



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINANTS	NORMAL
OIL CONDITION	NORMAL

Area
Boat Deck
 Machine Id
Emergency Generator (S/N 40601268)
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (30 LTR)

RECOMMENDATION

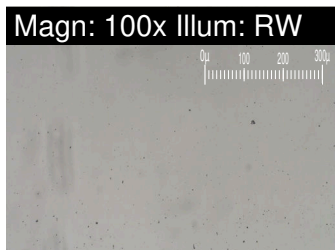
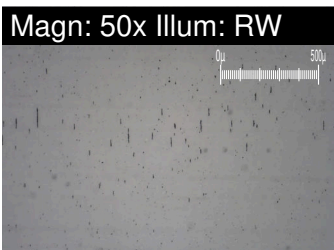
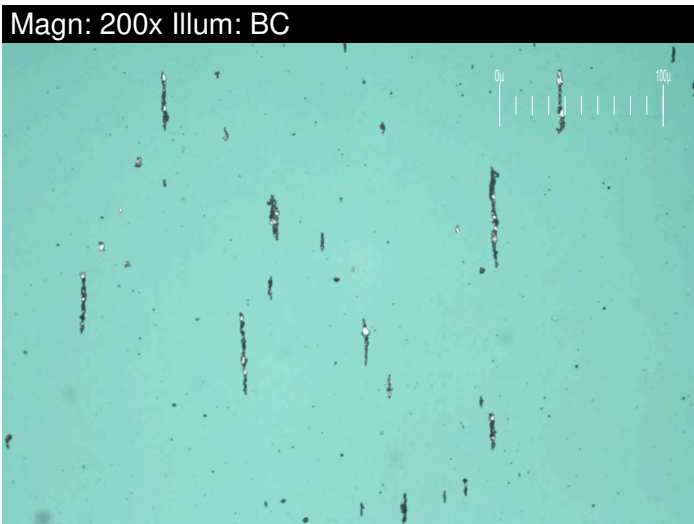
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0896731	WC0855487	WC0855486
Sample Date		Client Info		19 May 2024	22 Mar 2024	21 Jan 2024
Machine Age	hrs	Client Info		1856	1827	1806
Oil Age	hrs	Client Info		6	19	17
Filter Age	hrs	Client Info		67	38	17
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>80	1	1	1
Chromium	ppm	ASTM D5185(m)	>4	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>15	0	0	<1
Copper	ppm	ASTM D5185(m)	>230	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Large Particles		DR-Ferr*		6.5	3.0	5.2
Small Particles		DR-Ferr*		3.6	2.8	4.4
Total Particles		DR-Ferr*	>---	10.1	5.8	9.6
Large Particles Percentage	%	DR-Ferr*		28.7	3.4	8.3
Severity Index		DR-Ferr*		19	1	4
Ferrous Rubbing	Scale 0-10	ASTM D7684*		2	2	1
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		1	1	1
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		1		
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				



CONTAMINANTS

There is no indication of any contamination in the oil.

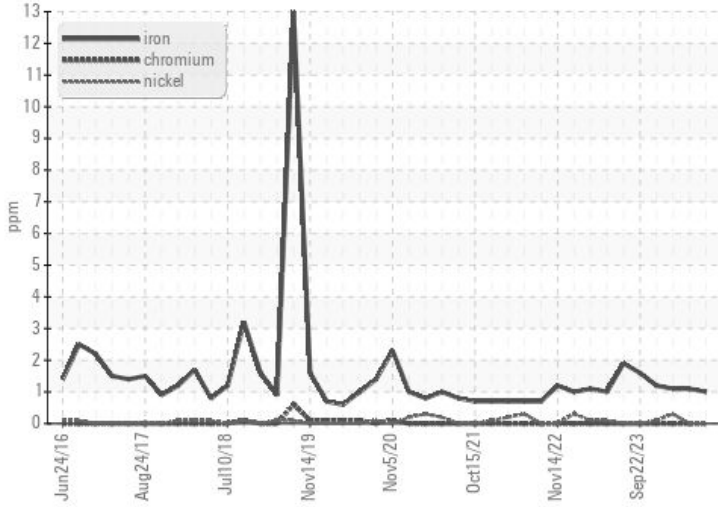
Silicon	ppm	ASTM D5185(m)	>25	1	<1	2
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	4.4	4.5	4.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	17.8	17.5	17.7
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		1		1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		2		

