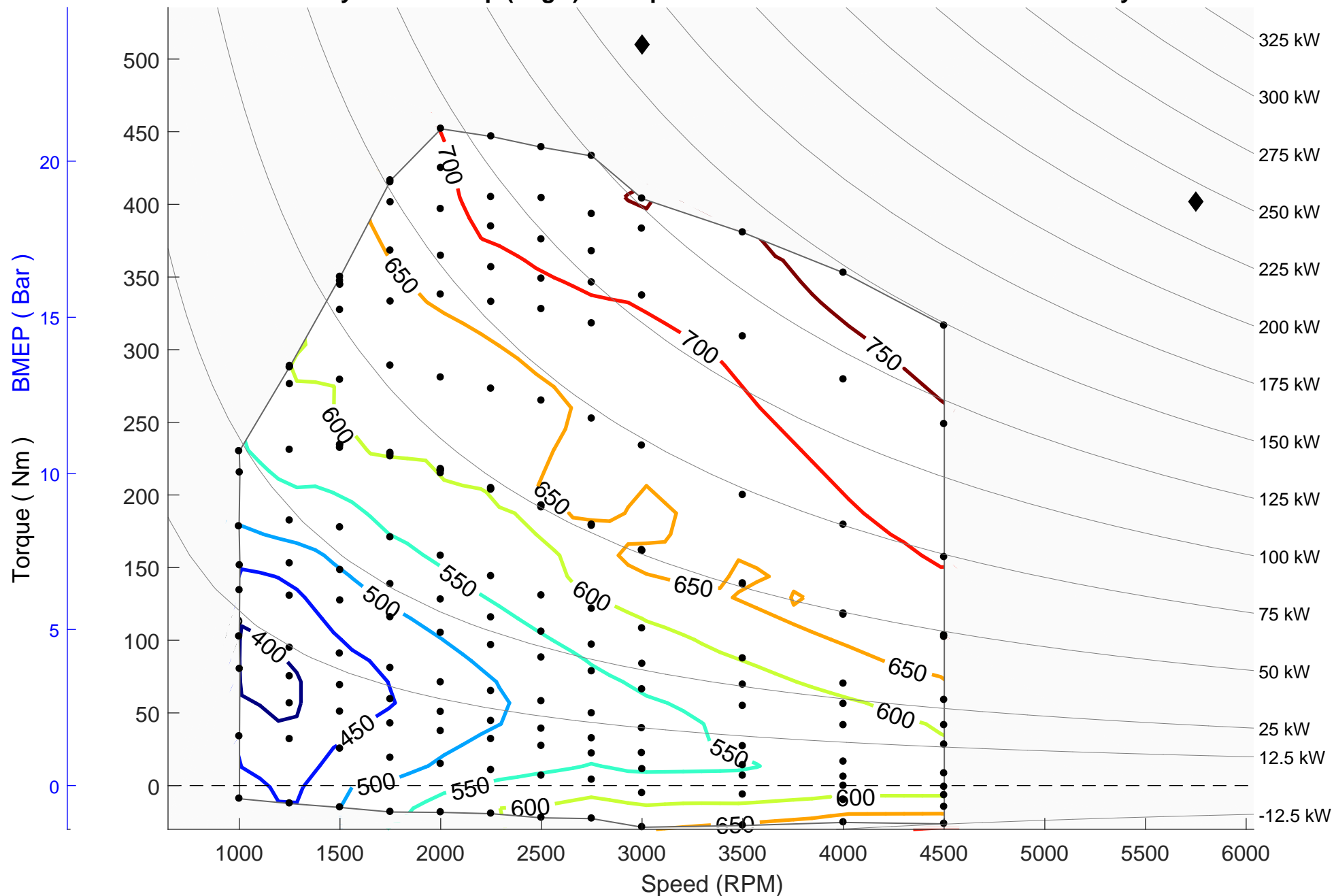
Catalyst Inlet Press (kPaA) - Pressure Measured at the Inlet to the Catalyst



