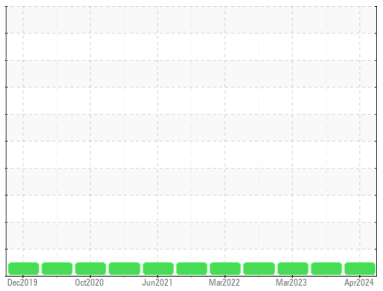
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
OR645
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
The water content is negligible. There is no indication of any contamination in the oil.

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0071590**	PC0082046	PC0072905
Sample Date		Client Info		**12 Apr 2024**	25 Oct 2023	19 Mar 2023
Machine Age	hrs	Client Info		**14005**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	N/A	N/A
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	**<1.0**	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>51	**24**	15	16
Chromium	ppm	ASTM D5185(m)	>11	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	**<1**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>31	**4**	2	2
Lead	ppm	ASTM D5185(m)	>26	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>26	**2**	<1	<1
Tin	ppm	ASTM D5185(m)	>4	**0**	0	<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

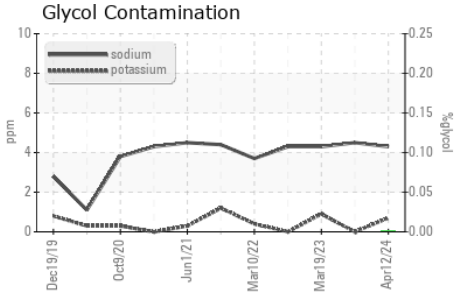
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	**43**	38	35
Barium	ppm	ASTM D5185(m)	10	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	100	**57**	61	59
Manganese	ppm	ASTM D5185(m)		**<1**	0	<1
Magnesium	ppm	ASTM D5185(m)	450	**1066**	1049	1118
Calcium	ppm	ASTM D5185(m)	3000	**818**	891	893
Phosphorus	ppm	ASTM D5185(m)	1150	**955**	945	1094
Zinc	ppm	ASTM D5185(m)	1350	**1153**	1171	1221
Sulfur	ppm	ASTM D5185(m)	4250	**2609**	2688	2822
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>22	**5**	5	3
Sodium	ppm	ASTM D5185(m)	>44	**4**	4	4
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	<1
Water	%	ASTM D6304*	>0.21	**0.125**	---	---
ppm Water	ppm	ASTM D6304*	>2100	**1258**	---	---
Glycol	%	ASTM D7922*		**0.0**	NEG	NEG

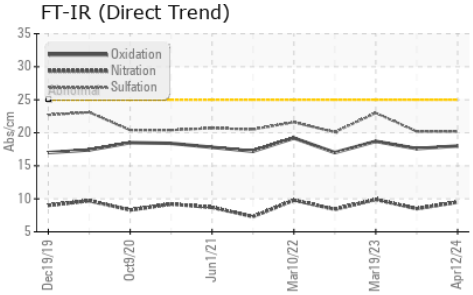
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.5**	0.3	0.2
Nitration	Abs/cm	ASTM D7624*	>20	**9.5**	8.5	9.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.2**	20.2	23.0

OIL ANALYSIS REPORT

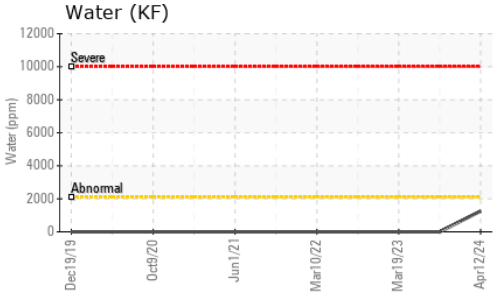
Glycol Contamination



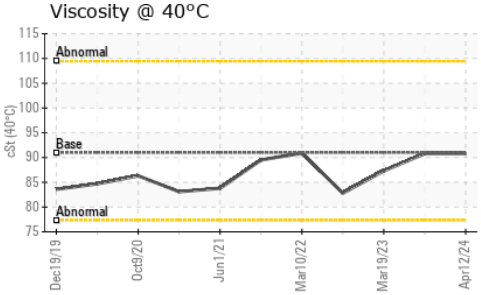
FT-IR (Direct Trend)



