



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINANTS	NORMAL
OIL CONDITION	NORMAL

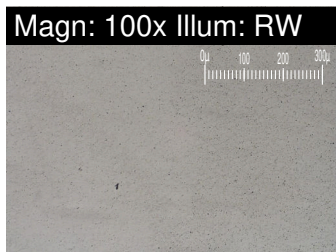
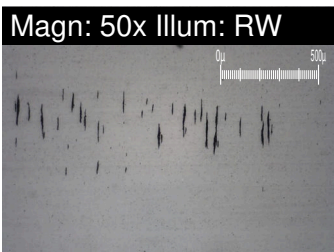
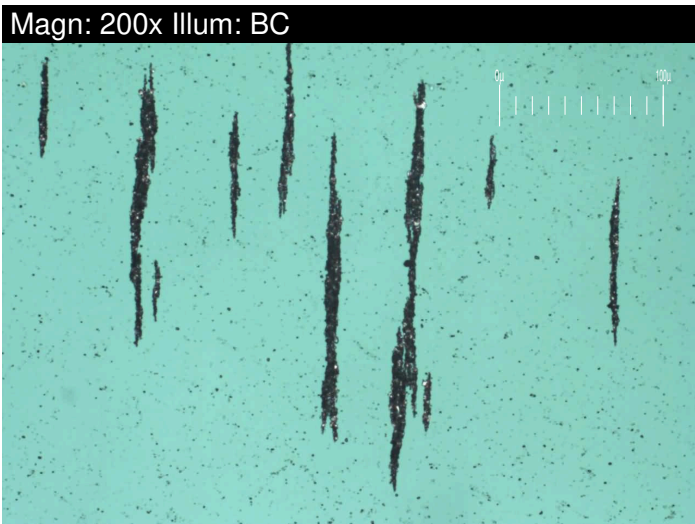
Machine Id
15501191 - SSG #2
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (62 LTR)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

WEAR

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



Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0855492	WC0700691	WC0700700
Sample Date		Client Info		30 Oct 2023	15 Jan 2023	30 Nov 2022
Machine Age	hrs	Client Info		55884	53952	53448
Oil Age	hrs	Client Info		500	503	509
Filter Age	hrs	Client Info		500	503	509
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>100	18	13	10
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	0
Nickel	ppm	ASTM D5185(m)	>4	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	1	<1	<1
Lead	ppm	ASTM D5185(m)	>40	17	3	2
Copper	ppm	ASTM D5185(m)	>330	591	4	4
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Large Particles		DR-Ferr*		11.2	3.5	4.9
Small Particles		DR-Ferr*		6.8	4.2	3.6
Total Particles		DR-Ferr*	>---	18	7.7	8.5
Large Particles Percentage	%	DR-Ferr*		24.4	0	15.3
Severity Index		DR-Ferr*		49	2	6
Ferrous Rubbing	Scale 0-10	ASTM D7684*		3	3	2
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*		1	1	
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.

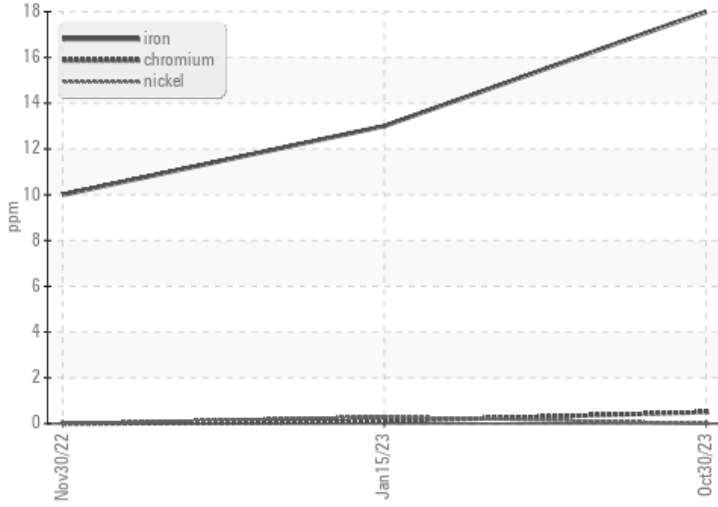
Silicon	ppm	ASTM D5185(m)	>25	10	3	3
Potassium	ppm	ASTM D5185(m)	>20	0	<1	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.5	9.1	8.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.5	23.5	22.5
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	1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		1	1	1

