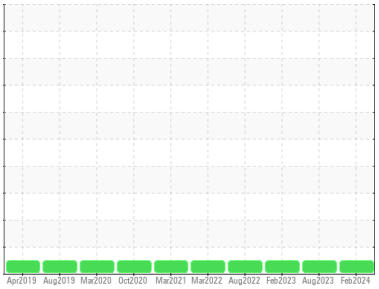
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
300977 E-12
Component
Front Diesel Engine
Fluid
SAFETY-KLEEN PERFORMANCE PLUS 15W40 (18 LTR)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
Metal levels are typical for a new component breaking in.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0078182**	PC0078190	PC0054286
Sample Date		Client Info		**14 Feb 2024**	22 Aug 2023	08 Feb 2023
Machine Age	kms	Client Info		**106979**	0	85344
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	N/A	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
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	**17**	15	14
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	**1**	1	1
Lead	ppm	ASTM D5185(m)	>40	**6**	4	3
Copper	ppm	ASTM D5185(m)	>330	**3**	2	4
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)	1.4	**<1**	1	2
Barium	ppm	ASTM D5185(m)	0.1	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0.1	**63**	59	61
Manganese	ppm	ASTM D5185(m)		**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	2.7	**1011**	997	980
Calcium	ppm	ASTM D5185(m)	2328	**1093**	1057	1107
Phosphorus	ppm	ASTM D5185(m)	924	**1019**	1045	1058
Zinc	ppm	ASTM D5185(m)	1004	**1231**	1219	1211
Sulfur	ppm	ASTM D5185(m)	3828	**2624**	2461	2551
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

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

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**1.1**	0.9	0.5
Nitration	Abs/cm	ASTM D7624*	>20	**9.2**	9.0	7.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.8**	23.4	20.9

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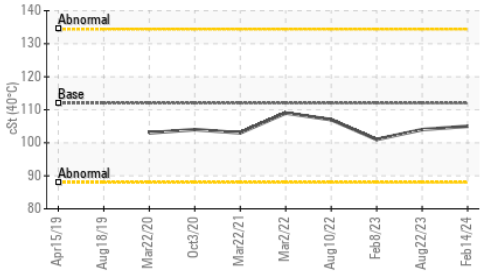
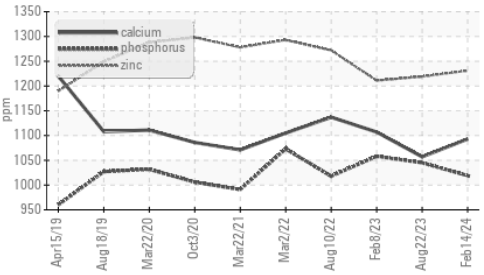
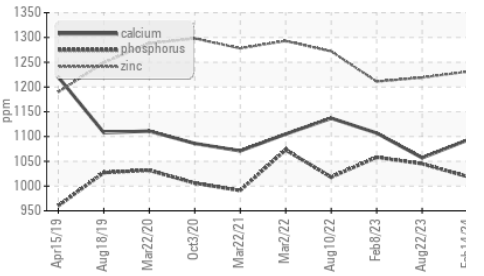
Viscosity @ 40°C



Additives



Additives



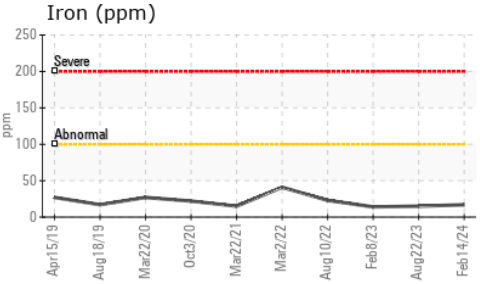
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**17.9**	17.4	13.7

