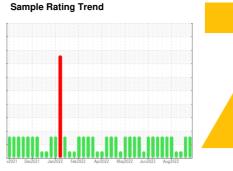


OIL ANALYSIS REPORT







DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Total oil added 103 gal)

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. Elemental level of silicon (Si) above normal.

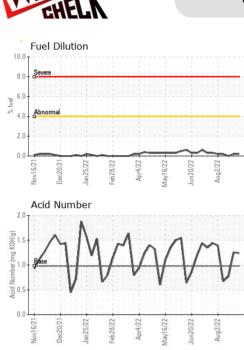
Fluid Condition

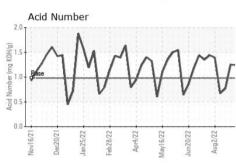
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

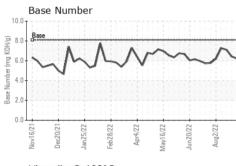
FRON CG 40 (145 GAL)							
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		WC0697930	WC0697932	WC0697937	
Sample Date		Client Info		29 Aug 2022	22 Aug 2022	15 Aug 2022	
Machine Age	hrs	Client Info		116861	116692	116525	
Oil Age	hrs	Client Info		620	451	284	
Oil Changed		Client Info		N/A	N/A	N/A	
Sample Status				ABNORMAL	ABNORMAL	NORMAL	
CONTAMINATION	1	method	limit/base	current	history1	history2	
Water		WC Method	>0.1	NEG	NEG	NEG	
Glycol		WC Method		NEG	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2	
ron	ppm	ASTM D5185m	>45	4	3	2	
Chromium	ppm	ASTM D5185m	>2	<1	<1	<1	
Nickel	ppm	ASTM D5185m	>2	<1	0	0	
Titanium	ppm	ASTM D5185m		0	0	0	
Silver	ppm	ASTM D5185m		<1	0	0	
Aluminum	ppm	ASTM D5185m	>10	2	2	2	
_ead	ppm	ASTM D5185m	>5	1	<1	<1	
Copper	ppm	ASTM D5185m	>14	3	3	2	
Γin	ppm	ASTM D5185m	>13	4	4	2	
Vanadium	ppm	ASTM D5185m		0	0	0	
Cadmium	ppm	ASTM D5185m		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	1	2	0	
Barium	ppm	ASTM D5185m	1	<1	0	0	
Molybdenum	ppm	ASTM D5185m	2	1	<1	<1	
Manganese		ASTM D5185m		<1	<1	<1	
-	ppm ppm	ASTM D5185m ASTM D5185m		<1 15			
Magnesium	ppm		1		<1	<1	
Magnesium Calcium	ppm ppm	ASTM D5185m	9	15	<1 13	<1 11	
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m	1 9 2712	15 3020	<1 13 3041 300	<1 11 2924	
Magnesium Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1 9 2712 292 342	15 3020 296	<1 13 3041	<1 11 2924 274	
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 9 2712 292 342	15 3020 296 372	<1 13 3041 300 357	<1 11 2924 274 340	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1 9 2712 292 342 2575	15 3020 296 372 3221	<1 13 3041 300 357 3500	<1 11 2924 274 340 3252	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1 9 2712 292 342 2575 limit/base	15 3020 296 372 3221 current	<1 13 3041 300 357 3500 history1	<1 11 2924 274 340 3252 history2	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1 9 2712 292 342 2575 limit/base	15 3020 296 372 3221 current	<1 13 3041 300 357 3500 history1 ▲ 233	<1 11 2924 274 340 3252 history2	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1 9 2712 292 342 2575 limit/base >200	15 3020 296 372 3221 current \$\triangle\$ 275 <1	<1 13 3041 300 357 3500 history1 233 1	<1 11 2924 274 340 3252 history2 166 0	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1 9 2712 292 342 2575 limit/base >200	15 3020 296 372 3221	<1 13 3041 300 357 3500 history1 233 1 0	<1 11 2924 274 340 3252 history2 166 0 0	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 9 2712 292 342 2575 limit/base >200 >4.0	15 3020 296 372 3221 current ▲ 275 <1 0	<1 13 3041 300 357 3500 history1 ▲ 233 1 0 0.2	<1 11 2924 274 340 3252 history2 166 0 0 0.0	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524	1 9 2712 292 342 2575 limit/base >200 >4.0	15 3020 296 372 3221 current ▲ 275 <1 0 0.2	<1 13 3041 300 357 3500 history1 ▲ 233 1 0 0.2 history1	<1 11 2924 274 340 3252 history2 166 0 0 0.0 history2	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844	1 9 2712 292 342 2575 limit/base >200 >4.0	15 3020 296 372 3221 current ▲ 275 <1 0 0.2 current	<1 13 3041 300 357 3500 history1 ▲ 233 1 0 0.2 history1 0.1	<1 11 2924 274 340 3252 history2 166 0 0 0.0 history2 0.1	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624	1 9 2712 292 342 2575 Iimit/base >200 >4.0 Iimit/base	15 3020 296 372 3221	<1 13 3041 300 357 3500 history1 ▲ 233 1 0 0.2 history1 0.1 6.1	<1 11 2924 274 340 3252 history2 166 0 0 0.0 history2 0.1 5.6	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844 *ASTM D7624 *ASTM D76145	1 9 2712 292 342 2575 limit/base >200 >4.0 limit/base >20 >30	15 3020 296 372 3221	<1 13 3041 300 357 3500 history1 ▲ 233 1 0 0.2 history1 0.1 6.1 21.4	<1 11 2924 274 340 3252 history2 166 0 0 0.0 history2 0.1 5.6 19.5	
Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	1 9 2712 292 342 2575 limit/base >200 >4.0 limit/base >20 >30 limit/base	15 3020 296 372 3221	<1 13 3041 300 357 3500 history1 ▲ 233 1 0 0.2 history1 6.1 21.4 history1	<1 11 2924 274 340 3252 history2 166 0 0 0.0 history2 0.1 5.6 19.5 history2	

