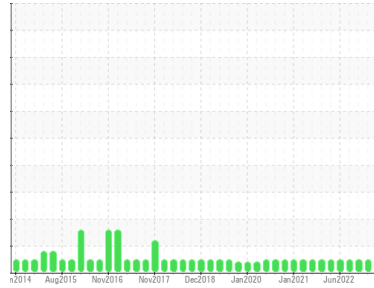


Area
Fwd Machinery Space [450182848]
 Machine Id
Emergency Generator - Engine Crank Case (S/N Sample Tag CD-84001-S1)
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON MARINE SAE 40 (145 LTR)



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 history 1 history 2

Sample Number	Client Info	PC	PC	PC
Sample Date	Client Info	06 Jun 2023	01 Jun 2023	01 May 2023
Machine Age	hrs Client Info	0	0	0
Oil Age	hrs Client Info	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION method limit/base current history 1 history 2

Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS method limit/base current history 1 history 2

PQ	ASTM D8184*		17	0	0
Iron	ppm ASTM D5185(m)	>200	7	7	7
Chromium	ppm ASTM D5185(m)	>20	<1	<1	0
Nickel	ppm ASTM D5185(m)	>2	0	0	<1
Titanium	ppm ASTM D5185(m)	>2	0	0	<1
Silver	ppm ASTM D5185(m)	>2	<1	<1	0
Aluminum	ppm ASTM D5185(m)	>30	<1	<1	<1
Lead	ppm ASTM D5185(m)	>30	<1	<1	<1
Copper	ppm ASTM D5185(m)	>30	3	3	3
Tin	ppm ASTM D5185(m)	>15	2	1	2
Antimony	ppm ASTM D5185(m)		0	0	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 history 1 history 2

Boron	ppm ASTM D5185(m)	1.0	1	1	1
Barium	ppm ASTM D5185(m)	1.0	0	0	0
Molybdenum	ppm ASTM D5185(m)	1.0	3	2	3
Manganese	ppm ASTM D5185(m)	1	<1	<1	<1
Magnesium	ppm ASTM D5185(m)	15	915	891	917
Calcium	ppm ASTM D5185(m)	2540	1076	1046	1125
Phosphorus	ppm ASTM D5185(m)	1000	1131	1110	1165
Zinc	ppm ASTM D5185(m)	1110	1241	1219	1245
Sulfur	ppm ASTM D5185(m)	3700	2701	2661	2811
Lithium	ppm ASTM D5185(m)		<1	<1	<1

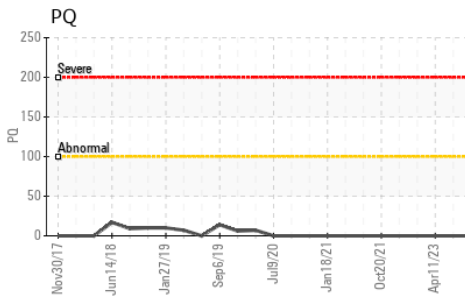
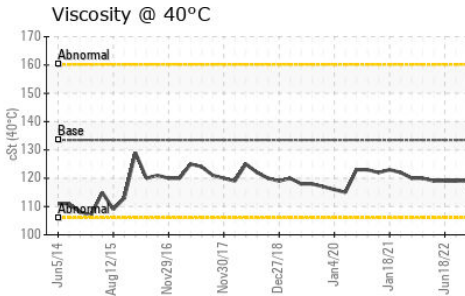
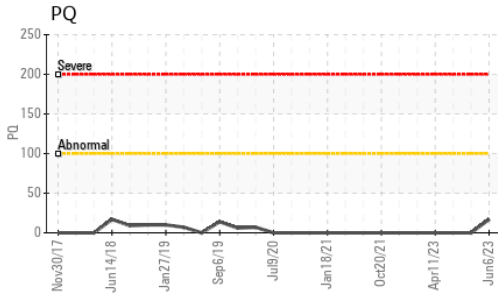
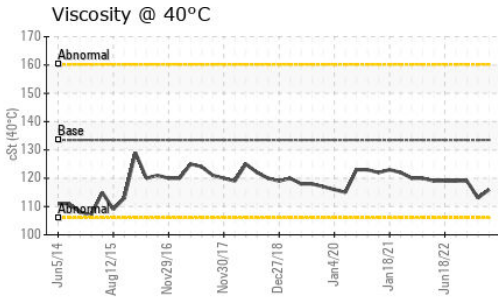
CONTAMINANTS method limit/base current history 1 history 2

