

Executive Summary

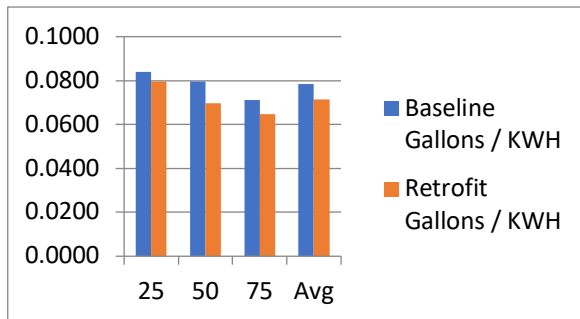
Tri Marine Group Evaluations and Implementations

A number of commercial fishing companies have installed Fitch Fuel Catalysts (FFCs) on their entire fleets. Perhaps the most diligent has been the Tri Marine Group whose division in American Samoa has installed FFCs on all 10 of their large tuna super-seiners beginning in 2013.

Prior to installing their first Fitch Fuel Catalyst on the *f/v Cape May*, the Tri Marine Group subjected the FFC to 3 distinct evaluations.

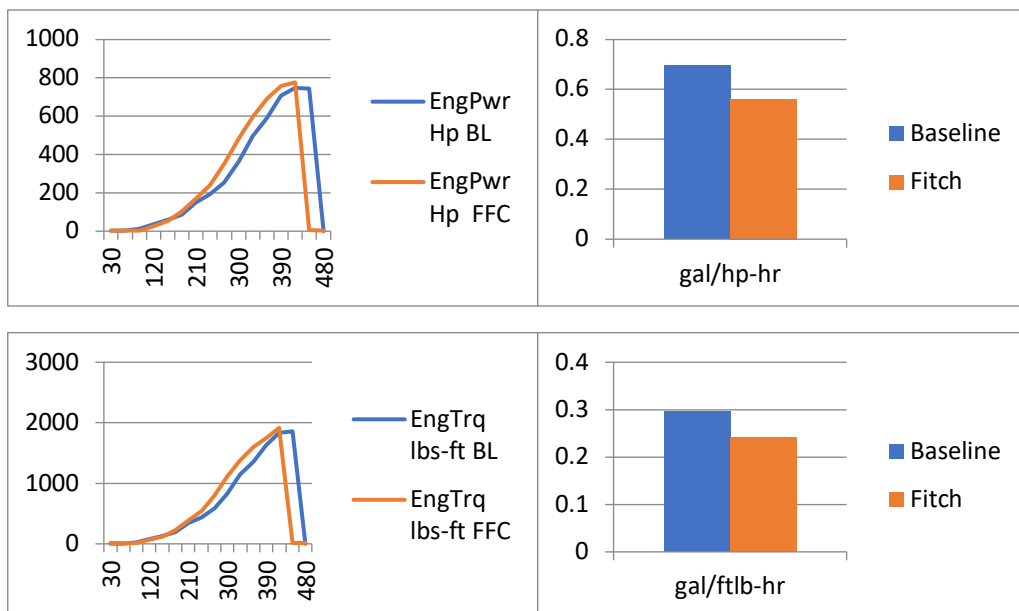
- Field Test on a Caterpillar 3412

Test performed on the *f/v Cape Hatteras*. Average reduction in fuel consumption was 8.8%.



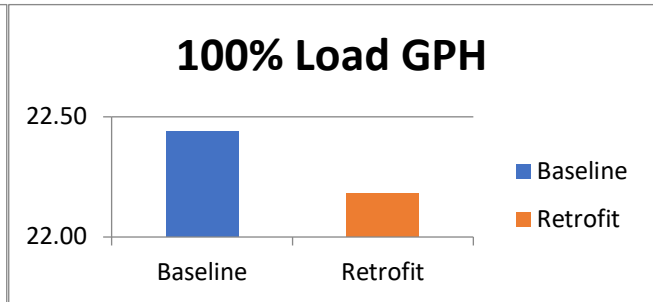
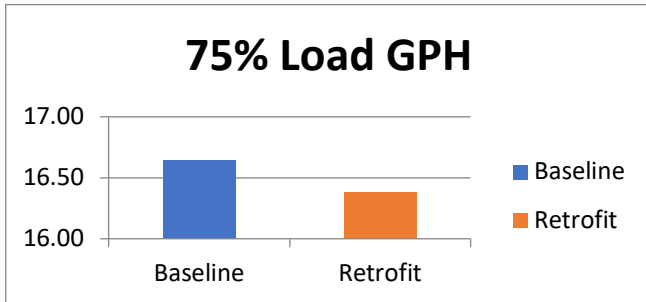
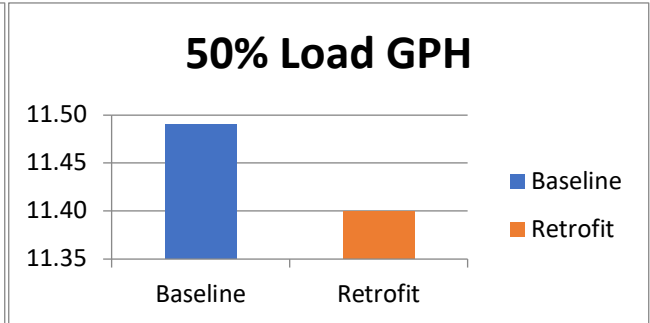
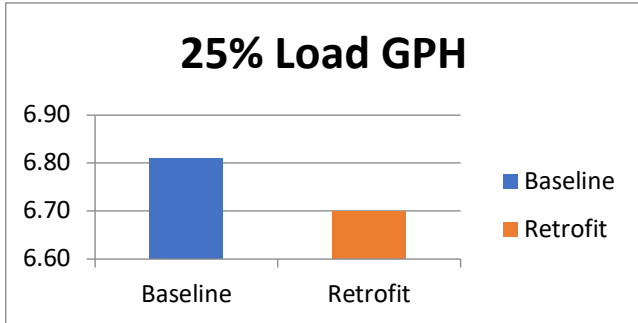
- Dynamometer Test on a Caterpillar 3412

Performed by Hawthorne Power Systems, San Diego, CA. Findings- Horsepower increased by 3.25%- Torque increased by 7.64%-Fuel consumption decreased by 18.25-19.21% relative to change in horsepower and torque.



- Load Bank Test on a Caterpillar 3406

Performed by Hawthorne Power Systems, San Diego, CA. Findings- An average reduction in fuel consumption of 4.8% over all four loads.



In 2015 Tri Marine put into service its newest purse seiner, the *f/v Cape Ann* and equipped her engines with FFC upon launch. Now, as the catalyst cores on the original 10 of the America Samoan-based ships have exceeded their normal 10,000 hour service life, the company is planning to order replacement cores to regain optimum performance prior to resuming fishing operations in 2016.



Also, all the power generators and oil-fired boilers at the Tri Marine tuna cannery in the Solomon Islands have recently been equipped with accurate fuel meters and FFCs.

