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SUMMARY OF TESTING OF FPC-1[®] BY CURTIN UNIVERSITY, WESTERN AUSTRALIA

This paper summarizes the results of tests with FPC-1[®] conducted by Curtin University, Western Australia. The study discusses the results of steady-state engine tests (constant load and rpm) in a single cylinder diesel engine called the Varimax test engine. The tests documented increases in power and reductions in specific fuel consumption (sfc) resulting from the treatment of standard diesel with FPC-1[®] (marketed as FTC in Australia).

The results of the specific fuel consumption and power output tests are tabled below:

Table 1. Change in Power Output after FPC-1[®] Fuel Treatment

	<u>Power</u>
Background level	7.05 kW
FPC-1 treated level	7.40 kW
	% Change + 5.0

Table 2. Change in SFC after FPC-1[®] Fuel Treatment

	<u>Fuel Consumption</u>
Background level	0.410 kg/kWh
FPC-1 treated level	0.385 kg/kWh
	% Change - 6.1

Both the kW and SFC values changed after a lag time or engine pre-conditioning period. In this study, the tests were continued for several hours after FPC-1[®] was removed from the diesel fuel powering the engine. This made it possible to observe both the engine pre-conditioning and the engine deconditioning or return to background level typically observed with FPC-1[®] fuel treatment. The attached graphs (Appendix 1 and 2) demonstrate the improvements created by the addition of FPC-

1[®], and the return to background after catalyst removal.

Conclusions

- 1) FPC-1[®] fuel treatment reduced specific fuel consumption 6.10% after the Varimax engine had time to experience the typical pre-conditioning.
- 2) FPC-1[®] fuel treatment increased power output 5.00%.
- 3) A definite engine pre-conditioning and deconditioning period was observed after FPC-1[®] treatment and after FPC-1[®] removal.

Note: FPC-1[®] is the designation for the FPC[®] product formulation for high-speed diesel and gasoline engines. All FPC[®] products contain the same active ingredient.

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