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Steady State

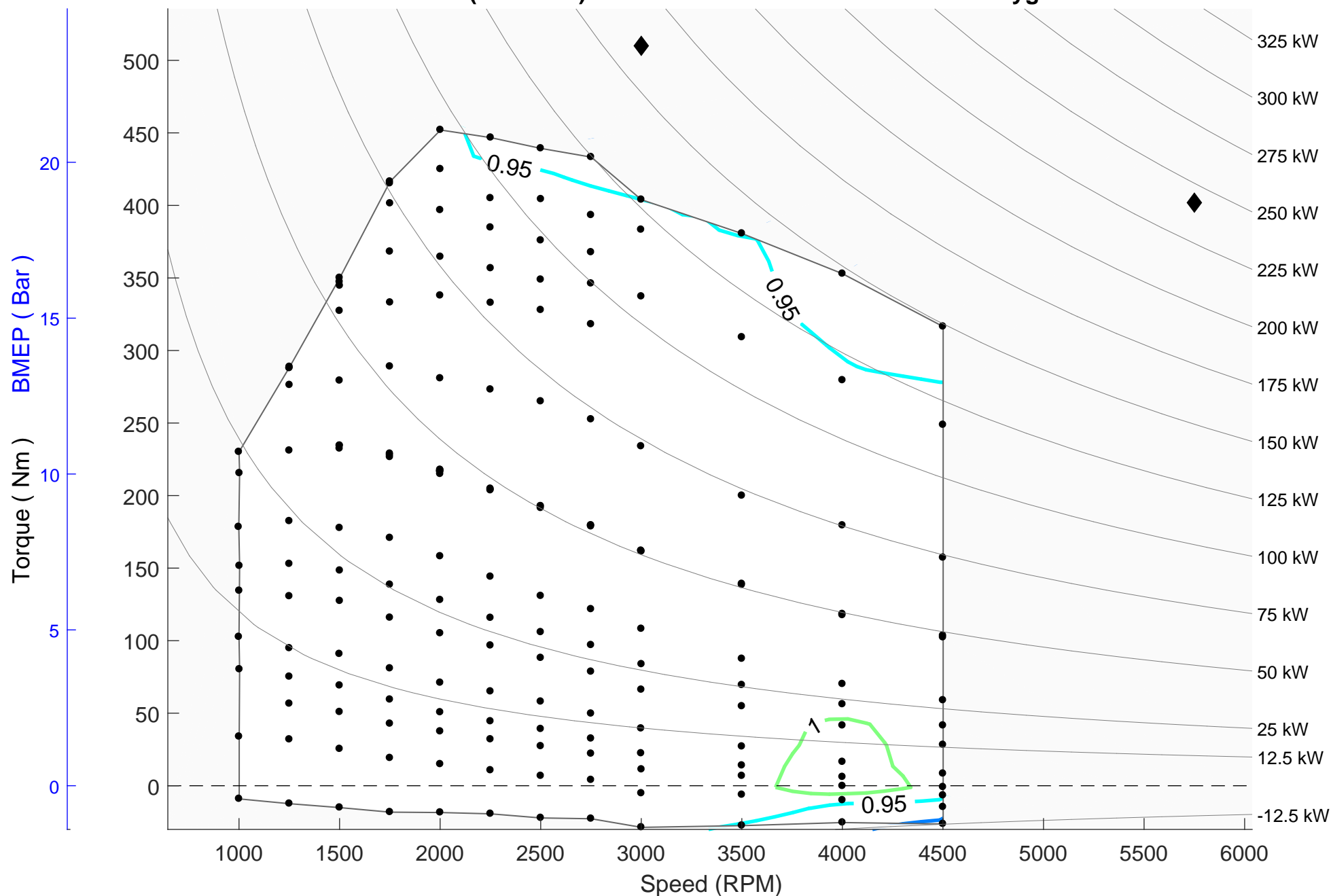
Catalyst Inlet Temp (degC) - Temperature Measured at the Inlet to the Catalyst