OIL CONDITION

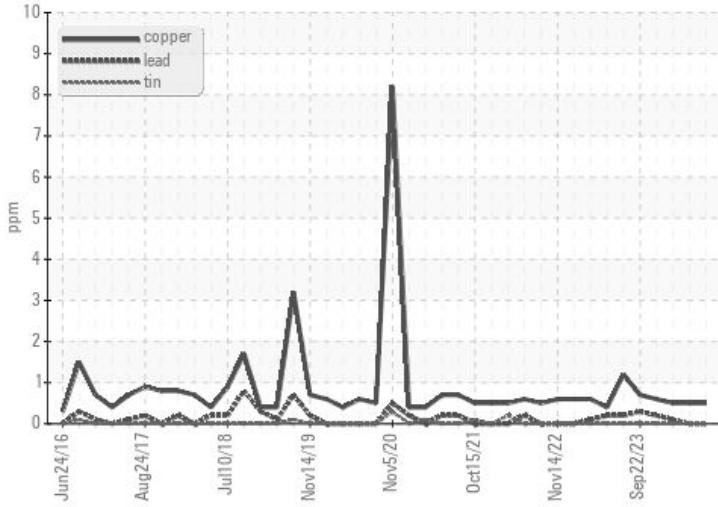
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)	0	2	3	3
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	56	55	55
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	1010	944	925	907
Calcium	ppm	ASTM D5185(m)	1070	983	978	981
Phosphorus	ppm	ASTM D5185(m)	1150	957	954	941
Zinc	ppm	ASTM D5185(m)	1270	1112	1099	1089
Sulfur	ppm	ASTM D5185(m)	2060	2503	2459	2651
Oxidation	Abs/.1mm	ASTM D7414*	>25	12.4	12.6	12.9
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	10.03	9.95	9.03
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	13.5	13.6	13.3
Lubricant Degradation	Scale 0-10	ASTM D7684*				

