

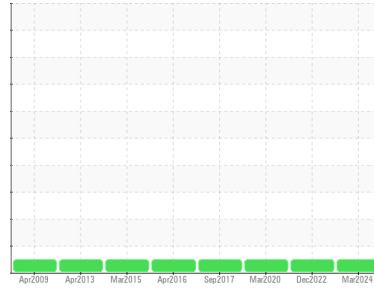
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
SCOTIA LEARNING CENTRES [6100272987]
Machine Id
CLARKE FIRE PUMP
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (20 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			WA0021301	WA0018584	WA0015340
Sample Date	Client Info			20 Mar 2024	15 Dec 2022	05 Mar 2020
Machine Age	hrs	Client Info		93	90	84
Oil Age	hrs	Client Info		0	0	20
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>2.1		<1.0	<1.0	<1.0
Water	WC Method	>0.21		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

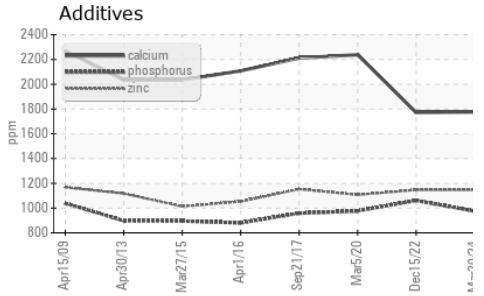
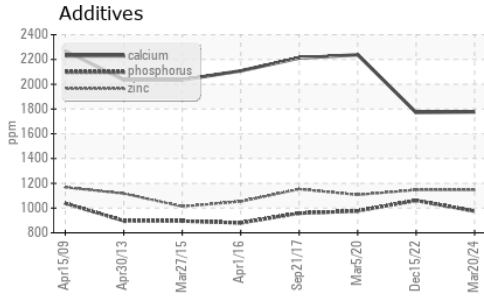
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>51	1	1	2
Chromium	ppm	ASTM D5185(m)	>11	0	0	<1
Nickel	ppm	ASTM D5185(m)	>5	0	0	0
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>31	1	1	2
Lead	ppm	ASTM D5185(m)	>26	0	0	0
Copper	ppm	ASTM D5185(m)	>26	<1	<1	1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Antimony	ppm	ASTM D5185(m)		0	<1	<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)	0	46	77	52
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	69	50	<1
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	578	493	9
Calcium	ppm	ASTM D5185(m)	1070	1776	1771	2238
Phosphorus	ppm	ASTM D5185(m)	1150	975	1061	976
Zinc	ppm	ASTM D5185(m)	1270	1147	1147	1107
Sulfur	ppm	ASTM D5185(m)	2060	2794	2965	3456
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>22	2	4	5
Sodium	ppm	ASTM D5185(m)	>31	2	2	1
Potassium	ppm	ASTM D5185(m)	>20	<1	2	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	5.1	3.9	5.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.3	16.3	20.8

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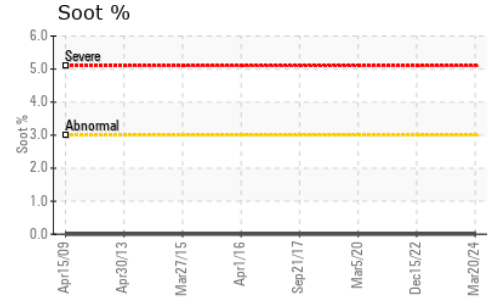
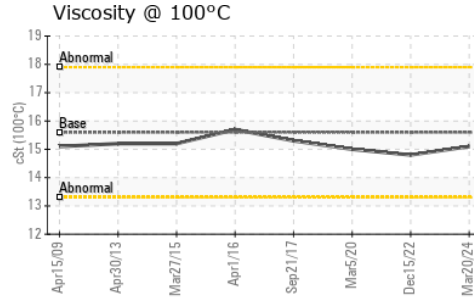
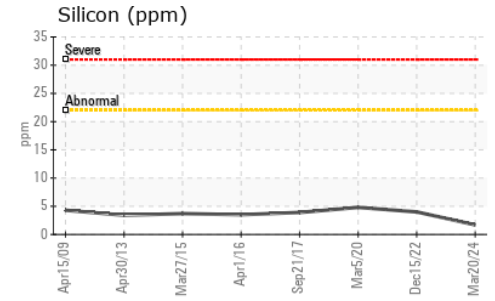
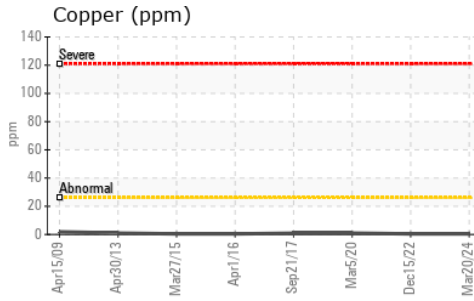
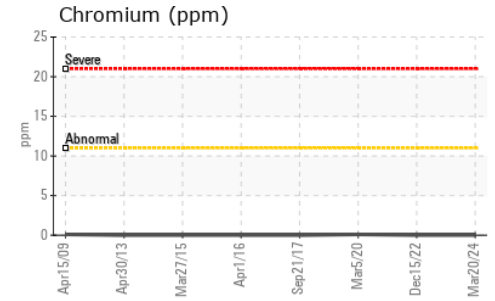
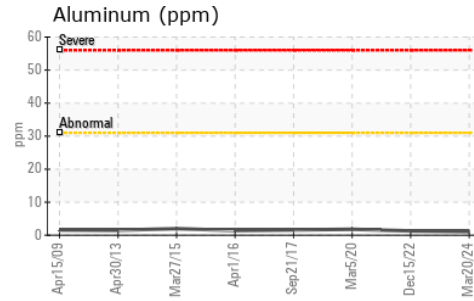
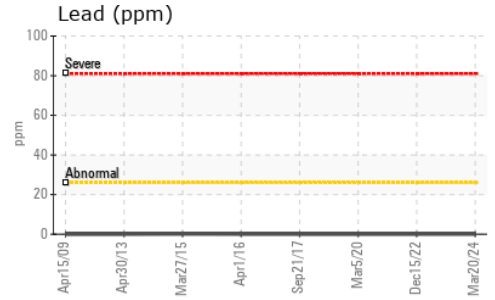
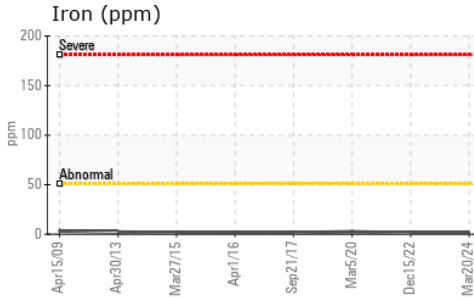


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	13.8	9.0	13.0

VISUAL	method	limit/base	current	history1	history2	
Emulsified Water	scalar	Visual*	>0.21	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)	15.6	15.1	14.8	15.0

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WA0021301
Lab Number : 02624612
Unique Number : 5749731
Test Package : MOB 1
Received : 26 Mar 2024
Tested : 26 Mar 2024
Diagnosed : 26 Mar 2024 - Wes Davis

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 Dartmouth, NS
 CA B3B 1T7
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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.