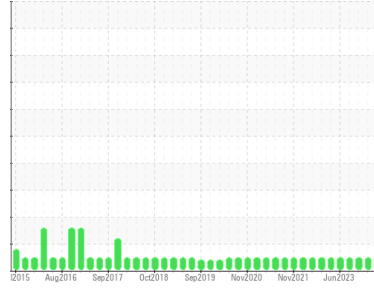


Area  
**Fwd Machinery Space [450248711]**  
Machine Id  
**Emergency Generator - Engine Crank Case (S/N Sample Tag CD-84001-S1)**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON MARINE SAE 40 (145 LTR)**



**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			<b>PC</b>	PC	WC0052023
Sample Date	Client Info			<b>14 Jan 2024</b>	17 Dec 2023	09 Sep 2023
Machine Age	hrs Client Info			<b>0</b>	0	0
Oil Age	hrs Client Info			<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

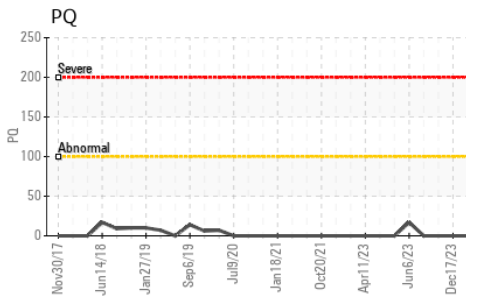
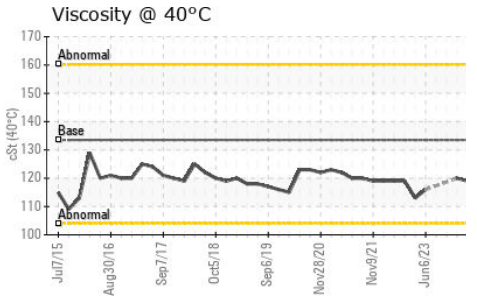
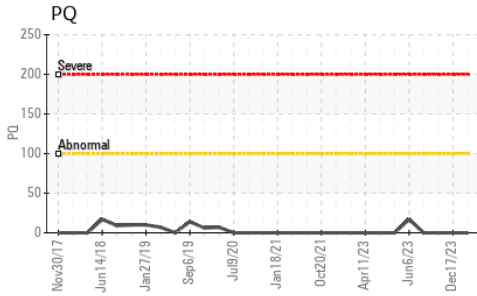
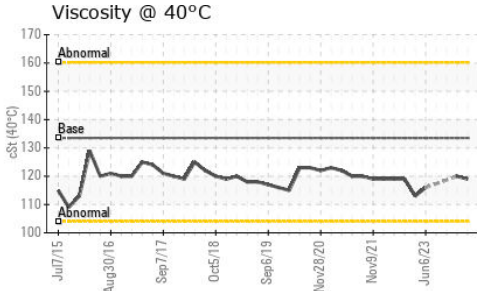
CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m)	>200	<b>4</b>	4	7
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>30	<b>9</b>	8	4
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	1.0	<b>1</b>	1	<1
Barium	ppm	ASTM D5185(m)	1.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	1.0	<b>2</b>	2	3
Manganese	ppm	ASTM D5185(m)	1	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	15	<b>925</b>	926	922
Calcium	ppm	ASTM D5185(m)	2540	<b>1065</b>	1041	1091
Phosphorus	ppm	ASTM D5185(m)	1000	<b>1099</b>	1101	1129
Zinc	ppm	ASTM D5185(m)	1110	<b>1253</b>	1229	1256
Sulfur	ppm	ASTM D5185(m)	3700	<b>2883</b>	2838	2717
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	<b>9</b>	9	13
Sodium	ppm	ASTM D5185(m)		<b>1</b>	1	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>0.8	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>3.3</b>	3.3	3.7
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>12.6</b>	12.7	13.0

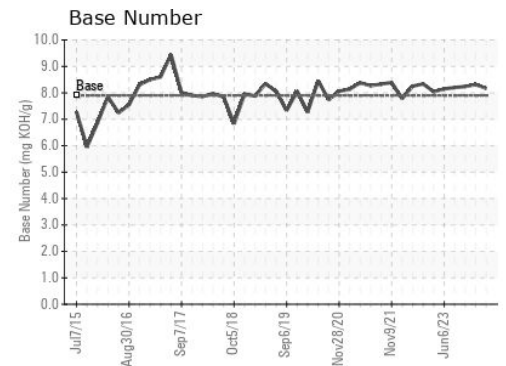
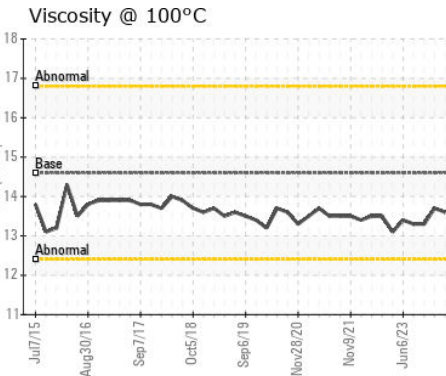
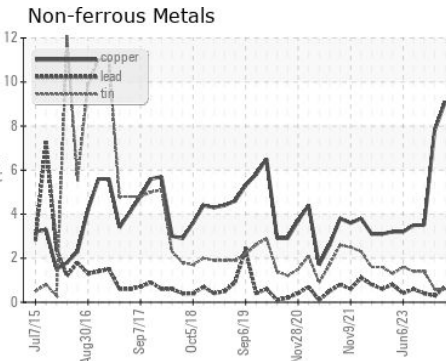
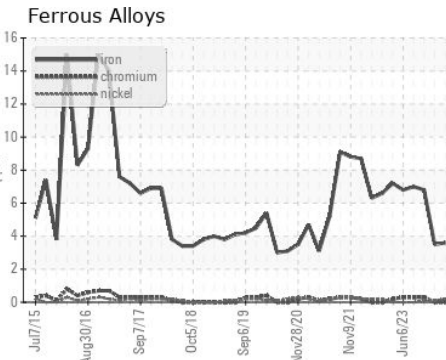


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>6.1</b>	6.2	7.5
Base Number (BN)	mg KOH/g	ASTM D2896*	7.9	<b>8.17</b>	8.31	8.24

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	133.5	<b>119</b>	120	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.6	<b>13.6</b>	13.7	13.3
Viscosity Index (VI)	Scale	ASTM D2270*	109	<b>111</b>	111	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC  
**Lab Number** : **02614533**  
**Unique Number** : 5723628  
**Test Package** : MAR 2 ( Additional Tests: KV40, PQ, PrtCount, VI )  
**Received** : 09 Feb 2024  
**Tested** : 15 Feb 2024  
**Diagnosed** : 15 Feb 2024 - Kevin Marson

**Suncor - Terra Nova Projects**  
 Scotia Centre, 235 Water Street  
 St. John's, NL  
 CA A1C 1B6  
 Contact: Josh Hynes  
 joshhynes@suncor.com  
 T: (709)778-3575  
 F: (709)724-2835

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.