



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINANTS	NORMAL
OIL CONDITION	NORMAL

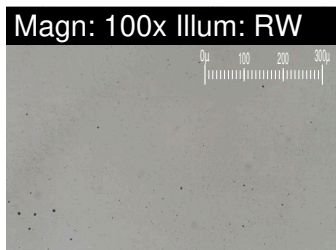
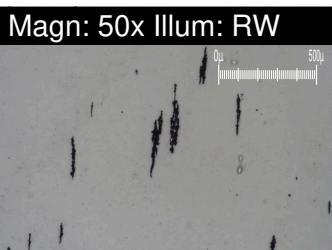
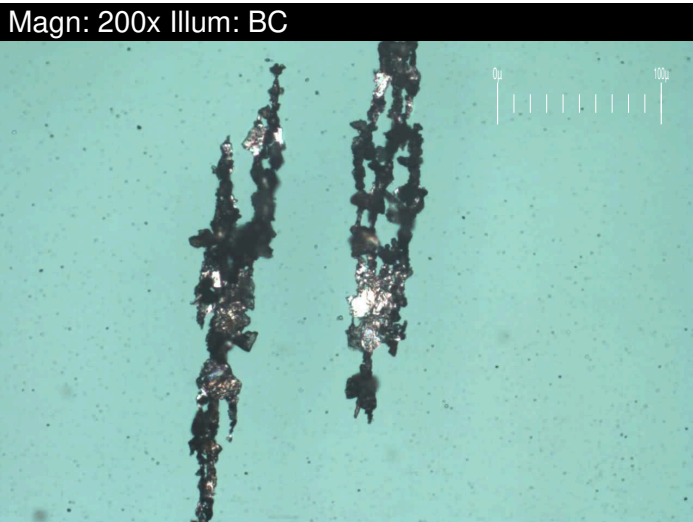
Machine Id  
**#2 AUX ENG**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (68 LTR)**

## RECOMMENDATION

We recommend an early resample to monitor this condition. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.

## WEAR

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



Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0895920</b>	WC0785232	WC0785220
Sample Date		Client Info		<b>02 Jul 2024</b>	26 Dec 2023	28 Apr 2023
Machine Age	hrs	Client Info		<b>0</b>	21121	21121
Oil Age	hrs	Client Info		<b>0</b>	0	526
Filter Age	hrs	Client Info		<b>0</b>	0	526
Oil Changed		Client Info		<b>N/A</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL
PQ		ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m)	>100	<b>3</b>	2	5
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
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>0</b>	<1	3
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Large Particles		DR-Ferr*		<b>20.3</b>	9.6	5.9
Small Particles		DR-Ferr*		<b>13.2</b>	5.6	6.2
Total Particles		DR-Ferr*	>---	<b>33.5</b>	15.2	12.1
Large Particles Percentage	%	DR-Ferr*		<b>21.2</b>	26.3	0
Severity Index		DR-Ferr*		<b>144</b>	38	2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		<b>3</b>	2	3
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*			1	
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		<b>2</b>	2	
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.

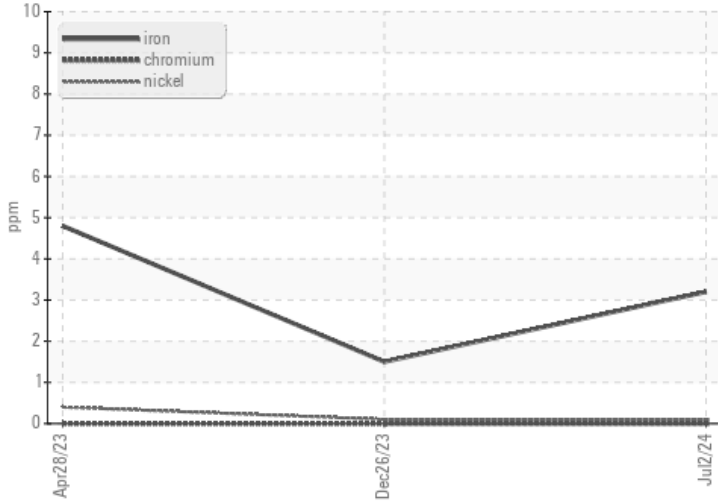
Silicon	ppm	ASTM D5185(m)	>25	<b>2</b>	3	5
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>5.9</b>	4.7	7.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>18.4</b>	17.8	20.0
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Carbonaceous Material	Scale 0-10	ASTM D7684*				1
Sand/Dirt	Scale 0-10	ASTM D7684*		<b>1</b>	2	1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		<b>2</b>		1

