



FUEL TREATMENT

What is a Catalyst?

A substance that induces a chemical reaction without itself undergoing any permanent chemical change. Unlike the Zirconium catalyst used in combination with heat and pressure in the refining process of fuel, the Fitch Fuel Catalyst is a Heterogeneous Metallic Alloy (HMAC) that transforms or reformulates the molecular composition of fuel at any temperature without the need for pressure.

The result is a cleaner burning fuel that produces higher energy yield with zero to ultra low soot deposits and with reduced emissions.

THE FITCH FUEL CATALYST SIMPLY IMPROVES FUEL QUALITY



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Ocean-going Tug Project



Caterpillar C280-12 engine(1 of 2)



Fitch model FHD20 installed on starboard engine



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Ocean-going Tug Project

ECM Fuel Consumption Measurements								
	Port	Stbd	Port	Stbd	Port	Stbd	Port-Stbd	Pct. Chg
Date	Hours	Hours	Eff Load %	Eff Load %	Rate(gph)	Rate(gph)	Rate(gph)	Percent
11/15/2018	628(NF)	626(F)	No Data	No Data	175.473	172.073	3.400	1.94%
12/28/2018	984(NF)	979(NF)	58%	57%	160.913	162.357	-1.444	-0.90%
2/14/2019	943(NF)	971(F)	57%	55%	166.965	159.893	7.072	4.24%
7/9/2019	1988(FP)	1982(F)	56%	54%	159.246	154.829	4.417	2.77%
11/26/2019*	1774(F)	1792(F)	44%	42%	127.688	121.332	6.356	4.98%

Legend: **F = with Fitch**, **NF= No Fitch** and **FP = Fitch part of time**

* note both engines equipped with Fitch, Stbd much longer than Port

Note change from 11/2018 to 11/2019 on both engines of nearly 50gph. Despite the 12% drop in effective load from previous data downloads there has been very large drop in fuel consumption indicating both engines are operating at peak efficiency and should certainly be much cleaner than they were prior to installing the Fitch units.



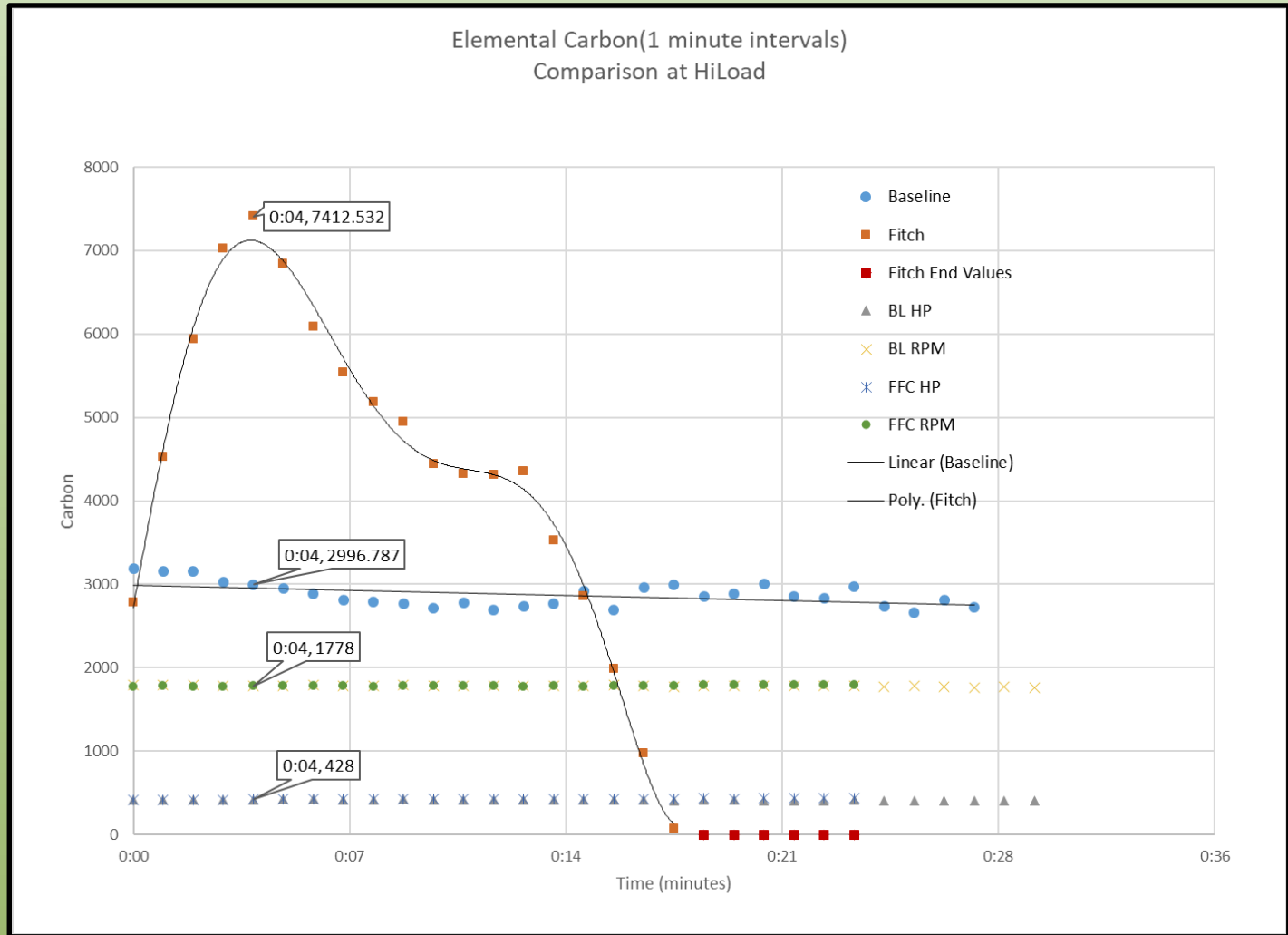
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Diesel Particulate (dPm) Example

The Graph: Extracted from a study conducted for a large mining company using the Fitch Fuel Catalyst.

Data Collected: By a sensitive portable monitor. (Instruments like this are used to protect underground miners from excess dPm exposure.)

The Results: The Elemental Carbon (related to dPm) was eliminated on Caterpillar C-15 engine with Fitch installed.





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Improved Fuel Quality to Reduce Fuel Consumption and Emissions



Manufactured by
Advanced Power Systems, Int'l
www.fitchfuelcatalyst.com
info@fitchfuelcatalyst.com
860-921-0009

**Commercial Applications
Warranted for 500,000 miles or
10,000 operating hours**