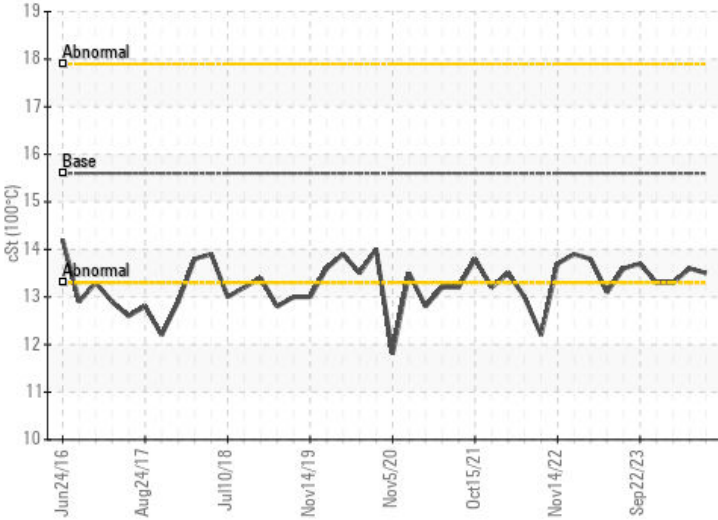
Ferrous Alloys



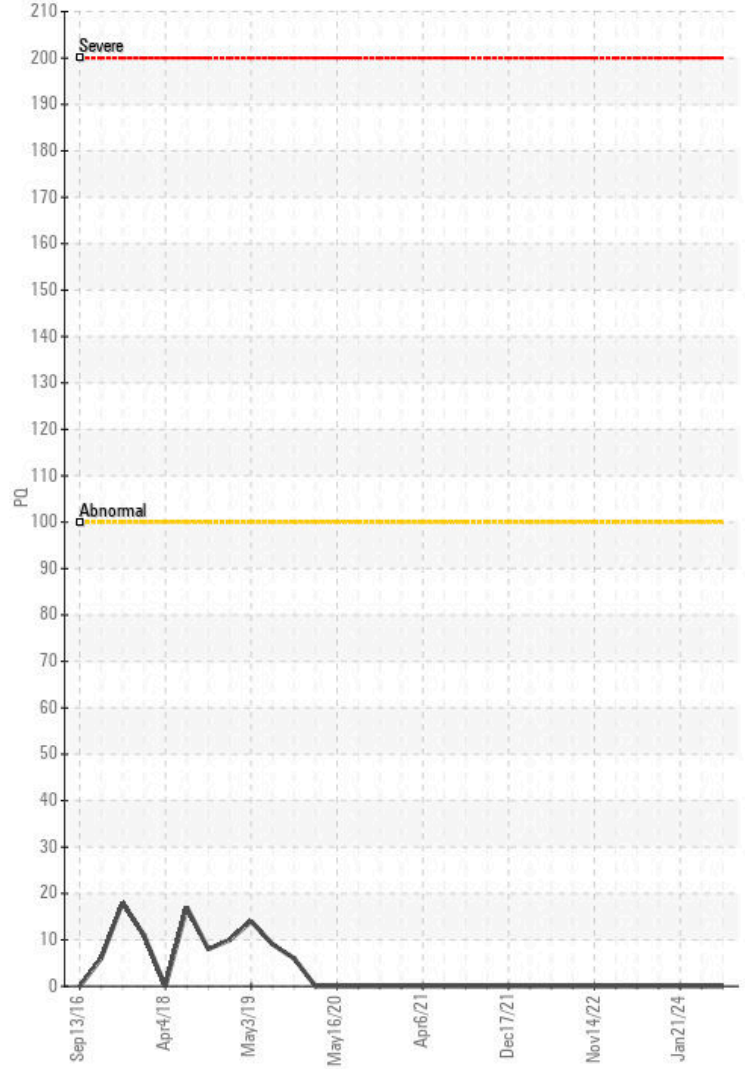
Non-ferrous Metals



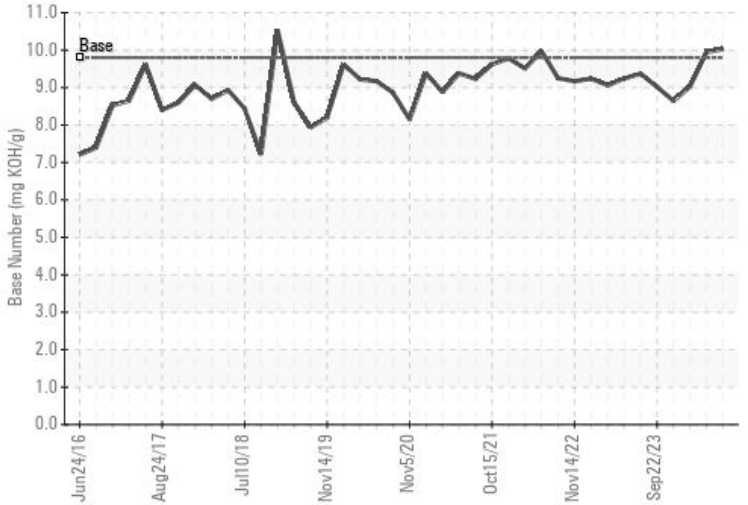
Viscosity @ 100°C



PQ



Base Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

Sample No. : WC0896731

Lab Number : 02637355

Unique Number : 5786517

Test Package : MAR 3

Received : 24 May 2024

Tested : 28 May 2024

Diagnosed : 28 May 2024 - Kevin Marson

CANADIAN COAST GUARD

CCGS GRIFFON, PO BOX 1000, 401 KING ST.W

Prescott, ON

CA K6V 5T3

Contact: Laurie Bosley

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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.

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