



OIL ANALYSIS REPORT

Sample Rating Trend

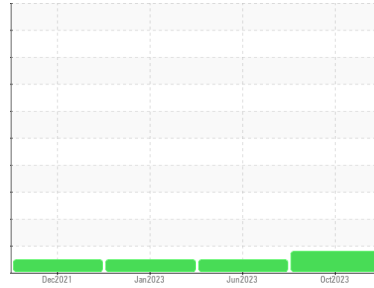
WEAR



Machine Id
56145

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 10W30 (--- LTR)



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Wear

Aluminum ppm levels are abnormal. Piston wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0863991	WC0817354	WC0771286
Sample Date	Client Info		03 Oct 2023	02 Jun 2023	28 Jan 2023
Machine Age	mls	Client Info	695645	656907	619046
Oil Age	mls	Client Info	0	37861	39329
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	43	28	30
Chromium	ppm	ASTM D5185(m)	>20	5	2	3
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	▲ 30	17	20
Lead	ppm	ASTM D5185(m)	>40	<1	0	<1
Copper	ppm	ASTM D5185(m)	>330	5	5	5
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
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)	250	2	1	1
Barium	ppm	ASTM D5185(m)	10	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	100	65	64	62
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	1043	1042	1036
Calcium	ppm	ASTM D5185(m)	3000	1129	1175	1159
Phosphorus	ppm	ASTM D5185(m)	1150	1006	1094	1103
Zinc	ppm	ASTM D5185(m)	1350	1272	1268	1278
Sulfur	ppm	ASTM D5185(m)	4250	2194	2219	2237
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	5	6	6
Sodium	ppm	ASTM D5185(m)		4	5	5
Potassium	ppm	ASTM D5185(m)	>20	7	3	4

INFRA-RED

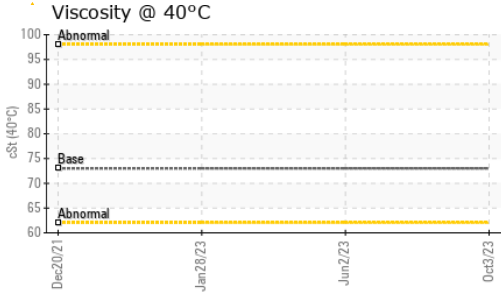
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.5	0.4	0.3
Nitration	Abs/cm	ASTM D7624*	>20	9.9	8.8	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.4	21.0	23.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.0	17.7	19.8



