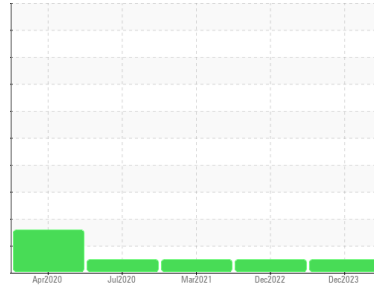


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
300995

Component
Front Diesel Engine

Fluid
SAFETY-KLEEN PERFORMANCE PLUS 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

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			PC0078491	PC0050431	PC0028976
Sample Date	Client Info			10 Dec 2023	06 Dec 2022	01 Mar 2021
Machine Age	kms	Client Info		0	452807	16943
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	>5		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

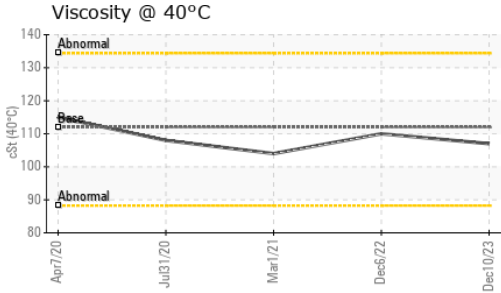
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	16	44	16
Chromium	ppm	ASTM D5185(m)	>20	2	3	2
Nickel	ppm	ASTM D5185(m)	>4	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>3	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	2	1
Lead	ppm	ASTM D5185(m)	>40	1	9	3
Copper	ppm	ASTM D5185(m)	>330	2	6	33
Tin	ppm	ASTM D5185(m)	>15	0	1	1
Antimony	ppm	ASTM D5185(m)		<1	<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	4
Barium	ppm	ASTM D5185(m)	0.1	<1	0	<1
Molybdenum	ppm	ASTM D5185(m)	0.1	62	65	59
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	2.7	1007	1063	996
Calcium	ppm	ASTM D5185(m)	2328	1064	1182	1124
Phosphorus	ppm	ASTM D5185(m)	924	1006	1138	1021
Zinc	ppm	ASTM D5185(m)	1004	1215	1307	1314
Sulfur	ppm	ASTM D5185(m)	3828	2526	2454	2653
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

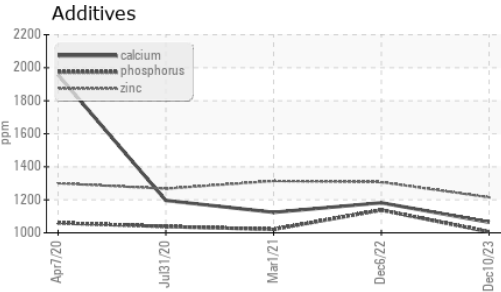
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5	9	11
Sodium	ppm	ASTM D5185(m)		5	6	4
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.6	1.3	0.6
Nitration	Abs/cm	ASTM D7624*	>20	7.8	9.0	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.5	24.9	22.9

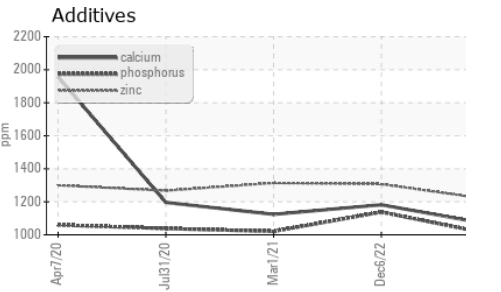
OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	16.1	16.7	17.2

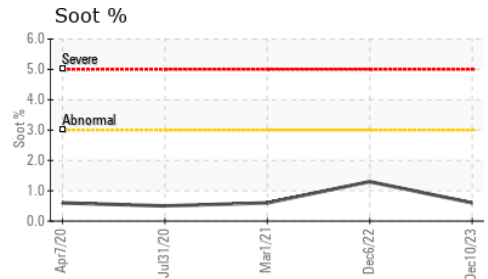
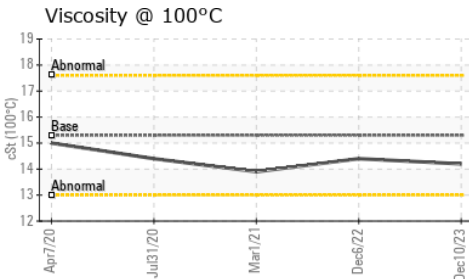
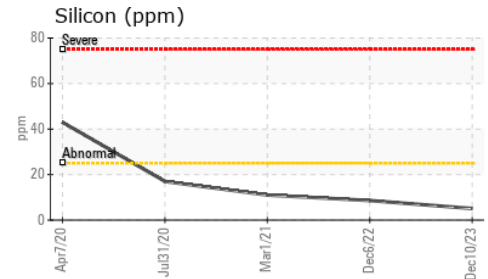
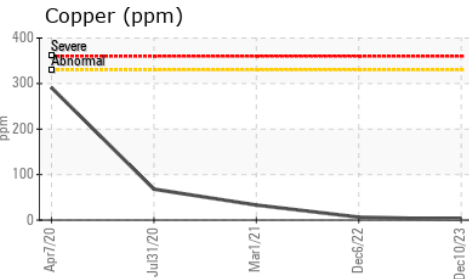
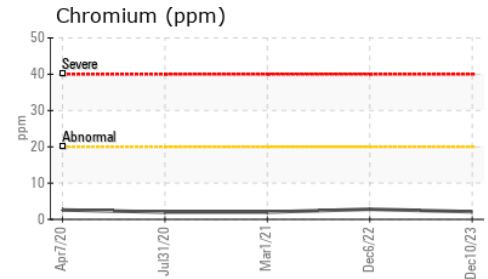
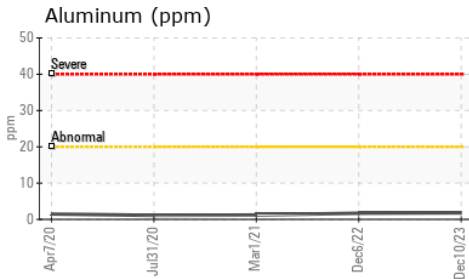
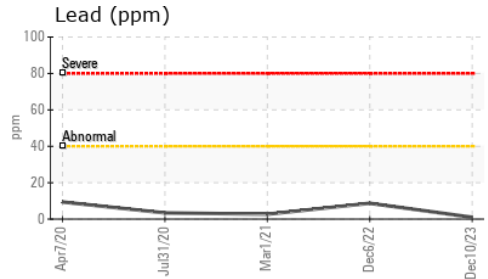
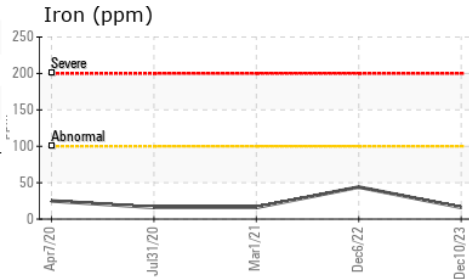


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	112	107	110	104
Visc @ 100°C	cSt	ASTM D7279(m)	15.3	14.2	14.4	13.9
Viscosity Index (VI)	Scale	ASTM D2270*	143	134	133	134

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0078491
Lab Number : **02602775**
Unique Number : 5695860
Test Package : MOB 1 (Additional Tests: KV40, VI)

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

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.