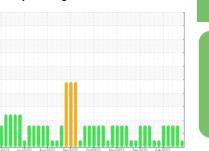


## **OIL ANALYSIS REPORT**

### Sample Rating Trend



## NORMAL





# DIAGNOSIS SAMPLE INF

## Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Total oil added 16 gal )

#### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

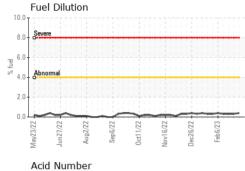
#### **Fluid Condition**

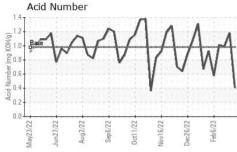
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

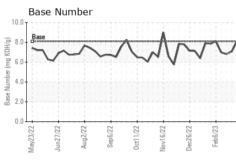
Content   Colient   Coli	•	GAL)	y2022 Jun20	22 Aug2022 Sep2022	Oct2022 Nov2022 Dec2022	Feb 2023	
Content   Colient   Coli	PLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   112735   112     Dil Age   hrs   Client Info   117   904     Dil Changed   Client Info   N/A   N/A     Dil Changed   Dil Changed   Client Info   N/A     Dil Changed   Dil Chang	e Number		Client Info		WC0699025	WC0699081	WC069908
Dil Age	e Date		Client Info		07 Mar 2023	27 Feb 2023	21 Feb 202
Dil Changed   Client Info   N/A   NORMAL   ABI	ne Age	hrs	Client Info		112735	112546	112409
NORMAL   ABI   CONTAMINATION   method   limit/base   current	Э	hrs	Client Info		117	904	767
Water	anged		Client Info		N/A	N/A	N/A
Water         WC Method         NEG         Image: Neg	e Status				NORMAL	ABNORMAL	ABNORMA
WEAR METALS	ITAMINATION	l	method	limit/base	current	history1	history2
WEAR METALS         method         limit/base         current           ron         ppm         ASTM D5185m         >45         2           Chromium         ppm         ASTM D5185m         >2         0           Nickel         ppm         ASTM D5185m         >2         0           Gilver         ppm         ASTM D5185m         >2         0           Gilver         ppm         ASTM D5185m         >5         <1				>0.1		NEG	NEG
Chromium			WC Method		NEG	NEG	NEG
Description	AR METALS		method	limit/base	current	history1	history2
Silickel		ppm	ASTM D5185m	>45	2	11	10
Description	ium	ppm	ASTM D5185m	>2	0	<1	<1
Silver		ppm	ASTM D5185m	>2	0	0	<1
Aluminum   ppm   ASTM D5185m   >1 0   <1   3   3   3   3   4   3   3   3   3   3	m	ppm	ASTM D5185m		0	<1	0
December   December		ppm	ASTM D5185m	>5	<1	0	0
Copper         ppm         ASTM D5185m         >14         <1         3           Fin         ppm         ASTM D5185m         >13         <1	ıum	ppm	ASTM D5185m	>10	<1	3	2
Tin		ppm	ASTM D5185m	>5	0	3	2
ASTM D5185m   STM D5185m   S	r	ppm	ASTM D5185m	>14	<1	3	2
Vanadium         ppm         ASTM D5185m         <1         Cadmium           Cadmium         ppm         ASTM D5185m         0         0           Cadmium         ppm         ASTM D5185m         0         <1			ASTM D5185m	>13	<1	6	5
Cadmium         ppm         ASTM D5185m         0         0           ADDITIVES         method         limit/base         current           Boron         ppm         ASTM D5185m         0         <1	ium		ASTM D5185m		<1	0	<1
Soron	um		ASTM D5185m			0	0
Description	ITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         2         <1         2           Manganese         ppm         ASTM D5185m         1         <1		ppm	ASTM D5185m	0	<1	0	<1
Manganese         ppm         ASTM D5185m         1         <1           Magnesium         ppm         ASTM D5185m         9         14           Calcium         ppm         ASTM D5185m         2712         2571         2           Phosphorus         ppm         ASTM D5185m         292         251         2           Zinc         ppm         ASTM D5185m         342         305         3           Sulfur         ppm         ASTM D5185m         2575         3153         3           CONTAMINANTS         method         limit/base         current           Silicon         ppm         ASTM D5185m         >200         83         ▲           CONTAMINANTS         method         limit/base         current           Solicon         ppm         ASTM D5185m         >200         83         ▲           CONTAMINANTS         ppm         ASTM D5185m         >20         0         0           Godium         ppm         ASTM D5185m         >20         0         0           Fuel         %         ASTM D5185m         >20         0         0           Goot %         %         ASTM D7844         0.1         0	1	ppm	ASTM D5185m	1	0	0	0
Magnesium         ppm         ASTM D5185m         9         14           Calcium         ppm         ASTM D5185m         2712         2571         2           Phosphorus         ppm         ASTM D5185m         292         251         2           Zinc         ppm         ASTM D5185m         342         305         3           Sulfur         ppm         ASTM D5185m         2575         3153         3           CONTAMINANTS         method         limit/base         current           Silicon         ppm         ASTM D5185m         >200         83         ▲           Godium         ppm         ASTM D5185m         >20         0         0           Potassium         ppm         ASTM D5185m         >20         0         0           Fuel         %         ASTM D3524         >4.0         0.4         0           INFRA-RED         method         limit/base         current           Soot %         %         *ASTM D7844         0.1         0           Nitration         Abs/.1mm         *ASTM D7624         >20         5.8         5           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.1 <td>denum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>2</td> <td>&lt;1</td> <td>2</td> <td>1</td>	denum	ppm	ASTM D5185m	2	<1	2	1
Calcium         ppm         ASTM D5185m         2712         2571         22571	inese	ppm	ASTM D5185m	1	<1	<1	<1
