



MACH 3 SUPER ECOFUEL SAVER-HEAVY DUTY™ (SEFS-HD) TEST REPORT

MACH 3 TECHNOLOGIES GROUP, LLC

October 18, 2007

17188 Hazelwood Drive
Riverside, Ca. 92503

Att: Mr. Dennis Leung,
CEO, President

Subject: Emissions & Mileage Test Report on Mach 3 Super EcoFuel Saver-HD
Fuel Reformulator

Dear Mr. Leung:

The Environmental Impact Foundation is pleased to inform you of the completion of the tests begun last November as described in our initial Report P307-1 dated Jan 28, 2007. Mach 3 Technologies Group, LLC, (Mach 3) asked Environmental Impact Foundation (EIF) to complete a series of tests on various types of vehicles, as more particularly described in this report, with Mach 3 SUPER ECOFUEL SAVER-HEAVY DUTY FUEL REFORMULATOR™ (SEFS-HD) EPA. Registration # 192720003. After qualifying due diligence, EIF was retained by Mach 3 to conduct testing to determine if SEFS-HD increased fuel economy while reducing emissions of all types.

Tests were started on November 13, 2006, and continued to be conducted for fuel economy benefits and resulting exhaust emissions in passenger vehicles, light, & medium duty pickup, heavy duty commercial trucks, a super stock race car and on 2 jet turbine engines.

Test session objectives and protocols were established to measure and record emissions and mileage data from gasoline and diesel powered vehicles over specified, time periods. Gases to be measured were CO (Carbon Monoxide), NO (Nitrous Oxide), NO_x (Oxides of Nitrogen Combination), HC (Hydro-Carbons) and CO₂ (Carbon Dioxide). Two (2) test protocols were utilized.

EIF "Secured" Laboratory Tests - Utilizing a Corrsys-Datron Model DFL -3 fuel consumption meter during which test vehicles are mounted on a Clayton, Externally Water Cooled, 2000hp Chassis Dynamometer have been performed. All tests followed both Federal Highway Economy driving cycle and Society of Automotive Engineers (SAE) test protocols. Each detailed test indicates the specific protocol followed.

Exhaust emissions sampled during dynamometer lab testing were measured by a Horiba CLA model 220 "Chemiluminescent" in-line, bench type, and Eurotron Greenline Model 4000 Instant reading gas analyzer. Exhaust gasses were measured from samples captured from both live "streaming" sessions (by inserting certified, calibrated collectors into exhaust pipes) and by "bagging" samples, using bench testing collected samples "clinical"

EIF "Over the Road Tests were conducted on public highways, both city and rural test configurations. Baseline fuel economy tests were conducted with all vehicles tested. Run over the exact same course, drivers rotated vehicles driven so each vehicle was driven by different drivers for each baseline test. The test vehicles were fueled by unleaded gasoline, standard commercial grade diesel and bio-diesel purchased and stored in 55 gallon drums that were secured on site under lock and key.

After base line tests were completed, fuel drawn from the same batched drums was used to blend the properly measured amounts of Mach 3 SEFS-HD with gasoline, diesel and bio-diesel as recommended by Mach 3 data sheets. Drivers did not know if they were driving vehicles on base-line or test line runs to avoid human prejudicial preferences as well as to minimize the differences in weather, traffic conditions and other anomalies' that would effect all vehicles equally. Over the Road routes included travel between the cities of Wichita Falls and Sanger, Texas. The round trips of 246 miles included stops for driver breaks as agreed before each trip and any unscheduled stops were made by all vehicles so as to have identical runs.

MACH 3 SEFS-HD completed tests described in the following pages are available in single test format. Mach 3 SEFS-HD has been subjected to comprehensive and rigorous testing on various types of fuel in strict accordance with SAE Type II J1321, EPA 511 (including FTP 75), 40 CFR 86 and CA Title 13 Test Protocols for fuel savings and emissions to EPA and CARB standards.

It is the opinion of Robert Availa, Sr. Independent Consultant and Technician, Registered Environmental Manager and Environmental Consultant to EIF that Mach 3 SEFS-HD has demonstrated a unique achievement of reductions of all emissions of CO (Carbon Monoxide), NO (Nitrous Oxide), NO_x (Oxides of Nitrogen Combination), HC (Hydro-Carbons) and CO₂ (Carbon Dioxide) in all test protocols utilized while significantly increasing fuel economy in each application.

EIF has reviewed the independent test protocols described in this report and find they follow appropriate United States Environmental Protection Agency (EPA) as well as the California Air Resource Board (CARB) Federal Test Procedure (FTP) and Highway Fuel Economy Test (HFET) procedures and that all Society of Engineers (SAE) for fuel economy and emissions testing were adhered to,

Using the previously cited protocols as tests recognized by the EPA for evaluating fuel economy and emissions tests on light, medium and heavy-duty vehicles with Mach 3 SEFS-HD as herein stated, MACH 3 TECHNOLOGIES Group, LLC considers any and all specific results of the tests reported within this report to be proprietary

information. For this reason, EIF will not discuss or release the results to any third party unless instructed to do so, in writing by authorized personnel of Mach 3 Technologies Group, LLC.

