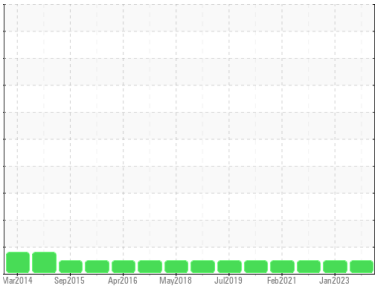
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
KME 300619
Component
Front Diesel Engine
Fluid
SAFETY-KLEEN PERFORMANCE PLUS XHD-7 15W40 (40 LTR)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
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		**PC0078178**	PC0054290	PC0050400
Sample Date		Client Info		**04 Mar 2024**	24 Jan 2023	30 Sep 2021
Machine Age	kms	Client Info		**0**	242107	226164
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>200	**33**	12	15
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	**<1**	0	0
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	0
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>30	**1**	1	<1
Lead	ppm	ASTM D5185(m)	>30	**11**	2	2
Copper	ppm	ASTM D5185(m)	>30	**2**	1	1
Tin	ppm	ASTM D5185(m)	>15	**<1**	<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

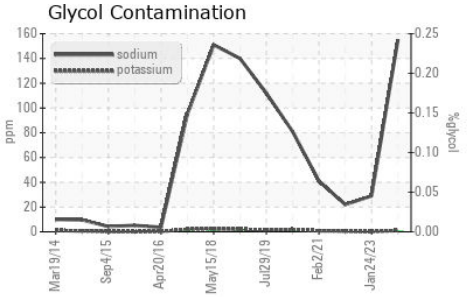
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**2**	2	1
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**61**	59	58
Manganese	ppm	ASTM D5185(m)		**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)		**987**	963	971
Calcium	ppm	ASTM D5185(m)		**1069**	1116	1072
Phosphorus	ppm	ASTM D5185(m)		**1025**	1077	1041
Zinc	ppm	ASTM D5185(m)		**1202**	1210	1193
Sulfur	ppm	ASTM D5185(m)		**2722**	2627	2635
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	**12**	3	3
Sodium	ppm	ASTM D5185(m)		**155**	29	22
Potassium	ppm	ASTM D5185(m)	>20	**1**	0	<1
Glycol	%	ASTM D7922*		**0.0**	NEG	NEG

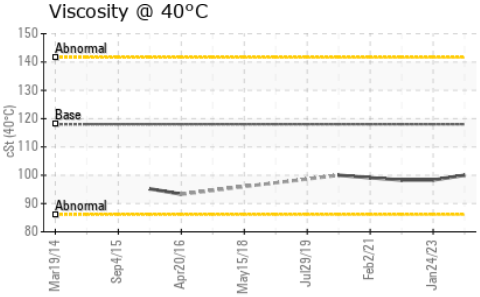
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**1**	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**8.5**	6.7	6.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.3**	20.6	19.2

OIL ANALYSIS REPORT

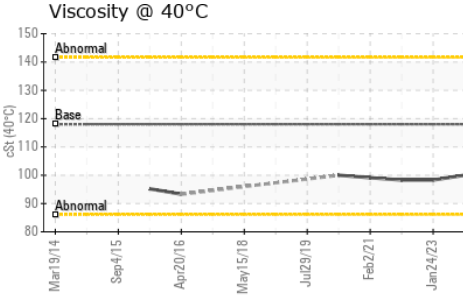
Glycol Contamination



Viscosity @ 40°C



Viscosity @ 40°C



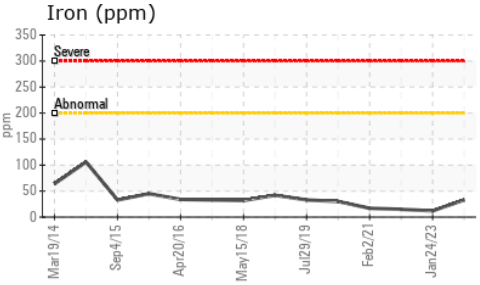
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**15.8**	14.6	13.5

