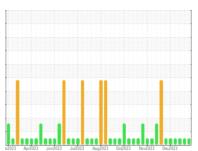


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id HBKM01BE Component Biogas Engine Fluid SHELL MYSELLA S5 S (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

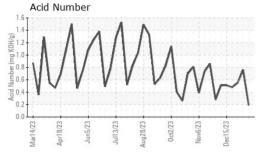
Fluid Condition

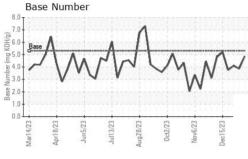
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

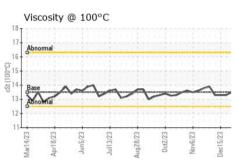
SAMPLE INFORMATION method limit/base current history1 history2 Sample Number Client Info WC0775454 WC0775467 WC0775470 Sample Date Client Info 10 Jan 2024 03 Jan 2024 27 Dec 2023 Machine Age hrs Client Info 107466 1079392 1072727 10 Jan 2024 27 Dec 2023 10 Jan 2024 10 Jan	6 (GAL)		w2023 Apr20	23 Jun2023 Jul2023	Aug2023 Oct2023 Nov2023	Dec2023	
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 107466 107392 107272	Sample Number		Client Info		WC0775454	WC0775467	WC0775470
Oil Age hrs Client Info 0 393 297 Oil Changed Client Info Changed Oil Added NORMAL NO 1 1 1<	Sample Date		Client Info		10 Jan 2024	03 Jan 2024	27 Dec 2023
Oil Changed Sample Status Client Info Changed NORMAL NORMAL NORMAL Oil Added NORMAL NORMAL NORMAL Oil Added NORMAL NORMAL NORMAL 1.0 1.0	Machine Age	hrs	Client Info		107466	107392	107272
NORMAL NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		0	393	297
CONTAMINATION	Oil Changed		Client Info		Changed	Oil Added	Oil Added
Fuel WC Method >4.0 <1.0 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.1 NEG	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.1 NEG NEG NEG Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM DS185m >15 0 4 4 Chromium ppm ASTM DS185m >4 0 <1	CONTAMINATION	N	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.1	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >4 0 <1 <1 Nickel ppm ASTM D5185m >2 1 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>15			4
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m >5 <1	Chromium	ppm		>4			
Stilver	Nickel	ppm	ASTM D5185m	>2			
Aluminum ppm ASTM D5185m >6 3 3 2 Lead ppm ASTM D5185m >9 <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >9 <1 <1 0 Copper ppm ASTM D5185m >6 <1 1 <1 Tin ppm ASTM D5185m >4 0 3 2 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 4 4 4 4 Manganese ppm ASTM D5185m 35 42 43 Calcium ppm ASTM D5185m 1301 1466 1401 Phosphorus ppm ASTM D5185m 300 367 375 Zinc ppm ASTM D	Silver	ppm	ASTM D5185m	>5			
Copper ppm ASTM D5185m >6 <1 1 <1 Tin ppm ASTM D5185m >4 0 3 2 Vanadium ppm ASTM D5185m <1	Aluminum	ppm	ASTM D5185m	>6	3	3	2
Tin	Lead	ppm	ASTM D5185m	>9	<1	<1	0
Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 4 4 4 Manganese ppm ASTM D5185m -11 0 0 Magnesium ppm ASTM D5185m 35 42 43 Calcium ppm ASTM D5185m 1301 1466 1401 Phosphorus ppm ASTM D5185m 388 412 400 Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20	Copper	ppm	ASTM D5185m	>6	<1	1	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 4 5 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 4 4 4 Manganese ppm ASTM D5185m 35 42 43 Calcium ppm ASTM D5185m 35 42 43 Calcium ppm ASTM D5185m 1301 1466 1401 Phosphorus ppm ASTM D5185m 388 412 400 Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m >20 0 <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>4</td> <td>0</td> <td>3</td> <td>2</td>	Tin	ppm	ASTM D5185m	>4	0	3	2
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 4 4 4 Manganese ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 4 4 4 Manganese ppm ASTM D5185m <1 0 0 Magnesium ppm ASTM D5185m 35 42 43 Calcium ppm ASTM D5185m 1301 1466 1401 Phosphorus ppm ASTM D5185m 300 305 367 375 Zinc ppm ASTM D5185m 388 412 400 Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m >20 0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>0</td> <td>4</td> <td>5</td>	Boron	ppm	ASTM D5185m		0	4	5
Manganese ppm ASTM D5185m <1 0 0 Magnesium ppm ASTM D5185m 35 42 43 Calcium ppm ASTM D5185m 1301 1466 1401 Phosphorus ppm ASTM D5185m 300 305 367 375 Zinc ppm ASTM D5185m 388 412 400 Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m >20 0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7624 >20 3.0 4.2 4.2 Sulfation <th< td=""><td>Barium</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>0</td><td>0</td><td>0</td></th<>	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m 35 42 43 Calcium ppm ASTM D5185m 1301 1466 1401 Phosphorus ppm ASTM D5185m 300 305 367 375 Zinc ppm ASTM D5185m 388 412 400 Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m >20 0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 0 Nitration Abs/.1mm *ASTM D7415 >30 16.4 18.9 18.7	Molybdenum	ppm	ASTM D5185m		4	4	4
Calcium ppm ASTM D5185m 1301 1466 1401 Phosphorus ppm ASTM D5185m 300 305 367 375 Zinc ppm ASTM D5185m 388 412 400 Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m >0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1	Manganese	ppm	ASTM D5185m		<1	0	0
Phosphorus ppm ASTM D5185m 300 305 367 375 Zinc ppm ASTM D5185m 388 412 400 Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1	Magnesium	ppm	ASTM D5185m		35	42	43
Zinc ppm ASTM D5185m 388 412 400 Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1	Calcium	ppm	ASTM D5185m		1301	1466	1401
Sulfur ppm ASTM D5185m 2948 3187 3339 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1	Phosphorus	ppm	ASTM D5185m	300	305	367	375
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1	Zinc	ppm	ASTM D5185m		388	412	400
Silicon ppm ASTM D5185m >181 19 110 105 Sodium ppm ASTM D5185m 0 6 6 6 Potassium ppm ASTM D5185m >20 0 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 3.0 4.2 4.2 Sulfation Abs/.1mm *ASTM D7415 >30 16.4 18.9 18.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 10.2 12.0 12.0 Acid Number (AN) mg KOH/g ASTM D8045 0.19 0.76 0.55	Sulfur	ppm	ASTM D5185m		2948	3187	3339
Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 0 0 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 3.0 4.2 4.2 Sulfation Abs/.1mm *ASTM D7415 >30 16.4 18.9 18.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 10.2 12.0 12.0 Acid Number (AN) mg KOH/g ASTM D8045 0.19 0.76 0.55	Silicon	ppm	ASTM D5185m	>181	19	110	105
INFRA-RED	Sodium	ppm	ASTM D5185m		0	6	6
Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 3.0 4.2 4.2 Sulfation Abs/.1mm *ASTM D7415 >30 16.4 18.9 18.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 10.2 12.0 12.0 Acid Number (AN) mg KOH/g ASTM D8045 0.19 0.76 0.55	Potassium	ppm	ASTM D5185m	>20	0	0	<1
Nitration Abs/cm *ASTM D7624 >20 3.0 4.2 4.2 Sulfation Abs/.1mm *ASTM D7415 >30 16.4 18.9 18.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 10.2 12.0 12.0 Acid Number (AN) mg KOH/g ASTM D8045 0.19 0.76 0.55	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 16.4 18.9 18.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 10.2 12.0 12.0 Acid Number (AN) mg KOH/g ASTM D8045 0.19 0.76 0.55	Soot %	%	*ASTM D7844		0	0	0
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 10.2 12.0 12.0 Acid Number (AN) mg KOH/g ASTM D8045 0.19 0.76 0.55	Nitration	Abs/cm	*ASTM D7624	>20	3.0	4.2	4.2
Oxidation Abs/.1mm *ASTM D7414 >25 10.2 12.0 12.0 Acid Number (AN) mg KOH/g ASTM D8045 0.19 0.76 0.55	Sulfation	Abs/.1mm	*ASTM D7415	>30	16.4	18.9	18.7
Acid Number (AN) mg KOH/g ASTM D8045 0.19 0.76 0.55	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
, ,	Oxidation	Abs/.1mm	*ASTM D7414	>25	10.2	12.0	12.0
, ,	Acid Number (AN)	mg KOH/g	ASTM D8045		0.19	0.76	0.55
	Base Number (BN)	mg KOH/g	ASTM D2896	5.3	4.87	3.86	4.10



