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Certificate of Analysis
Laboratory Number 101707060

Department of Agriculture
Weights and Measures
P.O Box 42560
Olympia, WA 98504-2560
Sample Taken From: Biolyte Biodiesel
Sample I.D.: DR101507-1

Sample Collection Date: 10/15/07
Date Received: 10/17/07
Date Released: 10/18/07
Test Package Number: 105
Blend Stock: used cooking oil
Type of Fuel: B-100 Bio-diesel

Test	Sample Result	Limits	Methods
Water, Suspended by KF	335.55	report	ASTM D6304
Flash Point, PMCC	343.7	199 °F minimum	ASTM D93
Distillation, 90% Recovery	657	680 °F maximum	ASTM D1160
Total Glycerin	0.149	0.240 max (% mass)	ASTM D6584
Monoglycerides	0.098		
Diglycerides	0.029		
Triglycerides	0.015		
Free Glycerin	0.007	0.02 max (% mass)	ASTM D6584
Carbon Residue	0.009	0.050 maximum (%mass)	ASTM D4530
Water and Sediment	0.012	0.05 maximum (%volume)	ASTM D2709
Sulfur, total	3.29	15 ppm maximum	ASTM D5453
Cetane Index	48.02	47 minimum	ASTM D976
Copper Strip Corrosion	1a	No.3 maximum	ASTM D130
Acid Number	0.11	0.50 mg KOH/gm	ASTM D664
Kinematic viscosity @40 °C	3.6	1.9 – 6.0 cst	ASTM D445
Cloud Point	29	report °F	ASTM D2500
Sulfated ash	0.008	0.020 maximum	ASTM D874
Oxidation Stability	4.6	3 hours minimum	EN 14112

Spectrochemical Analysis

Phosphorus	0.0008	0.001 maximum (%mass)	ASTM D4951
Calcium & Magnesium (combined)	3.3	5 maximum ppm	EN 14538
Sodium & Potassium (combined)	2.4	5 maximum ppm	EN 14538

Comments: All results are within acceptable limits.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy.
No responsibility is assumed for the manner in which these results are used or interpreted.

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Patient Name	Date Drawn	Date Received	Date of Report
Doe, Jane	12/27/03	12/29/03	12/30/03
Sex	Age	Physician Name/Address	I.D. Number
F	37	CONCOURSE MEDICAL YOUR DOCTOR, M.D. ANYWHERE, USA 000000	654534565
Account Number		Time Drawn	Specimen Number
3443534		9:30AM	343477
Patient I.D./Soc. Sec. #			
235463746			

TEST NAME	RESULT		UNITS	REFERENCE RANGE
	ABNORMAL	NORMAL		
CHEM-SCREEN PANEL				
GLUCOSE		87.0	MG/DL	65.0-125
SODIUM		140.0	MMOL/L	136-144
POTASSIUM		4.6	MMOL/L	3.60-5.10
CHLORIDE		106.0	MMOL/L	99.0-108
CARBON DIOXIDE		28.0	MMOL/L	21.7-30.7
BUN		9.00	MG/DL	8.00-24.00
CREATININE		0.90	MG/DL	0.70-1.30
BUN CREATININE RATIO		10.0		
URIC ACID		6.00	MG/DL	3.00-8.10
CALCIUM		9.60	MG/DL	8.90-10.3
MAGNESIUM		2.09	G/DL	1.50-2.50
CHOLESTEROL		215.0	MG/DL	120-233
CHOL. PERCENTILE	H 75.0		PERCENTILE	
TRIGLYCERIDES	H 230.0		MG/DL	50.0-200
PROTEIN, TOTAL		7.60	GM/DL	6.50-8.30
ALBUMIN		4.10	GM/DL	4.00-5.00
BILIRUBIN, TOTAL		0.41	MG/DL	0.20-1.50
BILIRUBIN, DIRECT		0.06	MG/DL	0.00-0.20
ALK PHOSPHATASE		69.0	UNITS/L	30.0-110
GGT		18.0	UNITS/L	5.00-80.0
AST (SGOT)	H 46.0		IU/L	5.00-43.0
ALT (SGPT)	H 65.0		IU/L	5.00-60.0
AMYLASE, SERUM		33.0	UNITS/	0.00-100
COMPLETE BLOOD COUNT (CBC)				
WHITE BLOOD CELL (WBC) COUNT		5.10	THOUS./CU.MM	4.00-11.0
RED BLOOD CELL (RBC) COUNT	L 3.88		MIL./CU.MM	4.20-5.40*
HEMOGLOBIN (HGB)		14.0	GM/DL	12.0-16.0*
HEMATOCRIT (HCT)		42.3	PERCENT	37.0-47.0*
MCV	H 109.0		FL	80.0-97.0
MCH	H 38.4		PG	27.5-33.5
MCHC		35.2	PERCENT	32.0-36.0
RDW		12.2	PERCENT	11.0-15.0
PLATELET COUNT, AUTO		243.0	THOUS./CU.MM	150-440
T-LYMPH SUBSETS				
CD4+ HELPER (36.0 PCT)		651	CU.MM	500-1500
CD8+ SUPPRESS (44.0 PCT)		796	CU.MM	150-1000
CD4/CD8 RATIO	L 0.81		RATIO	0.90-6.00
DIFFERENTIAL				
POLY (52.2 PCT)		2662	CU.MM	1650-8000
LYMPH (35.5 PCT)		1810	CU.MM	1000-3500
MONO (9.9 PCT)		504	CU.MM	40.0-900
EOS (1.9 PCT)		96	CU.MM	30.0-600
BASO (0.5 PCT)		25	CU.MM	0.00-125