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

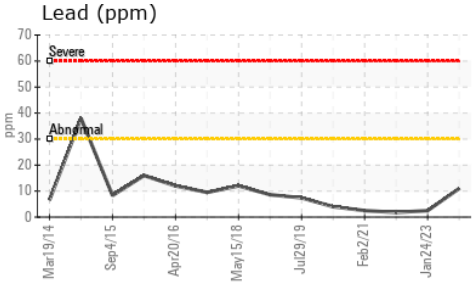
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	118	**100**	98.3	98.3
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	**13.7**	13.5	13.3
Viscosity Index (VI)	Scale	ASTM D2270*	140	**137**	137	134

GRAPHS

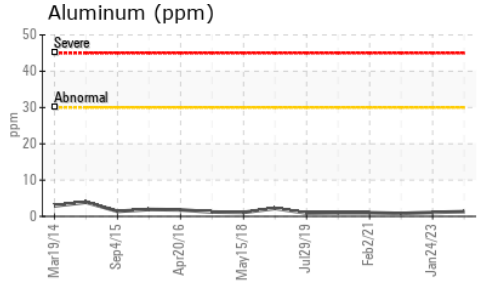
Iron (ppm)



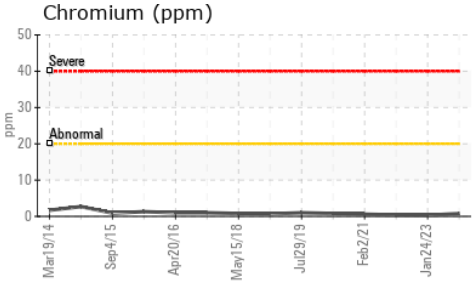
Lead (ppm)



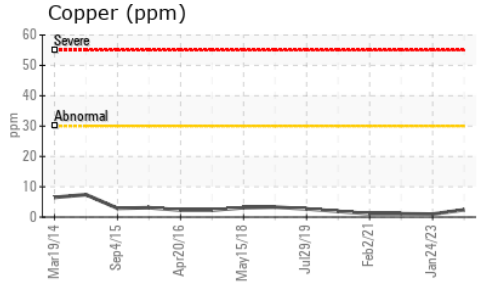
Aluminum (ppm)



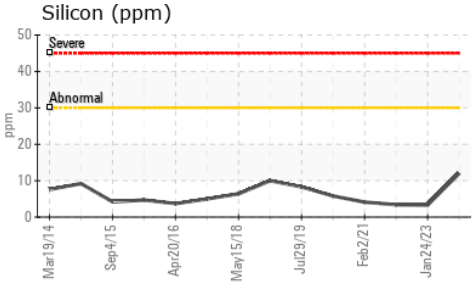
Chromium (ppm)



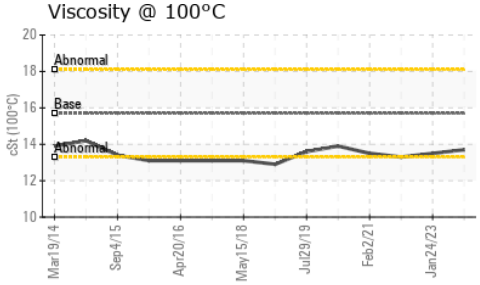
Copper (ppm)



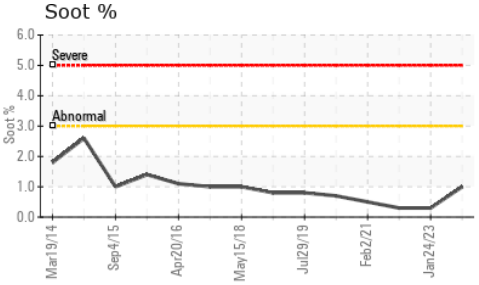
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0078178
Lab Number : 02619898
Unique Number : 5737008
Test Package : MOB 1 (Additional Tests: Glycol, 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.

HAMILTON FIRE DEPT
MECHANICAL DIV., 177 BAY STREET NORTH
HAMILTON, ON
CA L8R 2P8
Contact: Jenny-Lynn Pellegrino
jenny-lynn.pellegrino@hamilton.ca
T: (905)546-2424
F: (905)961-9116