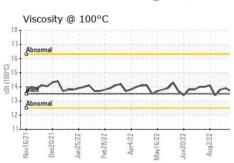


OIL ANALYSIS REPORT







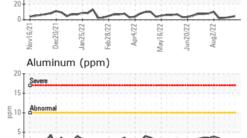


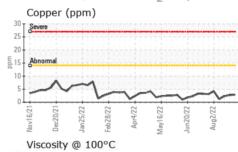
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

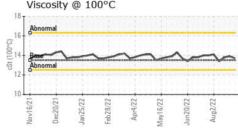
FLUID FROFER	THES	memod	IIIIII/Dase	Current	HISTORY	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	13.5	13.7	13.9	13.8

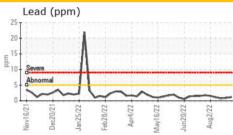
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80 Seve	re							
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Abn	ormal							-
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0 1		72	127	¥ 7	72	7	77	_
Nov16/21)ec20/	an25/2	-eb28/2	Apr4/2	May16/22	Jun20/2	Aug2/22	
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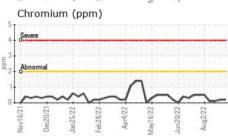
GRAPHS

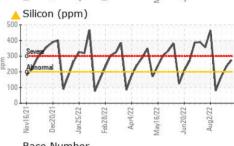


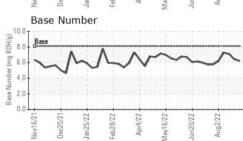














Certificate L2367

Laboratory Sample No. Lab Number : 05633165 Unique Number : 10117686

: WC0697930

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received **Tested** Diagnosed

: 02 Sep 2022 : 06 Sep 2022

: 06 Sep 2022 - Aaron Black

Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

Boardman, OR US 97818 Contact: Blain Middleton bmiddleton@archaea.energy

74265 Bombing Range Road

FINLEY BIOENERGY

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F:

T: (541)481-3232