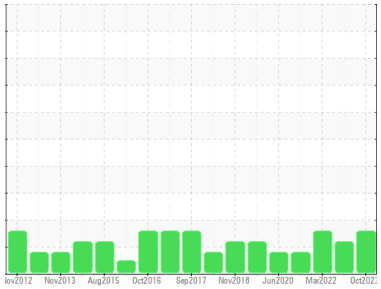
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
KME ENG 11
Component
Front Diesel Engine
Fluid
SAFETY-KLEEN PERFORMANCE PLUS 15W40 (40 LTR)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0078209**	PC0054314	PC0050559
Sample Date		Client Info		**03 Oct 2023**	28 Sep 2022	22 Mar 2022
Machine Age	kms	Client Info		**171123**	156814	149692
Oil Age	kms	Client Info		**0**	7200	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>85	**24**	25	27
Chromium	ppm	ASTM D5185(m)	>5	**1**	2	2
Nickel	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	0
Silver	ppm	ASTM D5185(m)	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>40	**10**	10	14
Lead	ppm	ASTM D5185(m)	>25	**11**	2	1
Copper	ppm	ASTM D5185(m)	>350	**1**	1	1
Tin	ppm	ASTM D5185(m)	>5	**0**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	<1	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)	1.4	**2**	<1	1
Barium	ppm	ASTM D5185(m)	0.1	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	0.1	**58**	56	56
Manganese	ppm	ASTM D5185(m)		**<1**	1	2
Magnesium	ppm	ASTM D5185(m)	2.7	**919**	915	▲ 972
Calcium	ppm	ASTM D5185(m)	2328	**971**	1024	▲ 981
Phosphorus	ppm	ASTM D5185(m)	924	**973**	1017	1024
Zinc	ppm	ASTM D5185(m)	1004	**1123**	1148	1163
Sulfur	ppm	ASTM D5185(m)	3828	**2452**	2458	2495
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

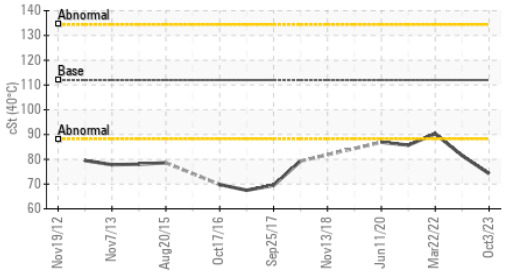
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>40	**5**	5	6
Sodium	ppm	ASTM D5185(m)		**5**	5	6
Potassium	ppm	ASTM D5185(m)	>20	**0**	1	2
Fuel	%	ASTM D7593*	>5	▲ **4.2**	▲ 5.6	▲ 3.4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.3**	0.3	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**8.0**	8.0	6.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	**25.9**	20.6	20.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**28.8**	16.5	14.5

OIL ANALYSIS REPORT

Viscosity @ 40°C

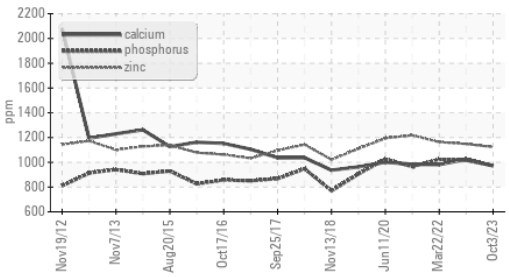


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

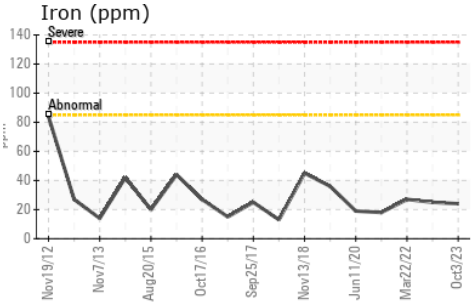
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	112	▲ **74.2**	81.5	90.3
Visc @ 100°C	cSt	ASTM D7279(m)	15.3	▲ **11.2**	▲ 11.8	12.8
Viscosity Index (VI)	Scale	ASTM D2270*	143	**141**	137	139