OIL CONDITION

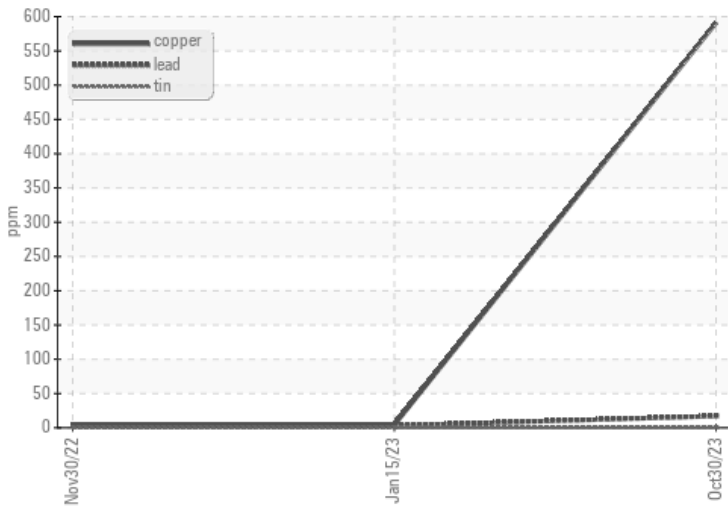
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		3	2	3
Boron	ppm	ASTM D5185(m)	0	5	4	2
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	60	68	64	62
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	1066	1073	1045
Calcium	ppm	ASTM D5185(m)	1070	1153	1184	1145
Phosphorus	ppm	ASTM D5185(m)	1150	1054	1183	1121
Zinc	ppm	ASTM D5185(m)	1270	1293	1321	1290
Sulfur	ppm	ASTM D5185(m)	2060	2351	2687	2647
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.3	20.5	19.9
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	9.47	8.92	9.03
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	15.2	14.7	14.6
Lubricant Degradation	Scale 0-10	ASTM D7684*				