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

INFRA-RED method limit/base current history 1 history 2

Soot %	% ASTM D7844*	>0.8	0	0	0
Nitration	Abs/cm ASTM D7624*	>20	3.7	3.7	3.6
Sulfation	Abs/.1mm ASTM D7415*	>30	12.9	12.7	13.1

OIL ANALYSIS REPORT

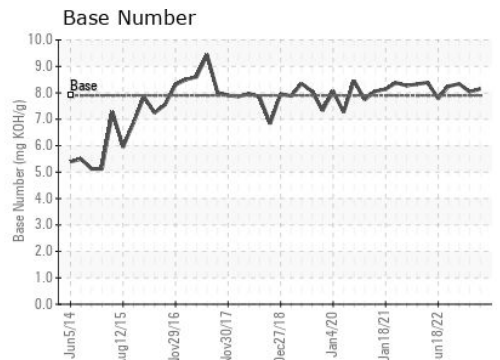
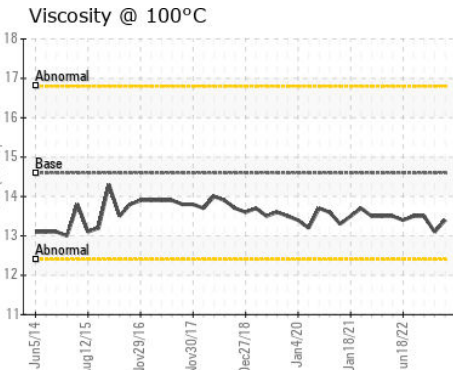
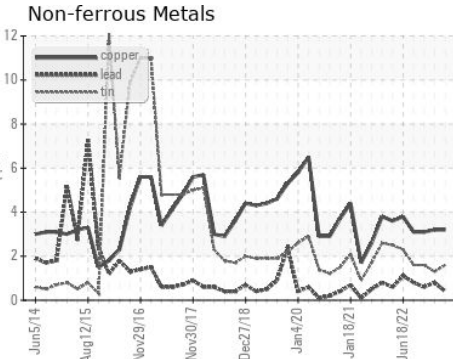
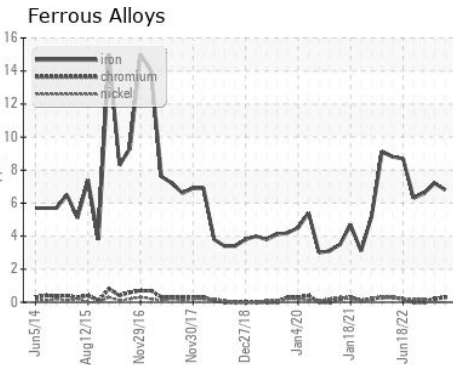


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414*	>25	7.4	7.2	6.4
Base Number (BN)	mg KOH/g	ASTM D2896*	7.9	8.15	8.04	8.34

VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	133.5	116	113	119
Visc @ 100°C	cSt	ASTM D7279(m)	14.6	13.4	13.1	13.5
Viscosity Index (VI)	Scale	ASTM D2270*	109	111	110	109

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : **02568180** **Received** : 06 Jul 2023
Unique Number : 5605226 **Diagnosed** : 07 Jul 2023
Test Package : MAR 2 (Additional Tests: KV40, PQ, PrtCount, VI) **Diagnostician** : Kevin Marson

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.

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