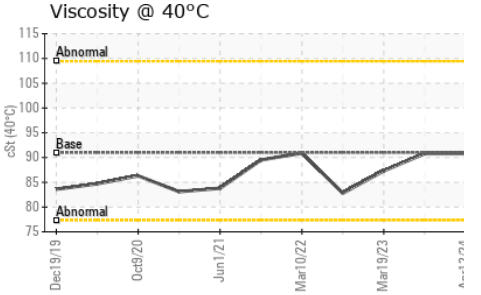
Water (KF)



Viscosity @ 40°C



Viscosity @ 40°C



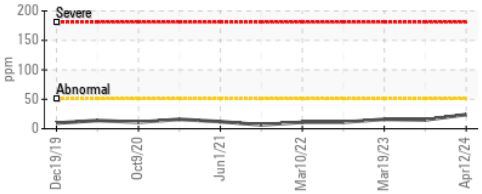
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.0**	17.6	18.7

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**VLITE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.21	**.2%**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

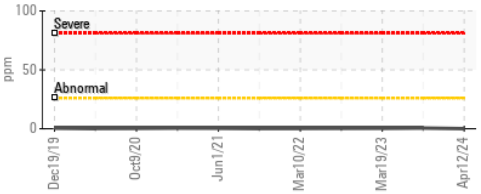
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	91	**90.8**	90.8	87.3
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	**14.7**	14.5	14.1
Viscosity Index (VI)	Scale	ASTM D2270*	164	**169**	166	166

GRAPHS

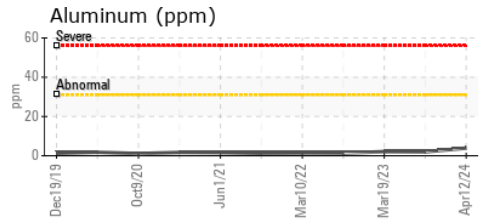
Iron (ppm)



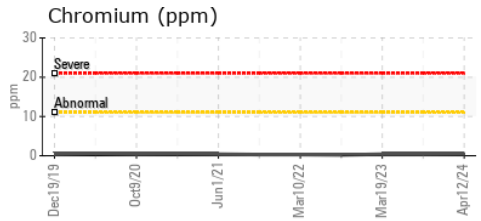
Lead (ppm)



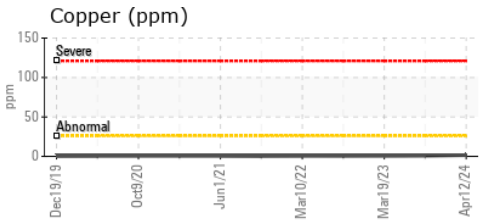
Aluminum (ppm)



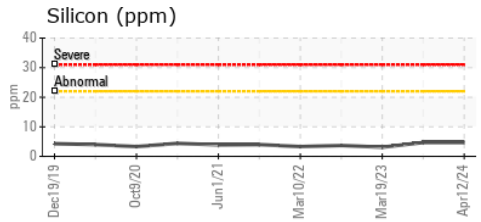
Chromium (ppm)



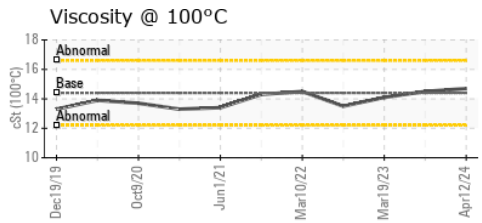
Copper (ppm)



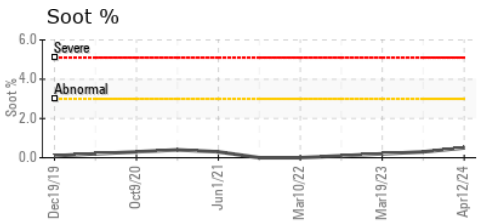
Silicon (ppm)



Viscosity @ 100°C



Soot %



CALA
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0071590 **Received** : 23 Apr 2024
Lab Number : 02630915 **Tested** : 24 Apr 2024
Unique Number : 5772068 **Diagnosed** : 24 Apr 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol, KF, KV40, VI, Visual)

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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