OIL ANALYSIS REPORT



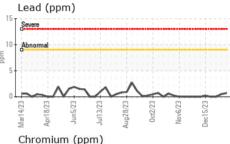


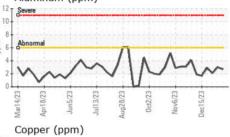


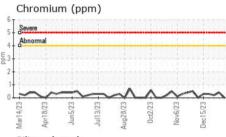
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

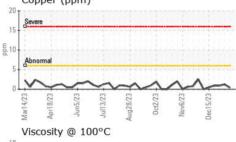
FLUID PROPER	THES	method	ilmivbase		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	13.5	13.3	13.3	13.5

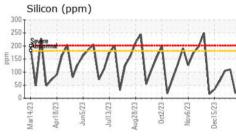
Seve	ere						
Abn	ormal						
1 10	٨		- 4	Λ		σ.	
-	1		1	1	1	1	1
Mar14/23	Apr18/23 - V	Jun5/23	Juli 3/23	Aug28/23	Oct2/23	Nov6/23	Dec15/23

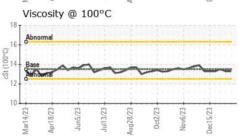


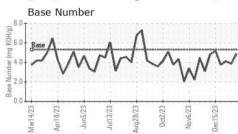
















Certificate L2367

Laboratory Sample No.

Lab Number **Unique Number** Test Package : MOB 2

: WC0775454 : 06059420

: 10830802

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 12 Jan 2024 Diagnosed : 15 Jan 2024

: Don Baldridge Diagnostician

EDL NA Recips-Honeybrook

Honey Brook Powerstation, 481 S. Churchtown Road Narvon, PA

US 17555-9574 Contact: Christian Adames

Christian.Adames@edlenergy.com T:

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)

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