## OIL CONDITION

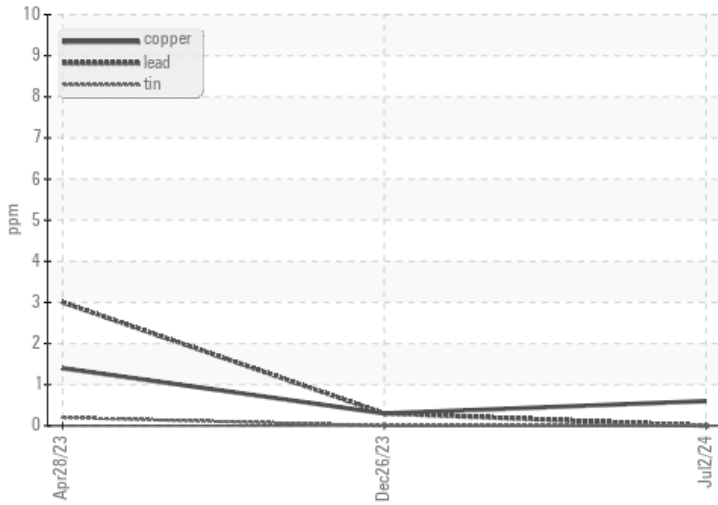
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>3</b>	1	2
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	1	1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>58</b>	58	61
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>970</b>	931	1005
Calcium	ppm	ASTM D5185(m)	1070	<b>1055</b>	1014	1151
Phosphorus	ppm	ASTM D5185(m)	1150	<b>973</b>	979	1090
Zinc	ppm	ASTM D5185(m)	1270	<b>1187</b>	1141	1231
Sulfur	ppm	ASTM D5185(m)	2060	<b>2557</b>	2779	2650
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>14.7</b>	13.3	16.5
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>9.40</b>	9.76	9.37
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>14.0</b>	14.7	13.7
Lubricant Degradation	Scale 0-10	ASTM D7684*				

