

OIL ANALYSIS REPORT

Sample Rating Trend







MAN G3685

Component **Natural Gas Engine**

Naturai Gas Engine

SHELL MYSELLA 40 (70 LTR)

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 acceptable for the time in service.

		c2019 Apr20.	20 Aug2020 Dec2020	Apr2021 Sep2021 Aug2022	Mar2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0724346	WC0724347	WC0724348
Sample Date		Client Info		25 Jan 2024	06 Jul 2023	15 Jun 2023
Machine Age	hrs	Client Info		79412	74722	74218
Oil Age	hrs	Client Info		1000	1500	1000
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	4	15	11
Chromium	ppm	ASTM D5185m	>10	7	14	12
Nickel	ppm	ASTM D5185m	>5	2	4	4
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	3
Lead	ppm	ASTM D5185m	>20	0	4	5
Copper	ppm	ASTM D5185m	>15	<1	3	3
Tin	ppm	ASTM D5185m	>10	0	0	1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
		method	mini base	oarront	Thistory	HISTOLYZ
	ppm	ASTM D5185m	mmbasc	0	0	0
Boron	ppm		mm base			
Boron Barium		ASTM D5185m	mm, base	0	0	0
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	mmpaase	0 1	0	0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 1 4	0 0 2	0 0 2
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 1 4 0	0 0 2 <1	0 0 2 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 1 4 0 7	0 0 2 <1 8	0 0 2 <1 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 200	0 1 4 0 7 1500	0 0 2 <1 8 1818	0 0 2 <1 5 1710
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 200	0 1 4 0 7 1500 312	0 0 2 <1 8 1818 341	0 0 2 <1 5 1710 311
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 200	0 1 4 0 7 1500 312 388	0 0 2 <1 8 1818 341 436	0 0 2 <1 5 1710 311 388
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 200 0	0 1 4 0 7 1500 312 388 2801	0 0 2 <1 8 1818 341 436 3170	0 0 2 <1 5 1710 311 388 3027
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 200 0	0 1 4 0 7 1500 312 388 2801	0 0 2 <1 8 1818 341 436 3170 history1	0 0 2 <1 5 1710 311 388 3027 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 200 0	0 1 4 0 7 1500 312 388 2801 current	0 0 2 <1 8 1818 341 436 3170 history1	0 0 2 <1 5 1710 311 388 3027 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 200 0 limit/base >20	0 1 4 0 7 1500 312 388 2801 current 2	0 0 2 <1 8 1818 341 436 3170 history1 3	0 0 2 <1 5 1710 311 388 3027 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 200 0 limit/base >20 >20	0 1 4 0 7 1500 312 388 2801 current 2 0	0 0 2 <1 8 1818 341 436 3170 history1 3 1	0 0 2 <1 5 1710 311 388 3027 history2 3 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 200 0 limit/base >20 >20 limit/base	0 1 4 0 7 1500 312 388 2801 current 2 0 2	0 0 2 <1 8 1818 341 436 3170 history1 3 1 <1	0 0 2 <1 5 1710 311 388 3027 history2 3 1 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 200 0 limit/base >20 >20 limit/base >1.5	0 1 4 0 7 1500 312 388 2801 current 2 0 2 current	0 0 2 <1 8 1818 341 436 3170 history1 3 1 <1 history1 0	0 0 2 <1 5 1710 311 388 3027 history2 3 1 2 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 200 0 limit/base >20 >20 limit/base >1.5 >20	0 1 4 0 7 1500 312 388 2801 current 2 0 2 current 0 6.7	0 0 2 <1 8 1818 341 436 3170 history1 3 1 <1 history1 0 8.7	0 0 2 <1 5 1710 311 388 3027 history2 3 1 2 history2 0.1 7.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	0 200 0 limit/base >20 limit/base >1.5 >20 >30	0 1 4 0 7 1500 312 388 2801 current 2 0 2 current 0 6.7 18.6	0 0 2 <1 8 1818 341 436 3170 history1 3 1 <1 history1 0 8.7 21.2	0 0 2 <1 5 1710 311 388 3027 history2 3 1 2 history2 0.1 7.2 20.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m METHOD ASTM D5185m METHOD *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m METHOD *ASTM D7844 *ASTM D7624 *ASTM D7615 METHOD	0 200 0 limit/base >20 s20 limit/base >20 s20 s20 s30 limit/base	0 1 4 0 7 1500 312 388 2801 current 2 0 2 current 0 6.7 18.6 current	0 0 2 <1 8 1818 341 436 3170 history1 3 1 <1 history1 0 8.7 21.2 history1	0 0 2 <1 5 1710 311 388 3027 history2 3 1 2 history2 0.1 7.2 20.1 history2

Base Number (BN) mg KOH/g ASTM D2896 1.1

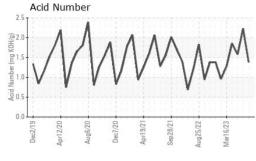
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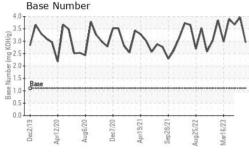
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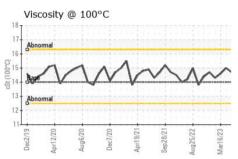
3.67



OIL ANALYSIS REPORT



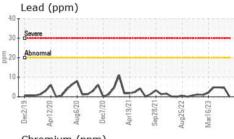


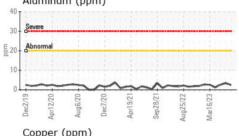


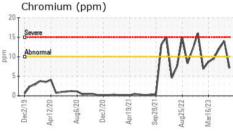
VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	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

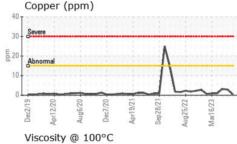
FLUID PROPER	TILO	memod			riistory i	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	14.0	14.4	15.2	14.7

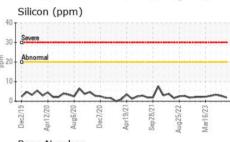
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Dec2/19	20	Aug6/20	Dec7/20	Apr19/21	Sep28/21	Aug25/22	Mar16/23

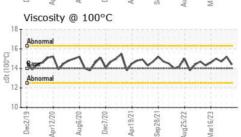


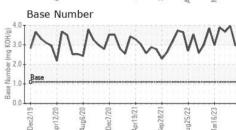














Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : MOB 2

: WC0724346 : 06074985

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved Diagnosed : 10857076 Diagnostician

: 30 Jan 2024 : 01 Feb 2024 : Sean Felton

EDEN RESORT 222 EDEN RD LANCASTER, PA US 17601

Contact: RODNEY CRAWFORD

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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)