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

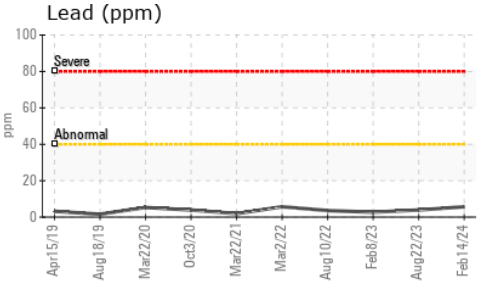
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	112	**105**	104	101
Visc @ 100°C	cSt	ASTM D7279(m)	15.3	**13.9**	14.2	13.7
Viscosity Index (VI)	Scale	ASTM D2270*	143	**133**	139	136

GRAPHS

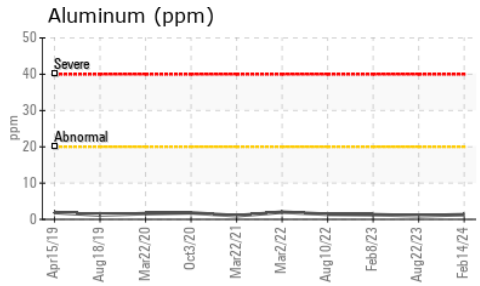
Iron (ppm)



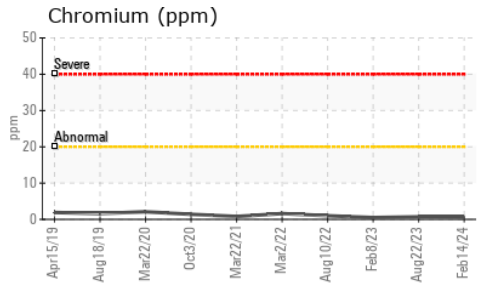
Lead (ppm)



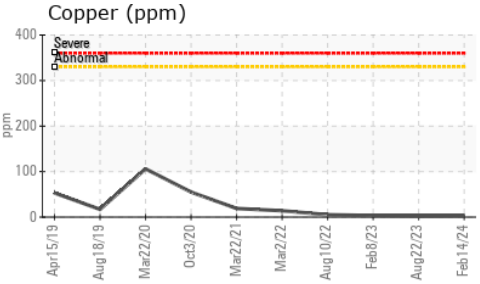
Aluminum (ppm)



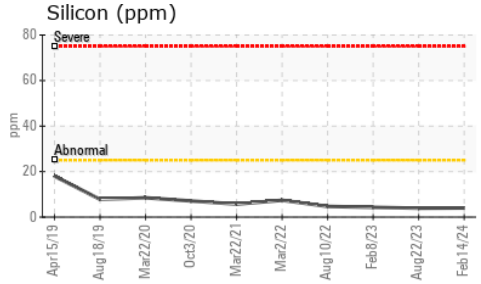
Chromium (ppm)



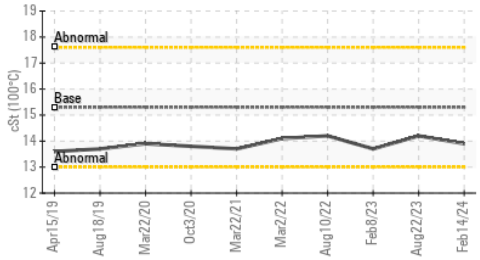
Copper (ppm)



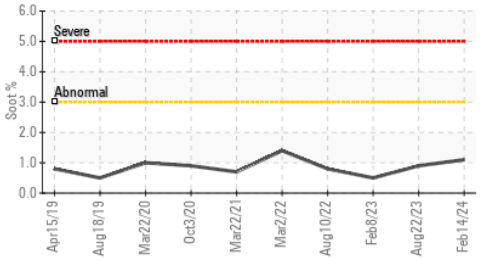
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0078182
Lab Number : 02619900
Unique Number : 5737010
Test Package : MOB 1 (Additional Tests: KV40, VI)

Received : 05 Mar 2024
Tested : 05 Mar 2024
Diagnosed : 05 Mar 2024 - Wes Davis

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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