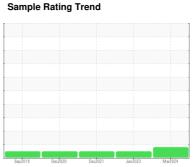


OIL ANALYSIS REPORT







Machine Id 85MAIN

Component

Diesel Engine

MOBIL DELVAC MX 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Metal levels are typical for a new component breaking in.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

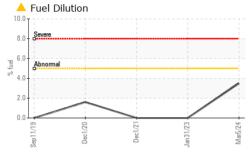
Fluid Condition

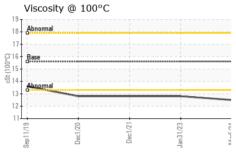
The condition of the oil is acceptable for the time in service.

		Sep2019	Dec2020	Dec2021 Jan2023	Mar2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0910592	WC0768115	WC0606410
Sample Date		Client Info		05 Mar 2024	31 Jan 2023	01 Dec 2021
Machine Age	hrs	Client Info		447	0	0
Oil Age	hrs	Client Info		0	0	1
Oil Changed		Client Info		N/A	N/A	Changed
Sample Status				MARGINAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	3	1	2
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	1	<1
Lead	ppm	ASTM D5185(m)	>40	0	<1	<1
Copper	ppm	ASTM D5185(m)	>330	1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		1	3	17
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		60	59	55
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		980	971	936
Calcium	ppm	ASTM D5185(m)		1057	1097	1106
Phosphorus	ppm	ASTM D5185(m)		1002	1111	1084
Zinc	ppm	ASTM D5185(m)		1170	1199	1217
Sulfur	ppm	ASTM D5185(m)		2711	2905	2867
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5	3	3
Sodium	ppm	ASTM D5185(m)		2	1	1
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1
Fuel	%	ASTM D7593*	>5	△ 3.5	<1.0	<1.0
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	5.4	5.4	5.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.5	21.0	19.7
		-			-	



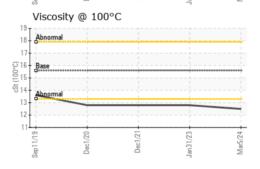
OIL ANALYSIS REPORT

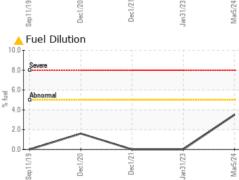




FLUID DEGRADATION		method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.8	13.8	14.2	
VISUAL		method	limit/base	current	history1	history2	
Emulsified Water Free Water	scalar scalar	Visual* Visual*	>0.2	NEG NEG	NEG NEG	NEG NEG	
FLUID PROPERTIES		method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	12.5	12.8	12.8	
GRAPHS							
Iron (ppm)	Lead (ppm)						

GRAPHS								
Iron (ppm)				Lead (ppm)			
Severe				Severe				
				60-			i i	
Abnormal	! ! !	1		Abnormal			!	
				20				
				0				
Dec1/20	Dec1/21	Jan31/23 ·	Mar5/24	Sep11/19.	Dec1/20	Dec1/21	Jan31/23	Mar5/24.
luminum (pp		P	~		nium (ppm		Ja	-
				50	(pp			
Severe				40 Severe				
Abnormal				30 Abnormal				
conomia				20 - 0				
				10				
Dec1/20 -	Dec1/21-	Jan31/23 -	Mar5/24	Sep11/19	Dec1/20 +	Dec1/21-	Jan31/23	Mar5/24
		Jan	Σ			De	Jan	Ž
Copper (ppm)				Silicon	(ppm)			
Abnormal				70				
				50				
				a 40 Abnormal				
				20-				
0:	21-	53	45	0	02		53	
c1/20	c1/21	31/23	ır5/24	1/19	c1/20	sc1/21	31/23	7.70







CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: WC0910592 Lab Number : 02625642 Unique Number : 5750761

Received **Tested** Diagnosed Test Package: MOB 1 (Additional Tests: FuelDilution, PercentFuel)

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 NORTHERN GENERATOR CO. LTD. : 01 Apr 2024

: 02 Apr 2024 : 02 Apr 2024 - Wes Davis

80 ASHBRIDGE CIRCLE,, UNIT #1 & 2

WOODBRIDGE, ON CA L4L 3R5 Contact: Selome Afework

selome@northerngenerator.com T: (905)264-9744 F: (905)264-9714

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.