*These reference ranges are for females.

The ranges for men are: RBC=4.7-6.10,HGB=140-18.0,HCT=42.0-52.0



OIL REPORT

LAB NUMBER: F06994

UNIT ID: 06 RX330

REPORT DATE: 6/15/2012

CLIENT ID: [REDACTED]

CODE: 44/501

PAYMENT: CC: Visa

UNIT	MAKE/MODEL:	Toyota 3.3L V-6 (3MZFE)	OIL TYPE & GRADE:	Mobil 1 5W/20
	FUEL TYPE:	Gasoline (Unleaded)	OIL USE INTERVAL:	4,641 Miles
	ADDITIONAL INFO:			

CLIENT	[REDACTED]	PHONE:	[REDACTED]
		FAX:	[REDACTED]
		ALT PHONE:	[REDACTED]
		EMAIL:	[REDACTED]

Everything looks much better in this second sample from your RX330's V-6 engine. Most every wear metal read at or below average after the 4,641-mile oil change interval, with lead being the only metal reading far enough out of line to highlight. Since lead showed some improvement, we'll just watch it in anticipation of seeing even closer to average lead during the next oil run. Silicon and sodium read normally, leaving no evidence of any coolant contamination in the 5W/20 oil. The TBN was 1.9. Go ahead and run this oil 6,500 miles. Lead shouldn't increase.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	4,641	UNIT / LOCATION	5,880					
	MI/HR on Unit	47,224	AVERAGES	11/12/11					UNIVERSAL AVERAGES
	Sample Date	06/14/12							
	Make Up Oil Added	0 qts		0 qts					
ALUMINUM	4	5	6						5
CHROMIUM	0	0	0						0
IRON	6	10	13						8
COPPER	1	1	1						1
LEAD	6	8	9						2
TIN	0	0	0						1
MOLYBDENUM	79	88	96						79
NICKEL	0	0	0						0
MANGANESE	0	1	1						0
SILVER	0	0	0						0
TITANIUM	0	0	0						0
POTASSIUM	1	3	4						3
BORON	39	47	55						39
SILICON	23	27	31						20
SODIUM	11	31	50						37
CALCIUM	1301	1869	2437						2124
MAGNESIUM	646	330	13						71
PHOSPHORUS	689	716	742						658
ZINC	770	816	862						785
BARIUM	0	1	1						0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	51.1	48-57	52.6					
	cSt Viscosity @ 100°C	7.62	6.7-9.7	8.05					
	Flashpoint in °F	400	>355	380					
	Fuel %	<0.5	<2.0	<0.5					
	Antifreeze %	0.0	0.0	?					
	Water %	0.0	0.0	0.0					
	Insolubles %	0.2	<0.6	0.2					
	TBN	1.9	>1.0	2.8					
	ITAN								
	ISO Code								

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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