It is the opinion of the EIF Technical Review Council that, after some exhaustive investigation and testing, MACH 3 SUPER ECOFUEL SAVER-HEAVY DUTY™ (SEFS-HD), “Fuel Reformulator™” of EPA Registration #192720003, is an environmentally friendly, non-metallic and non-polluting fuel enhancement additive. Mach 3 SEFS-HD is a liquid solution containing only compounds of hydrogen, oxygen and carbon.

It is found that Mach 3 SEFS-HD “reformulates” clusters of all hydrocarbon fuels into smaller molecular chains, thus effectuating cooler, longer, more uniform and more complete combustion, cleaner exhaust emissions, better fuel economy, higher engine efficiency and more power for all gasoline, diesel and/or bio-diesel internal combustion engines. The results of these tests are summarized at the end of each enclosed tables.

DESCRIPTION OF TESTS (sample 1992 Cadillac)

Test Vehicle -1992 Cadillac-4.9 liter V8
Clayton Chassis Dynamometer (Dyno) & Over The Road (OTR)

1. Initial reading without Mach 3 11/13/06
2. Second reading with Mach 3 11/14/06
3. Third reading with Mach 3 11/17/06
4. Fourth reading with Mach 3 11/20/06
5. Fifth reading with Mach 3 11/22/06
6. Sixth reading with Mach 3 11/24/06

The chart above, (1992 Cadillac), shows the procedure that was followed in tests of each of the si vehicles subjects of this report. Other data noted for each vehicle was; odometer reading (51,485.6), Engine size (4.9 liter 9.8:1 93 Octane Fuel), Emissions System Inspection, General Engine Operating Inspection for factory settings including “wet” cylinder compression readings before and after the completed 6 stage test series.

Test 1 was conducted on the Dyno. Test 2 was also conducted on the Dyno. Tests 3, 4, 5 and 6 were OTR and concluded with Dyno testing. Factory specified “pump” fuels were used for test number 1. 87 Octane unleaded fuel was used for tests 2 thru 6 which received the specified 1 ounce Mach 3 SEFS-HD solution per 15 gallons of 87 Octane unleaded fuel. As per the Mach 3 instruction sheet, all vehicles received a 2 ounce per 15 gallon Mach 3 SEFS-HD treatment to begin the “treated” tests (# 2). Emission and miles-per-gallon readings were then taken as shown in the sample table below.

SUMMARY OF TESTS (sample 1992 Cadillac)

<u>Number</u>	<u>RPM</u>	<u>HC</u>	<u>CO</u>	<u>NOx</u>	<u>CO₂</u>	<u>MPG</u>	<u>Fuel Saving</u>
1. <u>Base</u>	600	0.0098	0.3208	0.0456	436.5440	16.8	<u>Base</u>
2.	600	0.0089	0.2053	0.0191	366.6966	+2.6	+15.6%
3.	600	0.0068	0.2021	0.0167	326.4537	+3.2	+18.8%
4.	600	0.0071	0.2035	0.0146	341.4788	+3.4	+20.0%
5.	600	0.0044	0.2006	0.0115	311.5689	+3.8	+22.4%
6.	600	0.0041	0.1892	0.0087	308.3427	+4.2	+24.7%
7. Average							+20.3%

COMMENTS

The results of these tests indicate the 1992 Cadillac shows large reductions in both dyno and highway exhaust emissions, indicating Mach 3 SEFS-HD benefits both reductions of emissions and fuel economy increases. Of particular interest was an impressive result when 93 or higher octane "premium fuel" was specified and regular 87 octane gasoline blended with Mach 3 SEFS-HD was substituted and performed with no pre-ignition, with increased power, lower emissions and up to 24.7% increased MPG as time goes by over the 93 octane fuel.

Fuels used for all tests were as specified by industry standards. Mix rate of Super EcoFuel additive was as specified by customer "ounce per gallon" configuration rate and the US. EPA Registration #192720003. When gaseous fuel was tested, regular fuel was first tested and then a 10% Mach 3 Super EcoFuel mix was injected into the air stream that was then mixed with 90% regular fuel.

Itinerary of EIF Emissions & Fuel Consumption Testing on Mach 3 SEFS-HD

1. Red River Speedway, Wichita Falls, Texas.
2. CoServ DG power generation plant, Denton, Texas.
3. Open Door Garage Performance Testing facility, Wichita, Texas.
4. EIF emissions laboratory, Holliday, Texas.
5. Goodale Engineering and Engine Building Facilities, Riverside, California.
6. Field tests were over public roads and race track "hot lap" as well as in competition at the Red River Speedway and Willow Springs Race Way.
7. 1992 Cadillac field test was total of 1500 combined city and open road miles. 500 miles with 93 octane gasoline and 1000 miles with Mach 3 SEFS-HD enhanced 87 octane gasoline.