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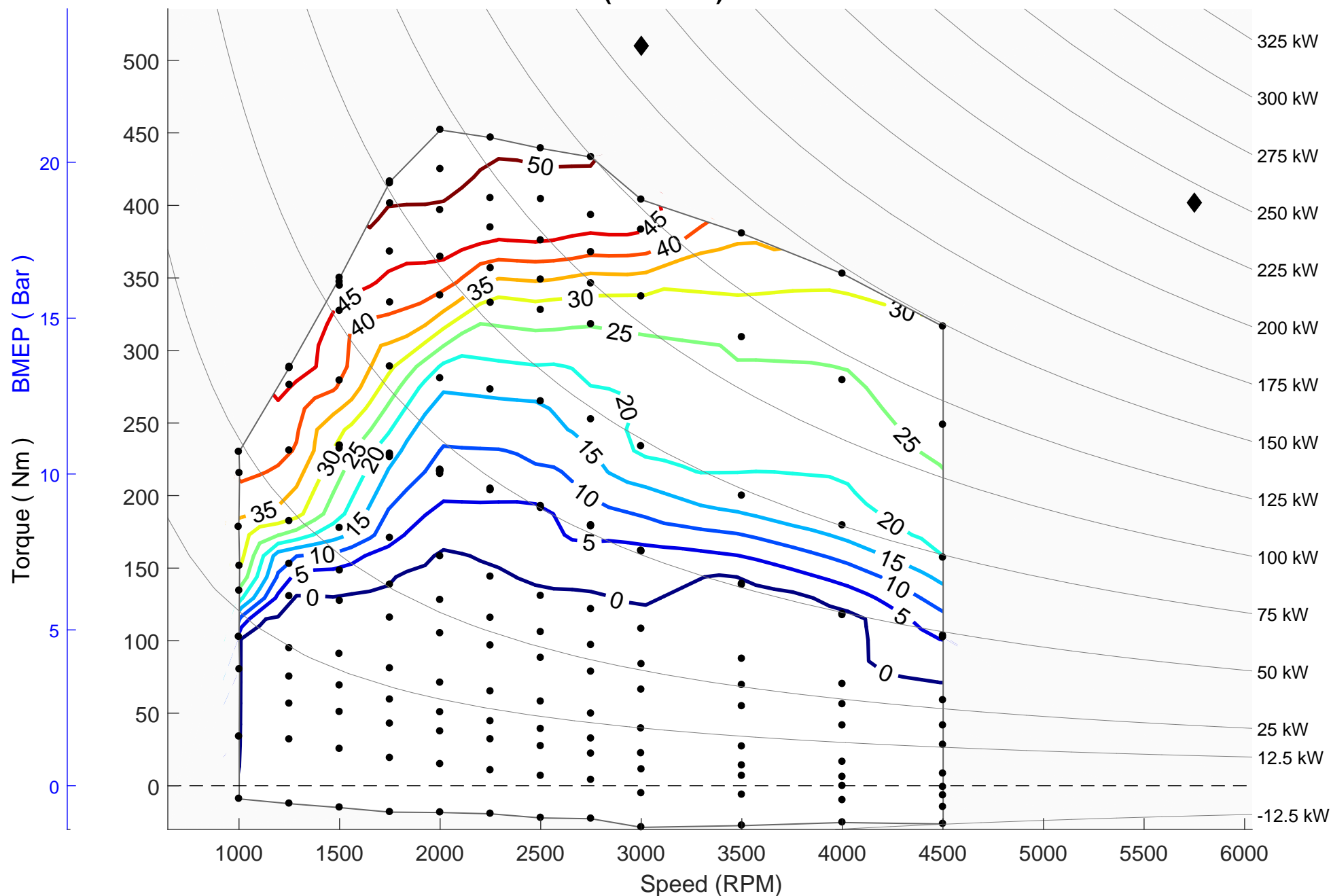
Exhaust Lambda (LAMBDA) - Measured via Wideband Exhaust Oxygen Sensor*



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Intake Cam Phase (CAD RET) - Intake Cam Phaser Retard



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Steady State

Exhaust Cam Phase (CAD RET) - Exhaust Cam Phaser Retard

