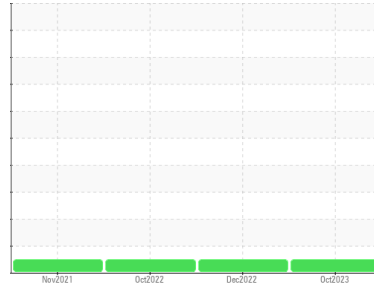




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**Auxiliary Generator (S/N 15501190)**

Component  
**Auxiliary Diesel Engine**

Fluid  
**PETRO CANADA DURON HP 15W40 (62 LTR)**

## DIAGNOSIS

### 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.

### Contaminants

There is no indication of any contamination in the oil.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0772121</b>	WC0700701	WC0603807
Sample Date	Client Info		<b>19 Oct 2023</b>	06 Dec 2022	28 Oct 2022
Machine Age	hrs	Client Info	<b>55551</b>	53393	52890
Oil Age	hrs	Client Info	<b>505</b>	503	506
Oil Changed		Client Info	<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m) >100	<b>19</b>	16	14
Chromium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185(m) >4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>1</b>	1	1
Lead	ppm	ASTM D5185(m) >40	<b>17</b>	4	4
Copper	ppm	ASTM D5185(m) >330	<b>581</b>	2	2
Tin	ppm	ASTM D5185(m) >15	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
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) 0	<b>3</b>	2	1
Barium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>67</b>	61	61
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>1056</b>	1028	1015
Calcium	ppm	ASTM D5185(m) 1070	<b>1149</b>	1139	1110
Phosphorus	ppm	ASTM D5185(m) 1150	<b>1046</b>	1093	1105
Zinc	ppm	ASTM D5185(m) 1270	<b>1295</b>	1259	1253
Sulfur	ppm	ASTM D5185(m) 2060	<b>2446</b>	2590	2612
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

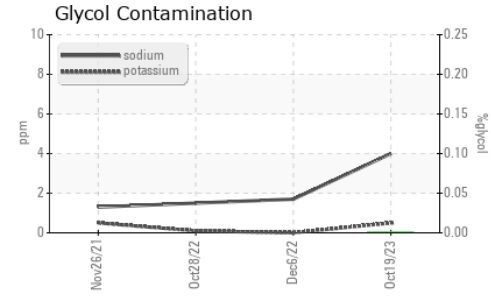
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>12</b>	2	2
Sodium	ppm	ASTM D5185(m)	<b>4</b>	2	2
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	0	<1
Glycol	%	ASTM D7922*	<b>0.0</b>	NEG	NEG

## INFRA-RED

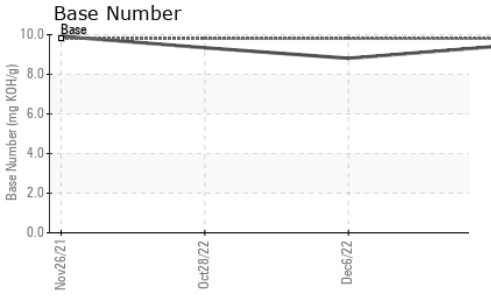
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624* >20	<b>8.7</b>	7.9	7.7
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>21.7</b>	22.1	21.5



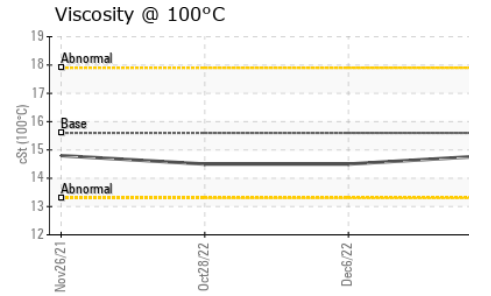
# OIL ANALYSIS REPORT



FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.8</b>	18.4	17.5
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>9.39</b>	8.81	9.34

