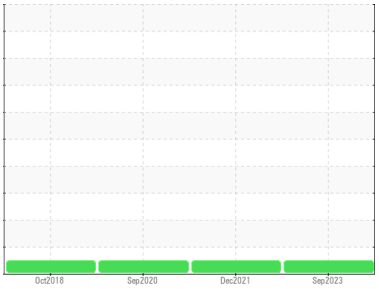
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
LAB CHARLES RIVER PM5523 [328699]
Machine Id
CUMMINS 11643407
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Échantillonner de nouveau l`équipement au prochain intervalle de vidange afin d`en surveiller la condition.

Wear
Les taux d`usure de tous les composants sont normaux.

Contamination
Il n`y a aucun indice de contamination dans l`huile.

Fluid Condition
Les niveaux d`additifs indiquent l`ajout d`une autre marque ou d`un autre type d`huile. L`état de l`huile est acceptable pour la durée de service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**CU0022040**	CU0018264	CU0016420
Sample Date		Client Info		**29 Sep 2023**	23 Dec 2021	29 Sep 2020
Machine Age	hrs	Client Info		**1174**	1117	1087
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Glycol		WC Method		**NEG**	NEG	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	**3**	3	2
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>2	**0**	<1	0
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**<1**	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>40	**2**	3	3
Copper	ppm	ASTM D5185(m)	>330	**1**	1	1
Tin	ppm	ASTM D5185(m)	>15	**0**	<1	0
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)	39	**40**	78	162
Barium	ppm	ASTM D5185(m)	1	**<1**	0	<1
Molybdenum	ppm	ASTM D5185(m)	49	**46**	37	11
Manganese	ppm	ASTM D5185(m)	1	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	616	**789**	589	145
Calcium	ppm	ASTM D5185(m)	1554	**1143**	1607	2060
Phosphorus	ppm	ASTM D5185(m)	899	**702**	1124	1034
Zinc	ppm	ASTM D5185(m)	1069	**823**	1234	1182
Sulfur	ppm	ASTM D5185(m)	2624	**1952**	2818	3074
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**4**	3	5
Sodium	ppm	ASTM D5185(m)		**3**	3	1
Potassium	ppm	ASTM D5185(m)	>20	**0**	1	5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**6.4**	6.3	5.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.1**	21.5	20.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**16.4**	16.3	16.0

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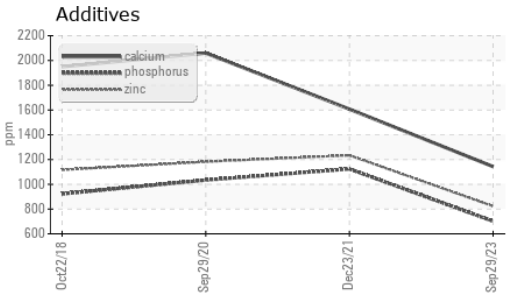
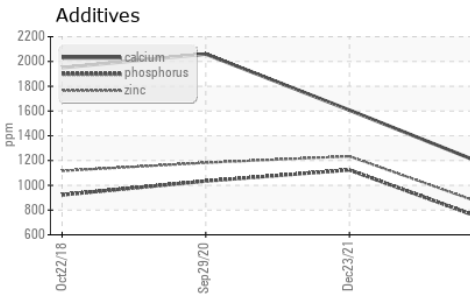
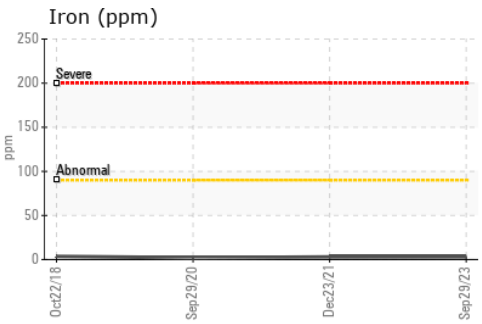