GRAPHS

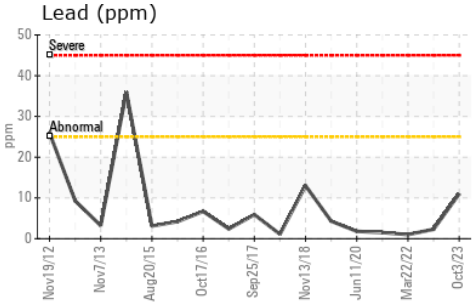
Additives



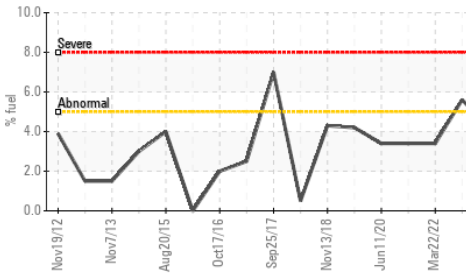
Iron (ppm)



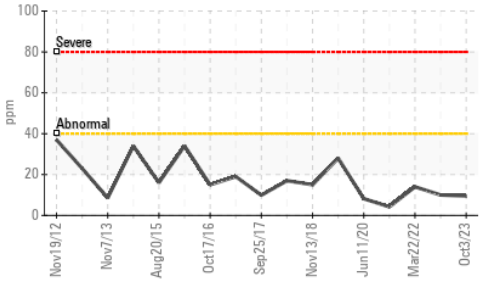
Lead (ppm)



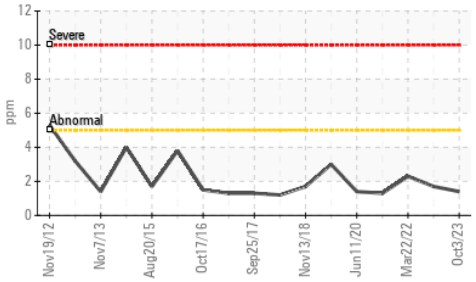
Fuel Dilution



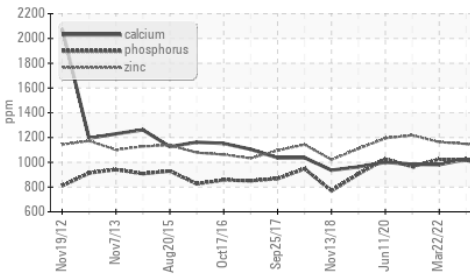
Aluminum (ppm)



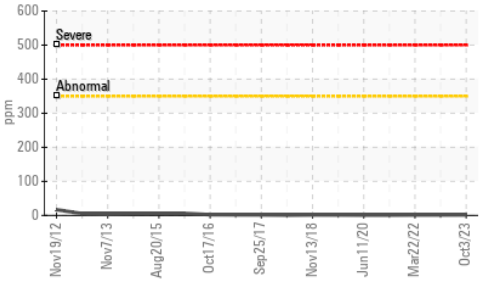
Chromium (ppm)



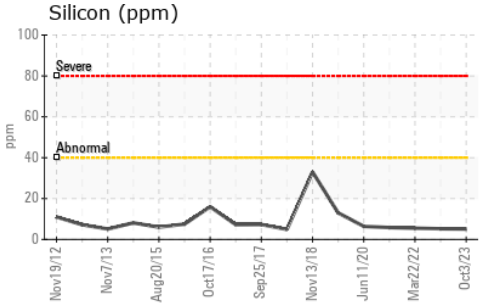
Additives



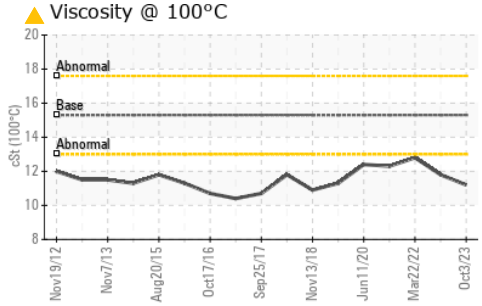
Copper (ppm)



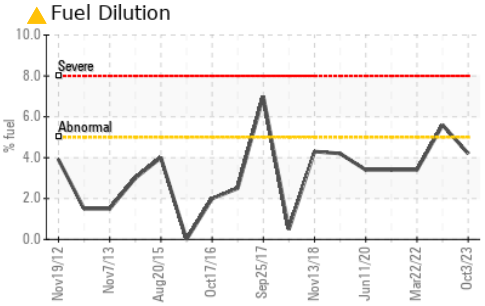
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0078209 **Received** : 06 Oct 2023
Lab Number : 02587476 **Diagnosed** : 10 Oct 2023
Unique Number : 5656542 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: KV40, PercentFuel, VI)

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.

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