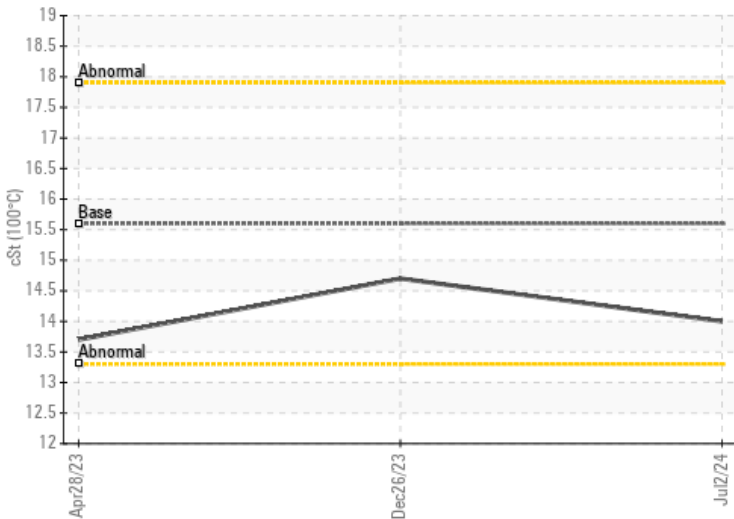
### Ferrous Alloys



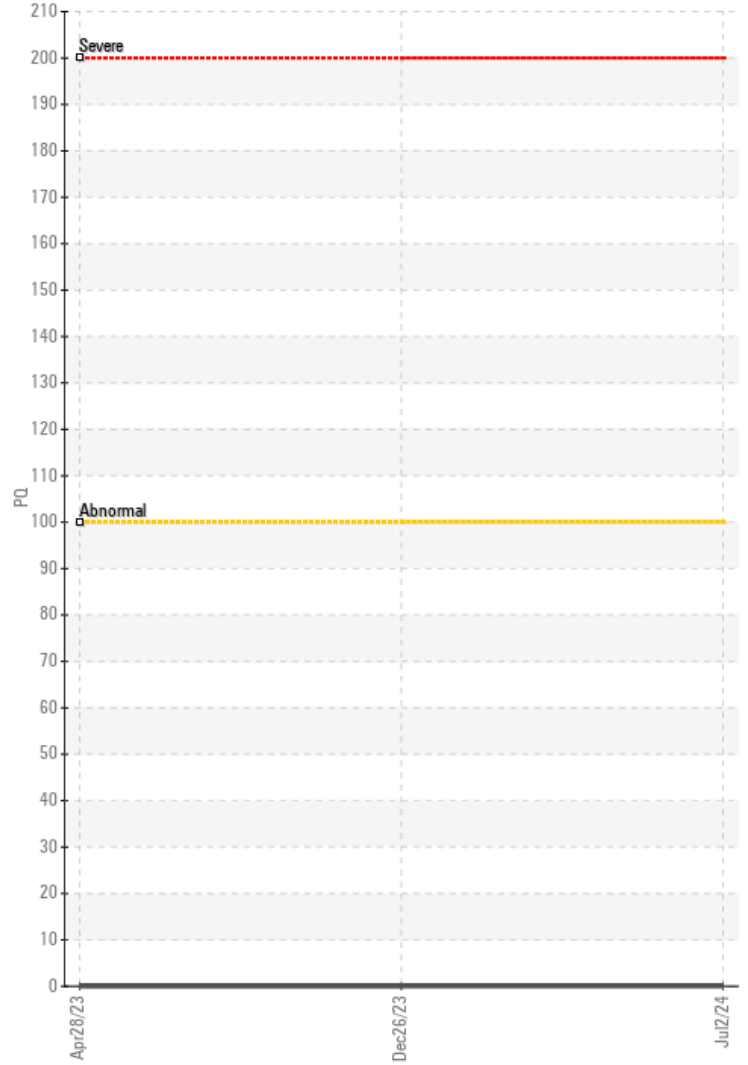
### Non-ferrous Metals



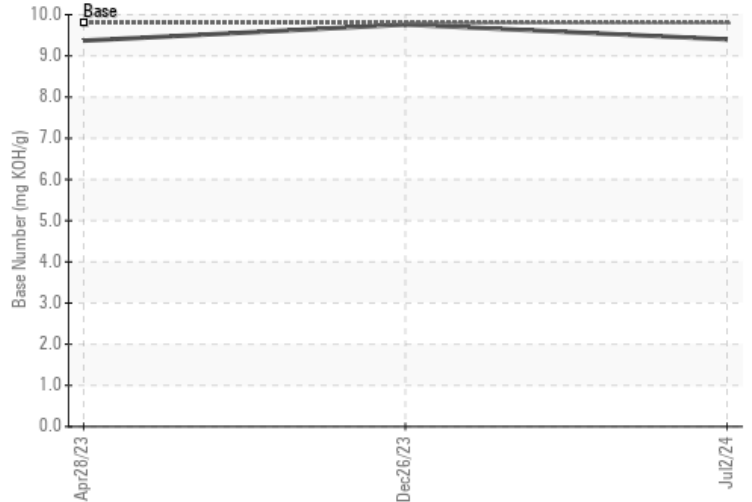
### Viscosity @ 100°C



### PQ



### Base Number



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0895920  
**Lab Number** : 02645117  
**Unique Number** : 5802656  
**Test Package** : MAR 3 ( Additional Tests: BottomAnalysis, FILTERPATCH )

**CANSHIP UGLAND LTD - M/V PLACENTIA PRIDE**  
 C/O NEWTERM LOGISTICS, 21 GLENCOE  
 MOUNT PEARL, NL  
 CA A1N 4S6  
 Contact: Don Gibbons  
 don@canship.com  
 T: (709)782-3333  
 F: (709)782-0225

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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