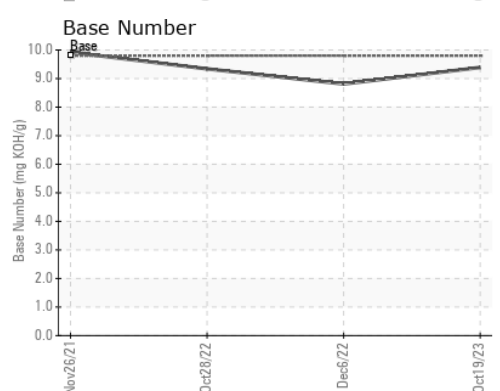
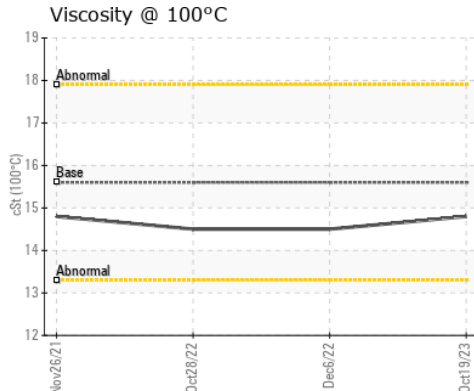
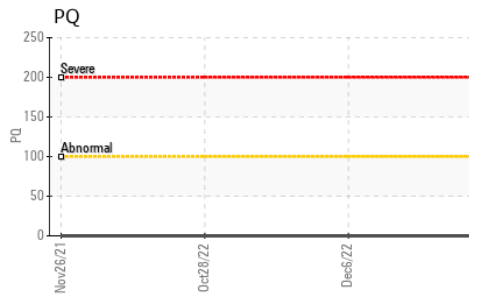
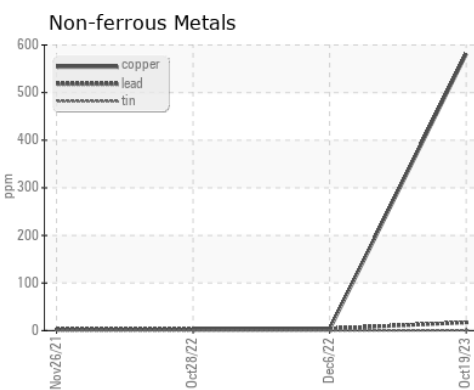
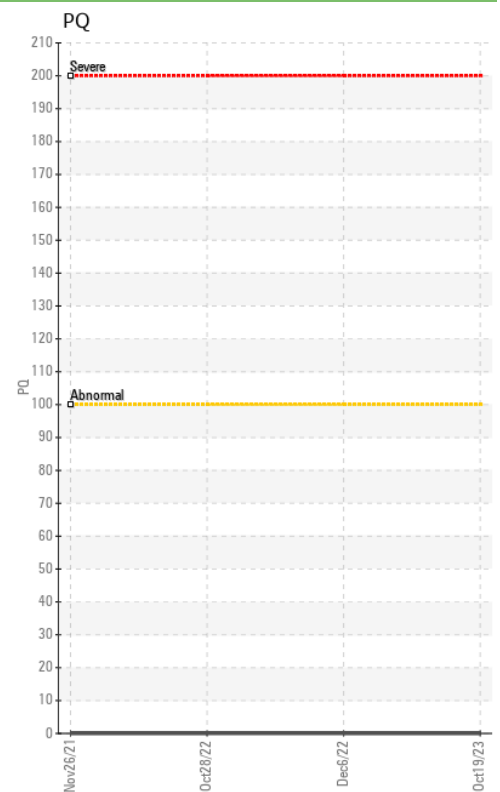
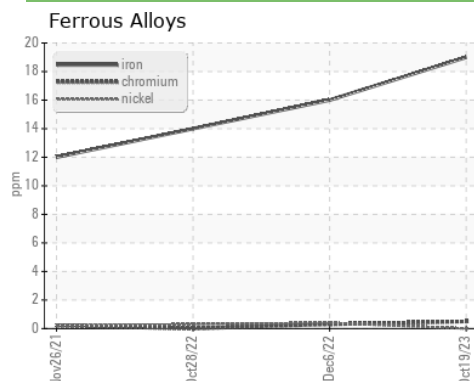


VISUAL	method	limit/base	current	history1	history2	
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG



FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>14.8</b>	14.5	14.5

### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0772121      **Received** : 24 Oct 2023  
**Lab Number** : **02591343**      **Diagnosed** : 30 Oct 2023  
**Unique Number** : 5668422      **Diagnostician** : Kevin Marson  
**Test Package** : MAR 3 ( Additional Tests: Glycol )

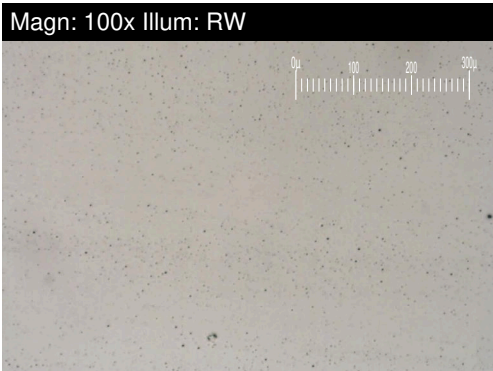
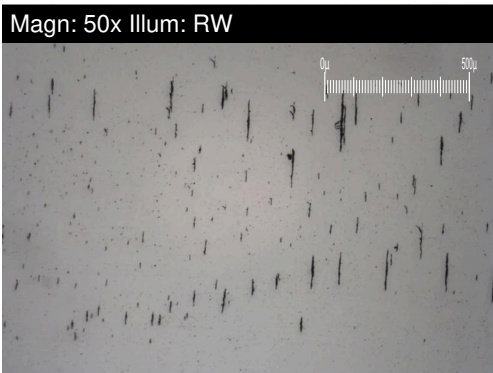
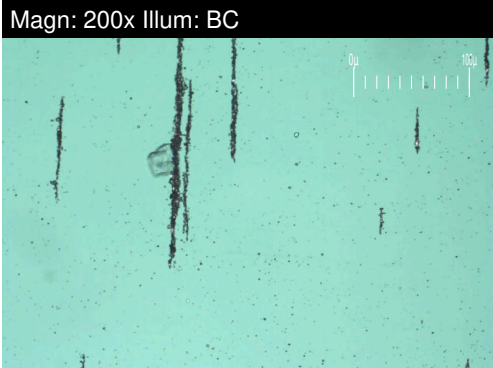
**CANADIAN COAST GUARD**  
 CCGS GRIFFON, PO BOX 1000, 401 KING ST.W  
 Prescott, ON  
 CA K6V 5T3  
 Contact: Mike Rankin  
 mike.rankin@dfo-mpo.gc.ca  
 T: (289)442-0810  
 F: (519)383-1994

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.



# FERROGRAPHY REPORT

Machine Id  
**Auxiliary Generator (S/N 15501190)**  
 Component  
**Auxiliary Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (62 LTR)**

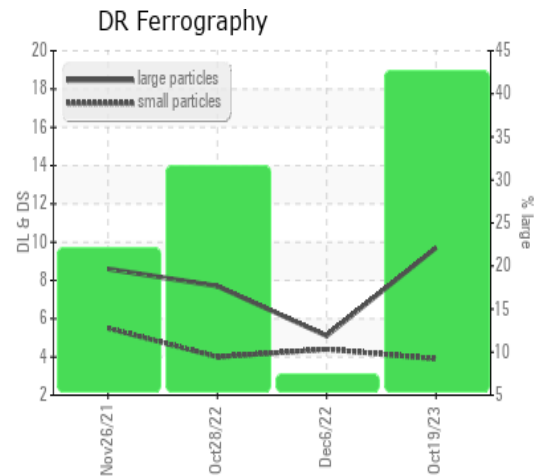


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		<b>9.7</b>	5.1	7.7
Small Particles		DR-Ferr*		<b>3.9</b>	4.4	4.0
Total Particles		DR-Ferr*	>---	<b>13.6</b>	9.5	11.7
Large Particles Percentage	%	DR-Ferr*		<b>42.6</b>	7.4	31.6
Severity Index		DR-Ferr*		<b>56</b>	4	28

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		<b>3</b>	2	2
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		<b>1</b>	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*		<b>1</b>		
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*			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*				
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		<b>1</b>	1	1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		<b>1</b>	1	1

### WEAR

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



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