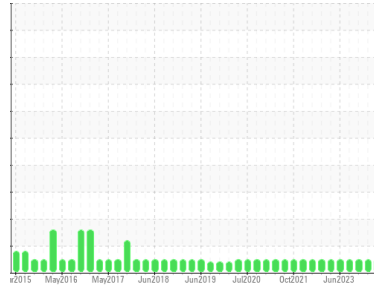


Area
Fwd Machinery Space [450237350]
Machine Id
Emergency Generator - Engine Crank Case (S/N Sample Tag CD-84001-S1)
Component
Diesel Engine
Fluid
PETRO CANADA DURON MARINE SAE 40 (145 LTR)



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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2

Sample Number	Client Info	PC	WC0052023	WC0062030
Sample Date	Client Info	17 Dec 2023	09 Sep 2023	16 Aug 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
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
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS method limit/base current history1 history2

PQ	ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>200	4	7
Chromium	ppm	ASTM D5185(m)	>20	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	<1
Aluminum	ppm	ASTM D5185(m)	>30	<1	<1
Lead	ppm	ASTM D5185(m)	>30	<1	<1
Copper	ppm	ASTM D5185(m)	>30	8	4
Tin	ppm	ASTM D5185(m)	>15	<1	1
Antimony	ppm	ASTM D5185(m)		0	0
Vanadium	ppm	ASTM D5185(m)		0	0
Beryllium	ppm	ASTM D5185(m)		0	0
Cadmium	ppm	ASTM D5185(m)		0	0

ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185(m)	1.0	1	<1
Barium	ppm	ASTM D5185(m)	1.0	0	0
Molybdenum	ppm	ASTM D5185(m)	1.0	2	3
Manganese	ppm	ASTM D5185(m)	1	0	<1
Magnesium	ppm	ASTM D5185(m)	15	926	922
Calcium	ppm	ASTM D5185(m)	2540	1041	1091
Phosphorus	ppm	ASTM D5185(m)	1000	1101	1129
Zinc	ppm	ASTM D5185(m)	1110	1229	1256
Sulfur	ppm	ASTM D5185(m)	3700	2838	2717
Lithium	ppm	ASTM D5185(m)		<1	<1

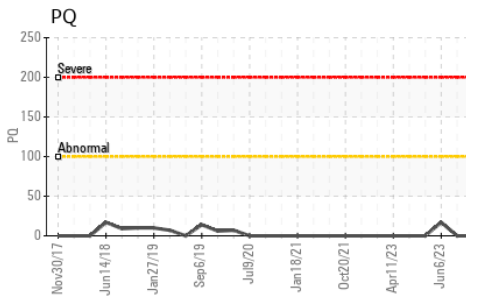
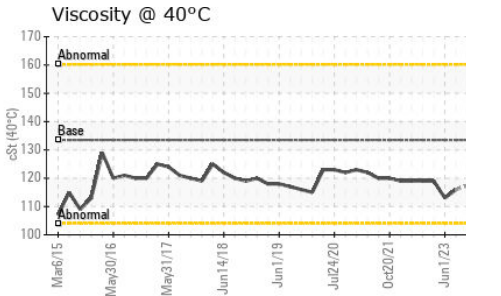
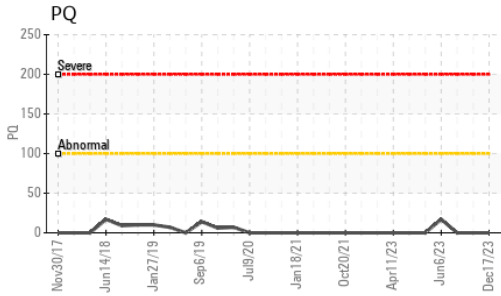
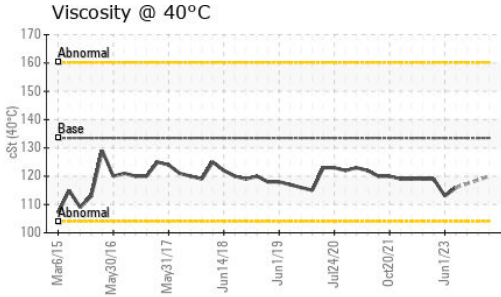
CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185(m)	>30	9	13
Sodium	ppm	ASTM D5185(m)		1	2
Potassium	ppm	ASTM D5185(m)	>20	<1	0

INFRA-RED method limit/base current history1 history2

Soot %	%	ASTM D7844*	>0.8	0	0
Nitration	Abs/cm	ASTM D7624*	>20	3.3	3.7
Sulfation	Abs./1mm	ASTM D7415*	>30	12.7	13.0

OIL ANALYSIS REPORT

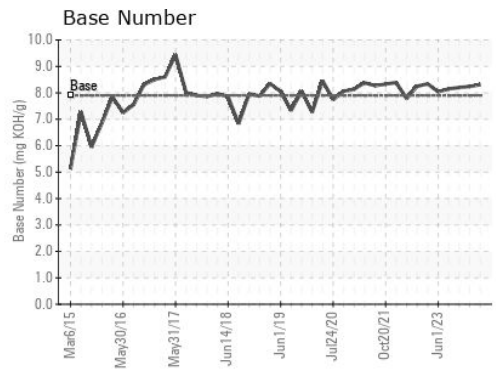
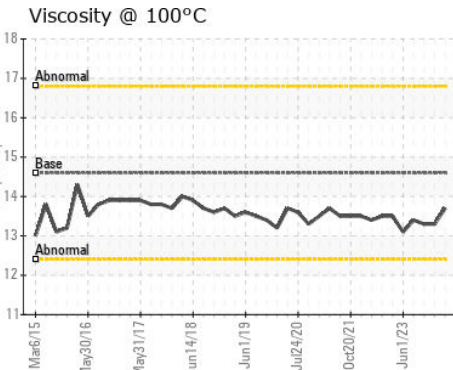
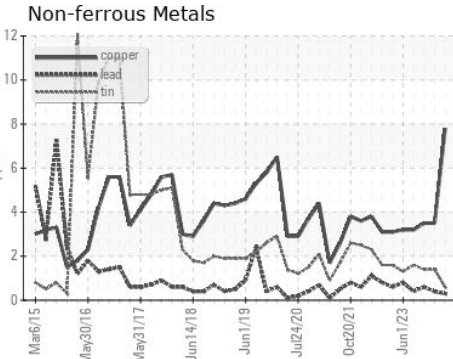
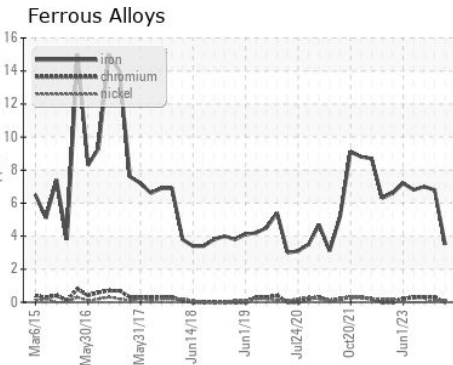


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	6.2	7.5	6.3
Base Number (BN)	mg KOH/g	ASTM D2896*	7.9	8.31	8.24	8.20

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)	133.5	120	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.6	13.7	13.3	13.3
Viscosity Index (VI)	Scale	ASTM D2270*	109	111	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC **Received** : 17 Jan 2024
Lab Number : **02609160** **Diagnosed** : 18 Jan 2024
Unique Number : 5710246 **Diagnostician** : Kevin Marson
Test Package : MAR 2 (Additional Tests: KV40, PQ, PrtCount, VI)

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 St. John's, NL
 CA A1C 1B6
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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.