Phosphorus         ppm         ASTM D5185m         292         251         2           Zinc         ppm         ASTM D5185m         342         305         3           Sulfur         ppm         ASTM D5185m         2575         3153         3           CONTAMINANTS         method         limit/base         current           Silicon         ppm         ASTM D5185m         >200         83         ▲           Sodium         ppm         ASTM D5185m         >20         0         0           Potassium         ppm         ASTM D5185m         >20         0         0         0           Fuel         %         ASTM D5185m         >20         0         0         0         0           Fuel         %         ASTM D5185m         >20         0	esium	ppm	ASTM D5185m	9	14	13	21
Zinc	m	ppm	ASTM D5185m	2712	2571	2886	2958
Zinc	horus	ppm	ASTM D5185m	292	251	274	280
Sulfur         ppm         ASTM D5185m         2575         3153         3           CONTAMINANTS         method         limit/base         current           Silicon         ppm         ASTM D5185m         >200         83         ▲           Sodium         ppm         ASTM D5185m         0         2           Potassium         ppm         ASTM D5185m         >20         0         0           Fuel         %         ASTM D5185m         >20         0         0         0           Fuel         %         ASTM D3524         >4.0         0.4         0           INFRA-RED         method         limit/base         current           Soot %         %         *ASTM D7844         0.1         0           Nitration         Abs/cm         *ASTM D7624         >20         5.8         5           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.1         2           FLUID DEGRADATION         method         limit/base         current           Dxidation         Abs/.1mm         *ASTM D7414         >25         12.2		ppm	ASTM D5185m	342	305	353	348
Silicon   ppm   ASTM D5185m   >200   83   A   A   A   A   A   A   A   A   A				2575	3153	3876	3683
Sodium	ITAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         0         0           Fuel         %         ASTM D3524         >4.0         0.4         0           INFRA-RED         method         limit/base         current           Soot %         %         *ASTM D7844         0.1         0           Nitration         Abs/cm         *ASTM D7624         >20         5.8         5           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.1         2           FLUID DEGRADATION         method         limit/base         current           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.2		ppm	ASTM D5185m	>200	83	<b>4</b> 01	<b>△</b> 398
Potassium         ppm         ASTM D5185m         >20         1         0         0         0         0         0         0         0         0         0         0         0         1         0         0         0         1	n	ppm	ASTM D5185m		0	2	2
Fuel         %         ASTM D3524         >4.0         0.4         0.4           INFRA-RED         method         limit/base         current           Soot %         %         *ASTM D7844         0.1         0.1           Nitration         Abs/cm         *ASTM D7624         >20         5.8         5           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.1         2           FLUID DEGRADATION         method         limit/base         current           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.2			ASTM D5185m	>20	0	0	0
Soot %         %         *ASTM D7844         0.1         0           Nitration         Abs/cm         *ASTM D7624         >20         5.8         5           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.1         2           FLUID DEGRADATION         method         limit/base         current           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.2		ppiii		. 10	0.4	0.3	0.3
Nitration         Abs/cm         *ASTM D7624         >20         5.8         5           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.1         2           FLUID DEGRADATION         method         limit/base         current           Dxidation         Abs/.1mm         *ASTM D7414         >25         12.2			ASTM D3524	>4.0		0.5	0.0
Nitration         Abs/cm         *ASTM D7624         >20         5.8         5           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.1         2           FLUID DEGRADATION method limit/base current           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.2         12.2	sium					history1	
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.1         2           FLUID DEGRADATION         method         limit/base         current           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.2	sium RA-RED	%	method		current		history2
Oxidation Abs/.1mm *ASTM D7414 >25 <b>12.2</b>	sium RA-RED	%	method *ASTM D7844	limit/base	current 0.1	history1	history2
	RA-RED	% Abs/cm	method *ASTM D7844 *ASTM D7624	limit/base	current 0.1 5.8	history1	history2
	AA-RED	%  % Abs/cm Abs/.1mm	method  *ASTM D7844  *ASTM D7624  *ASTM D7415	limit/base >20 >30	current 0.1 5.8 19.1	history1 0.1 5.4	history2 0.1 5.2 19.9
TOTAL TALLIDOL (7 LT) HIGHOLING ACTIVIDATION OF CO. C. T. T.	SA-RED SON ON ON ON ON ON	% Abs/cm Abs/.1mm	method  *ASTM D7844  *ASTM D7624  *ASTM D7415  method	limit/base >20 >30 limit/base	current 0.1 5.8 19.1 current	history1 0.1 5.4 20.8	history2 0.1 5.2 19.9
Base Number (BN) mg KOH/g ASTM D2896 8.1 8.07	RA-RED  on  D DEGRADA	% Abs/cm Abs/.1mm	method  *ASTM D7844  *ASTM D7624  *ASTM D7415  method	limit/base >20 >30 limit/base	current 0.1 5.8 19.1 current	history1  0.1  5.4  20.8  history1	history2 0.1 5.2 19.9 history2