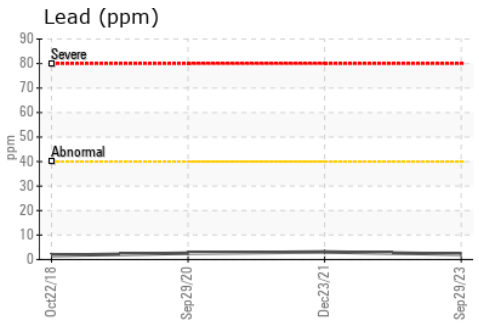


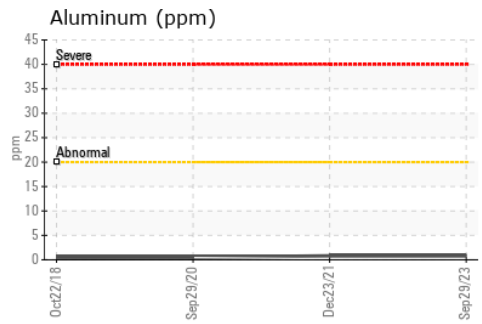
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

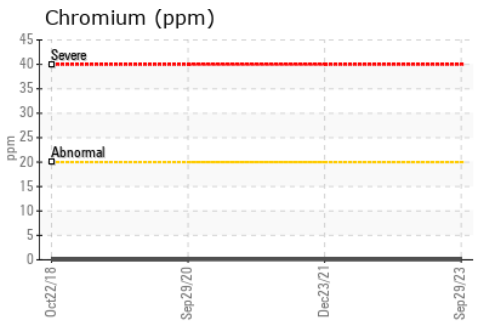
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	13.6	**14.3**	14.4	14.2

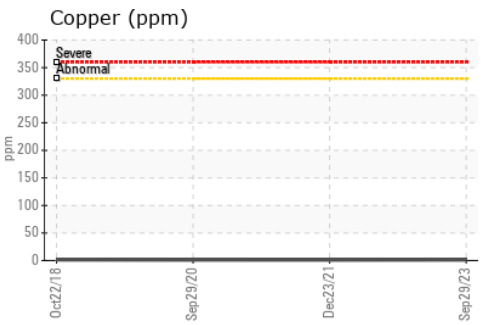
GRAPHS

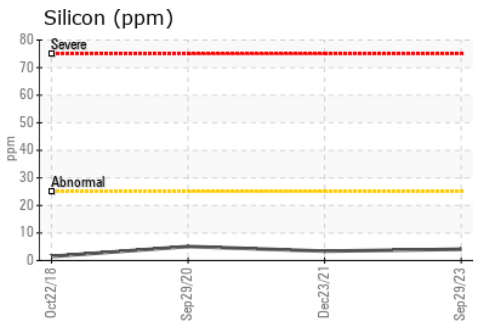


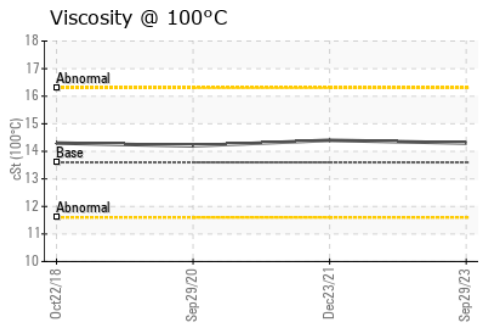


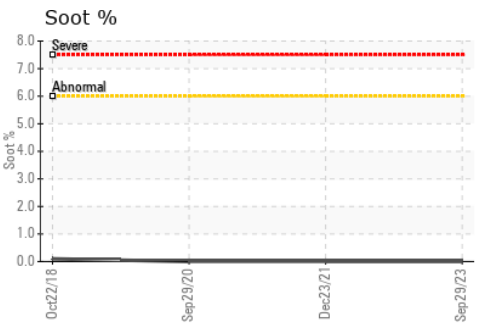












ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: CU0022040	**Received**	: 11 Oct 2023
Lab Number	: 02588235	**Diagnosed**	: 12 Oct 2023
Unique Number	: 5657301	**Diagnostician**	: Kevin Marson
Test Package	: MOB 1		

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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