8. 2004 Ford Ranger - over the road combined city and open road. 200 miles with 87 octane gasoline and 500 miles with Mach 3 SEFS-HD enhanced 87 octane gasoline.
9. 1998 Chevrolet 1 ton PU - 1,100 combined city and open road miles. 300 miles with 87 octane gasoline and 800 miles with Mach 3 SEFS-HD enhanced 87 octane.
10. Jet turbine tests were conformed utilizing data supplied by factory manual test and setup procedures. A total of 5 hrs regular #2 Diesel jet fuel and five hrs Mach 3 SEFS-HD EcoFuel enhanced #2 Diesel fuel were tested.

EXHAUST EMISSION REDUCTIONS WITH MACH 3 SEFS-HD

a. 1992 Cadillac	HC 9%	CO 36%	NOx 42%	CO ₂ 16%
b. 2004 Ford Ranger	HC 13%	CO 37%	NOx 48%	CO ₂ 15%
c. 1998 Chevrolet PU	HC 12%	CO 29%	NOx 39%	CO ₂ 17%
d. 1988 Ford SS racer	HC 16%	CO 34%	NOx 52%	CO ₂ 21%
e. 2001 Ford diesel truck	HC 21%	CO 17%	NOx 41%	CO ₂ 14%
f. T53 LYC Jet Turbine	HC 11%	CO 26%	NOx 42%	CO ₂ 17%

FUEL ECONOMY INCREASES WITH SEFS-HD

	<u>Base MPG</u>	<u>SEFS-HD MPG</u>	<u>MPG</u>	<u>FUEL SAVING</u>
a. 1992 Cadillac (gasoline)	16.8	20.3	+3.5	20.8%
b. 2004 Ford Ranger (gasoline)	20.3	24.6	+4.3	21.2%
c. 1998 Chevrolet PU (gasoline)	11.1	13.5	+2.4	21.6%
d. 1988 Ford SS 25 HL(Fuel Used)	5.5 gal	4.6 gal	-0.9 gal	16.4%
e. 2001 Ford truck (diesel)	18.4	22.5	+4.1	22.3%
f. T53 LYC Jet Turbine (diesel)	134 gph	106.6 gph	-27.8 gph	20.7%

OBSERVATIONS OF TEST RESULTS

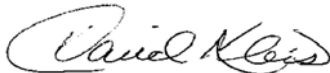
The purposes of the tests as herein recorded on various types of vehicles (including a super stock race car and a jet turbine) were to determine if there would be any increase or reduction of exhaust emissions and improvement or deficiency in fuel consumption in gasoline and/or diesel engines using fuels blended with Mach 3 SEFS-HD, in a mixture of 1 oz SEFS-HD per 15 gallons (2000 oz / 500 ppm) of fuel. It was of interest that not only were all results positive for emission reductions and fuel savings when standard fuel was treated with Mach 3 SEFS-HD, but also that all the engines tested performed notably smoother, beginning with the first test use of the Mach 3 blend. Without exception, all engine performance continued to improve with continuous use of Mach 3 SEFS-HD blended fuels.

Emission reductions of up to 52% for NO_x, 21% for CO₂, 37% for CO and 21% for HC were recorded for internal combustion engines, including a super stock race car normally requiring 108 octane race fuel, and in a jet turbine tested. Also recorded were fuel savings of up to 21.6% for gasoline engines, 22.3% for a diesel engine and 20.7% for the diesel jet turbine. The super stock race car using only 100 octane race fuel blended with Mach 3 SEFS-HD in the ratio of 2 oz per 15 gallon (1 in 1,000) outperformed tests when the 108 high octane racing fuel was used.

CONCLUSIONS

It is the conclusion of EIF's technical group that a substantial benefit of significant value to environmental ecology, fuel economy and engine efficiency results when Mach 3 Super EcoFuel Saver-Heavy Duty (SEFS-HD) Fuel Reformulator™ is blended with any hydrocarbon fuels, like gasoline, diesel or bio-diesel. Of particular interest was when 93 or higher octane "premium fuel" was specified and regular gasoline of 87 octane blended with Mach 3 SEFS-HD performed with no pre-ignition, higher power and lower emissions than with the specified high octane fuel. Similarly, improvement in fuel economy and reduction of emissions continued to take place in engines powered by Mach 3 SEFS-HD blended fuel, indicating the elimination and prevention of carbon deposits that cause "hot spots" and uneven combustion was the result of the Mach 3 SEFS-HD "Reformulating" process.

Respectfully submitted



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