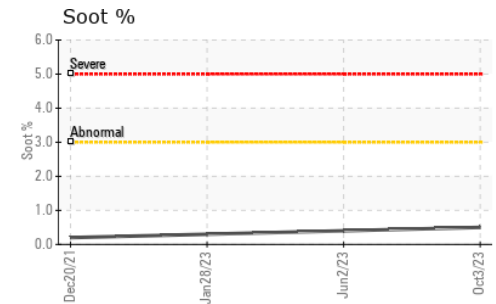
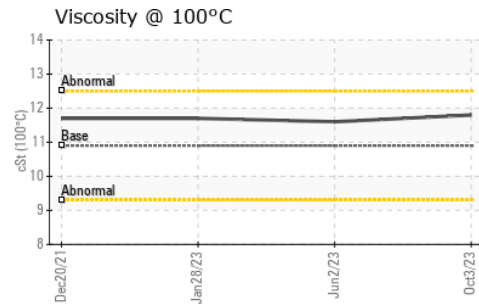
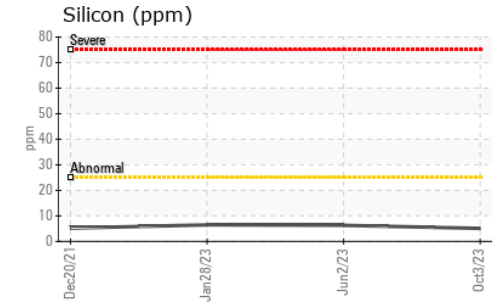
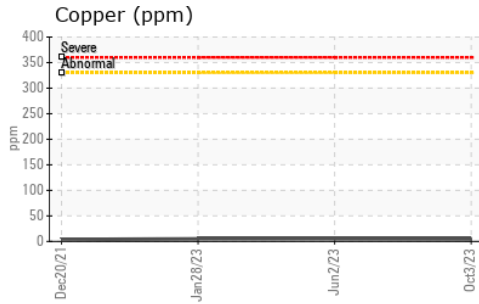
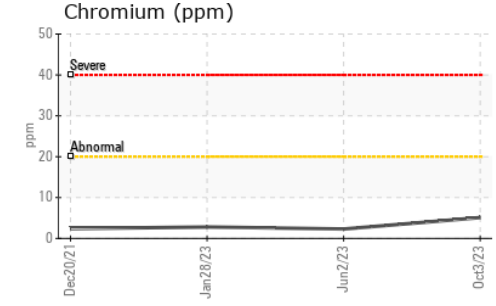
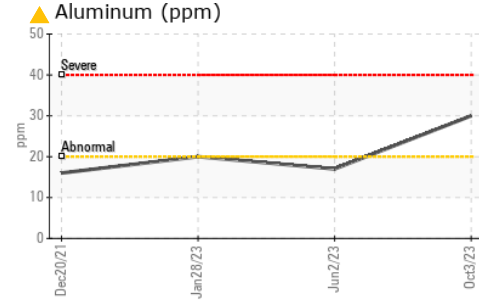
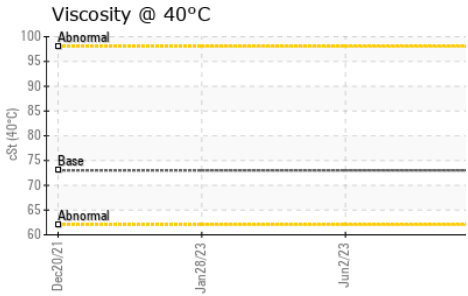
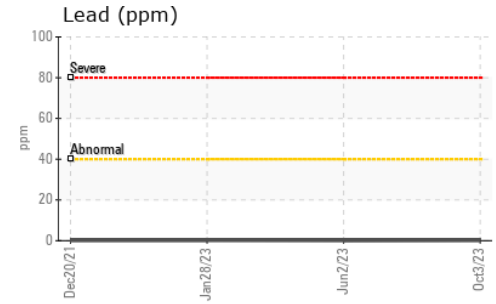
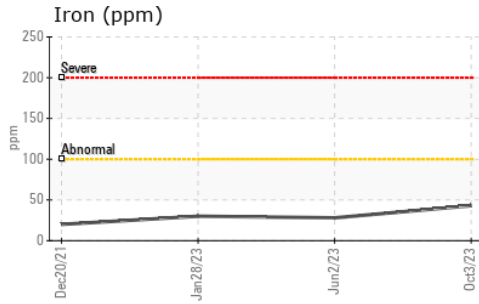
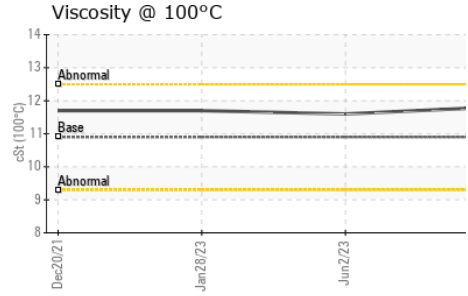
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	73	79.5	---
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	11.8	11.6
Viscosity Index (VI)	Scale	ASTM D2270*	138	142	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0863991 **Received** : 13 Oct 2023
Lab Number : 02588810 **Diagnosed** : 16 Oct 2023
Unique Number : 5657876 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: KV40, VI)

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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.