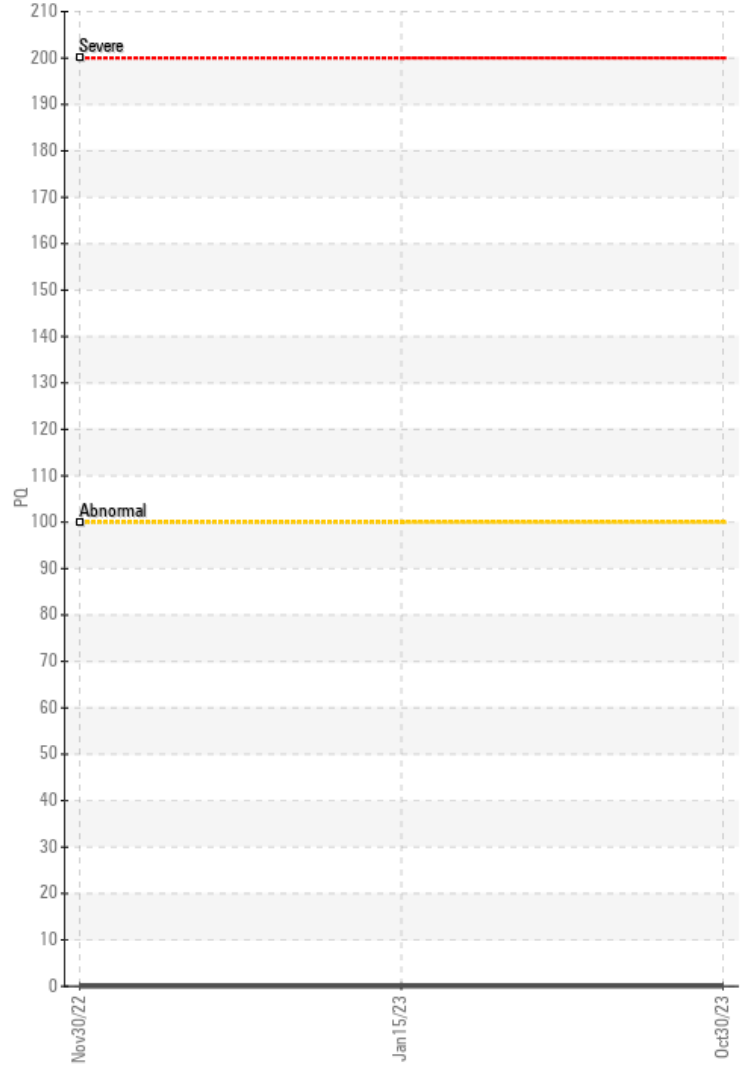
Ferrous Alloys



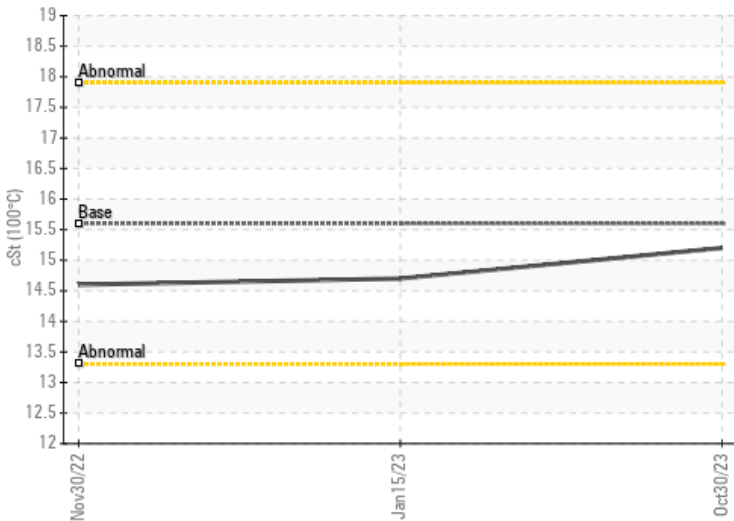
Non-ferrous Metals



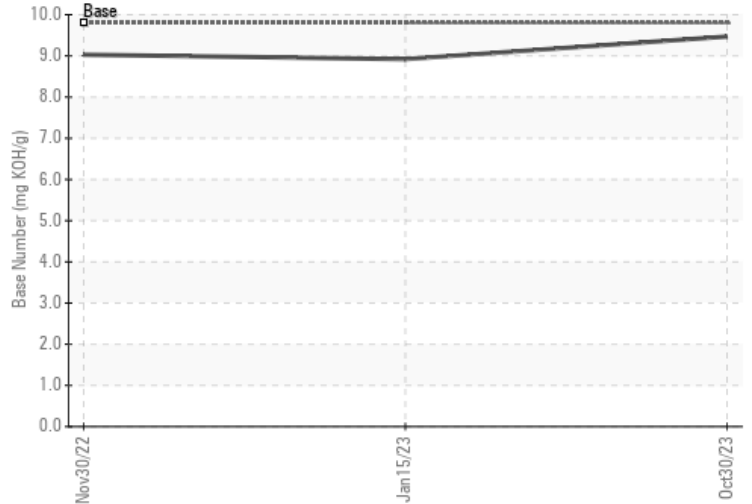
PQ



Viscosity @ 100°C



Base Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0855492
Lab Number : 02595516
Unique Number : 5672595
Test Package : MAR 3 (Additional Tests: Glycol)

Received : 10 Nov 2023
Tested : 13 Nov 2023
Diagnosed : 15 Nov 2023 - Kevin Marson

CANADIAN COAST GUARD
 CCGS GRIFFON, PO BOX 1000, 401 KING ST.W
 Prescott, ON
 CA K6V 5T3

Contact: Mike Rankin
 mike.rankin@dfo-mpo.gc.ca
 T: (289)442-0810
 F: (519)383-1994

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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