

# PIT Group Fuel Consumption and Emissions Testing Results

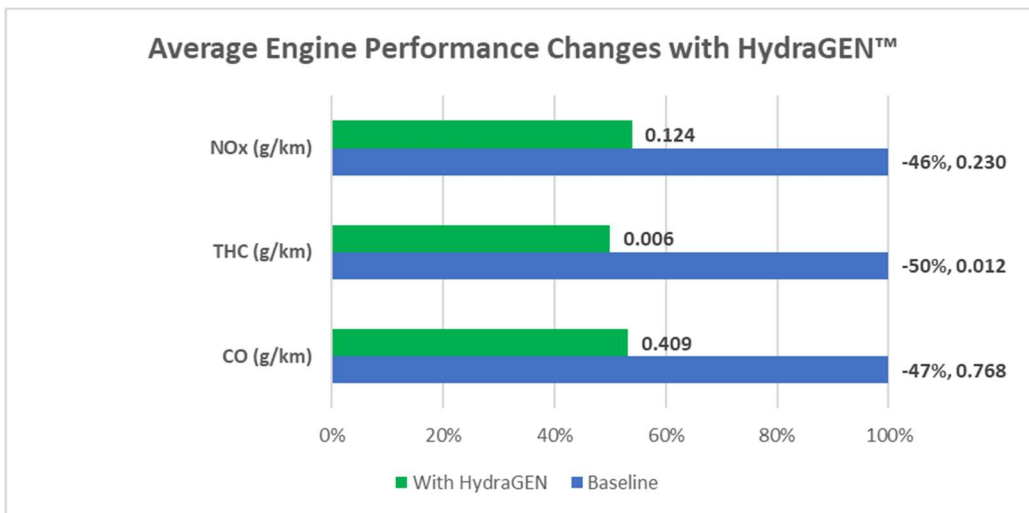


To corroborate test results obtained in-house, dynaCERT Inc. mandated FPInnovations PIT Group to conduct testing to evaluate the impact on fuel consumption and emissions of HydraGEN™ technology. The tests were performed at the Transport Canada Motor Vehicle Test Centre.

The emissions tests consisted of 6 laps (41.3 km) around an ALPHA low-speed test track, with a Horibas OBS-2200 portable emission measuring system to measure and record the relevant properties, specifically exhaust CO<sub>2</sub>, CO, NOx, and THC (total hydrocarbon) content. Once a baseline was established, three trials were conducted with a truck fitted with a HydraGEN™ unit and emissions were compared. These results are summarized in the figure below.

The fuel consumption tests consisted of 15 laps (100 km) around a BRAVO high-speed test track. Fuel savings were calculated by comparing fuel consumption of a control truck and a test truck fitted with a HydraGEN™ unit. The summary of these results can be found in the table below.

This testing program is based respectively on the TMC Fuel Consumption Test Procedure – Type II, RP 1102A (TMC 2016a), and CFR, Title 40 Part 1065, Engine Testing Procedures – Subpart J PEMS Testing (CFR 2008).



Test run	Baseline Test/Control ratio	Trial 1 T/C ratio	Trial 2 T/C ratio
1	1.0383	1.0311	0.9817
2	1.0381	1.0280	0.9844
3	1.0343	1.0309	0.9727
<b>Fuel improvement:</b>		0.89%	5.9%

Testing conducted on a 2014 Cummins ISX15 450 hp tractor engine.