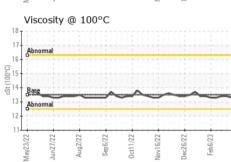


## **OIL ANALYSIS REPORT**





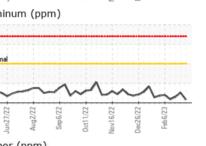


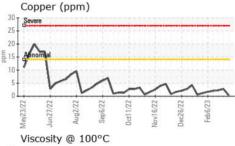


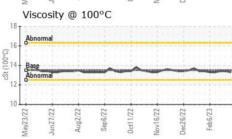
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

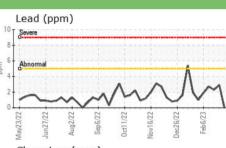
FLUID PROPER	HES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	13.5	13.3	13.4	13.4

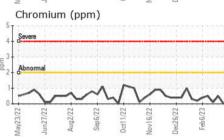
ere				*********		
ormal						
_					<u></u>	
Jun27/22	Aug2/23	Sep 6/22	0ct11/23	Nov16/22	Dec26/22	Feb 6/23
	normal 22/12	normal 22	normal 22 22 22	normal 22 22 22 22	nomal	nomal

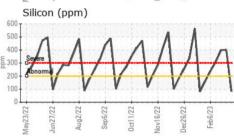


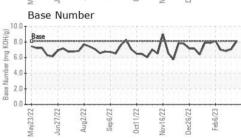














Certificate L2367

Laboratory Sample No. Unique Number : 10373325

: WC0699025 Lab Number : 05788654

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

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

: 13 Mar 2023

: 13 Mar 2023 - Don Baldridge

: 10 Mar 2023

US 97818 Contact: Blain Middleton bmiddleton@archaea.energy T: (541)481-3232

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)

Report Id: FINLEX [WUSCAR] 05788654 (Generated: 03/06/2024 16:54:31) Rev: 1

Contact/Location: Blain Middleton - FINLEX

F:

**FINLEY BIOENERGY** 

Boardman, OR

74265 Bombing Range Road