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Purpose of Evaluation

This evaluation is to determine the effectiveness of the EnerBurn® Diesel Fuel Performance Catalyst on fuel economy in a fleet of Semi's with Caterpillar engines.

Product Tested: EnerBurn® Off-Road EC5932A (EnerBurn)

Evaluation For:

Large Heavy Duty Construction Company
Name withheld per customers instructions.

Equipment Evaluated

Truck Model: Kenworth W900B
Engine Manufacturer: Caterpillar
Model Number: 3406C
Horsepower Rating: 425hp

Evaluation Analyst:

The company ran the evaluation themselves using the data collected from the ECU (Engine Control Unit) on the truck.

Evaluation Protocols

Testing was conducted on a single 1997 Kenworth W900B truck. This truck supports local operations in the New Jersey area. The truck is parked each night in the customer's equipment yard and is not used as a long-haul truck. Baseline fuel readings were supplied by Foley CAT via Caterpillar Electronic Technician software (CAT ET) collected from the truck ECU September 20, 2012. The report

provided a baseline measurement of historical truck ECU data. This data will then be compared to future readings after the treatment with EnerBurn has completed its conditioning period (expected to be 3-4 months since the truck is used on short haul situations)

Since EnerBurn must continually be supplied to the engine via the diesel fuel, a separate fueling tank to be used by this truck only was set up. This tank was the only tank onsite to be treated and the treatment was handled by Energy Innovation Works (EIW) staff to ensure the proper ration of catalyst to fuel. This truck only received fuel from the tank with EnerBurn treated fuel and was monitored closely by the customer.

Evaluation Summary

With seven ECU Readings collected, ECU Readings '1 through 6' were compared with the most recent 'ECU Reading 7' taken on June 8, 2013. This provided the most recent ECU period data with the greatest engine catalyst conditioning. Fuel efficiency improvements are observed at each period as the catalyst conditions the engine; with the exception of period B's reduced improvement. Period B results can be attributed to load weight, ambient temperatures, fuel quality, driving conditions, etc., which go beyond the data collection capabilities of this test.

Data collection was conducted by EIW using a Laptop PC and two software packages; CAT ET and eFuel Scan software. Data was collected via the truck's J1939 data port located under the driver side dashboard. Both software packages provided similar ECU data logging capabilities and were used for redundancy.

The evaluation showed an average fuel efficiency improvement of over 14% from the baseline reading. June 8, 2013 reading from the ECU showed a 14.1% increase in MPG versus the September 20, 2012 baseline reading.

Data Collection Results

The following table displays all the readings taken for this vehicle during the evaluation period. The vehicle is still being treated with EnerBurn and future results will be appended to this report. The initial dealer readings were taken by the local Caterpillar dealer and all subsequent readings were taken by Energy Innovation Works using the equipment noted above.

A - ECU Reading Summary	Dealer Reading #1	ECU Reading #7	Period Difference
Date	9/20/2012	6/8/2013	261 days
Total Distance (miles)	562,235.90	582,750.00	20,514.10
Total Time (hours)	23,513.03	24,456.36	943.33
Total Fuel (gallons)	108,384.90	112,154.00	3769.1
Total Idle Fuel (gallons)	7,995.60	8323	327.4
Drive Fuel Economy (mpg)	5.60		5.96
Drive Fuel Efficiency Gain			6.40%

B - ECU Reading Summary	ECU Reading #2	ECU Reading #7	Period Difference
Date	12/18/2012	6/8/2013	172 days
Total Distance (miles)	569,391.30	582,750.00	13,358.70
Total Time (hours)	23,851.35	24,456.36	605.01
Total Fuel (gallons)	109,661.13	112,154.00	2492.87
Total Idle Fuel (gallons)	8,102.75	8,323.00	220.25
Drive Fuel Economy (mpg)			5.88
Drive Fuel Efficiency Gain			5.00%

C - ECU Reading Summary	ECU Reading #3	ECU Reading #7	Period Difference
Date	1/24/2013	6/8/2013	135
Total Distance (miles)	570,612.00	582,750.00	12,138.00
Total Time (hours)	23,968.21	24,456.36	508.15
Total Fuel (gallons)	110,044.00	112,154.00	2,110.00
Total Idle Fuel (gallons)	8,151.00	8,323.00	172.00
Drive Fuel Economy (mpg)			6.26
Drive Fuel Efficiency Gain			11.80%

D - ECU Reading Summary	ECU Reading #4	ECU Reading #7	Period Difference
Date	2/14/2013	6/8/2013	114
Total Distance (miles)	572,491.00	582,750.00	10,259.00
Total Time (hours)	24,036.39	24,456.36	419.97
Total Fuel (gallons)	110,398.00	112,154.00	1,756.00
Total Idle Fuel (gallons)	8,184.00	8,323.00	139.00
Drive Fuel Economy (mpg)			6.34
Drive Fuel Efficiency Gain			13.30%

E - ECU Reading Summary	ECU Reading #5	ECU Reading #7	Period Difference
Date	3/16/2013	6/8/2013	84
Total Distance (miles)	575,192.00	582,750.00	7,558.00
Total Time (hours)	24,163.00	24,456.36	293.36
Total Fuel (gallons)	110,890.00	112,154.00	1,264.00
Total Idle Fuel (gallons)	8,234.00	8,323.00	89.00
Drive Fuel Economy (mpg)			6.43
Drive Fuel Efficiency Gain			14.90%

F - ECU Reading Summary	ECU Reading #6	ECU Reading #7	Period Difference
Date	4/26/2013	6/8/2013	43
Total Distance (miles)	578,187.00	582,750.00	4,563.00
Total Time (hours)	24,279.36	24,456.36	177.00
Total Fuel (gallons)	111,389.00	112,154.00	765.00
Total Idle Fuel (gallons)	8,272.00	8323	51.00
Drive Fuel Economy (mpg)			5.39
Drive Fuel Efficiency Gain			14.10%