



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINANTS	NORMAL
OIL CONDITION	NORMAL

Machine Id
PP437.010.11 HAWSER WINCH MOTOR PORT (S/N 4697378)

Component
Winch

Fluid
PETRO CANADA ENDURATEX EP 220 (4 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

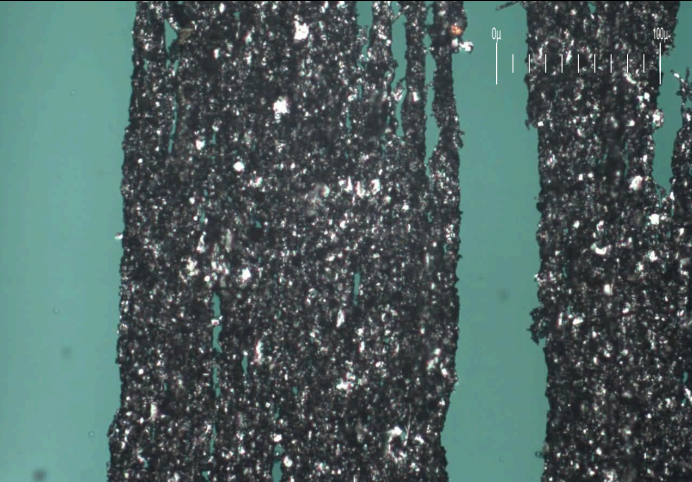
WEAR

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		WC0895912	WC0608431	WC0523947
Sample Date		Client Info		25 Jun 2024	22 Jul 2022	12 Jul 2021
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Filter Age	mths	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	None	N/A
Sample Status				NORMAL	NORMAL	SEVERE

PQ		ASTM D8184*		14	9	30
Iron	ppm	ASTM D5185(m)	>30	58	47	▲ 95
Chromium	ppm	ASTM D5185(m)	>2	0	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	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)	>5	1	<1	2
Lead	ppm	ASTM D5185(m)	>70	0	<1	1
Copper	ppm	ASTM D5185(m)	>65	5	4	14
Tin	ppm	ASTM D5185(m)	>9	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Large Particles		DR-Ferr*		137.5	---	---
Small Particles		DR-Ferr*		61.0	---	---
Total Particles		DR-Ferr*	>---	198.5	---	---
Large Particles Percentage	%	DR-Ferr*		38.5	---	---
Severity Index		DR-Ferr*		10519	---	---
Ferrous Rubbing	Scale 0-10	ASTM D7684*		5		
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		2		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		2		
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*		1		
Nonferrous Other	Scale 0-10	ASTM D7684*				

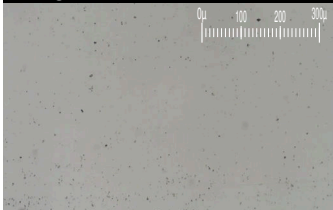
Magn: 200x Illum: BC



Magn: 50x Illum: RW



Magn: 100x Illum: RW



CONTAMINANTS

There is no indication of any contamination in the oil.

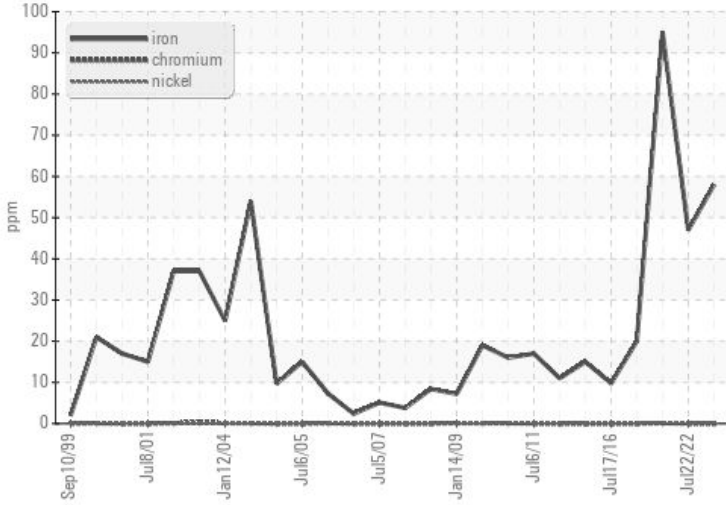
Silicon	ppm	ASTM D5185(m)	>30	2	2	3
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	VLITE
Debris	scalar	Visual*	NONE	VLITE	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	VLITE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		1		
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		2		

OIL CONDITION

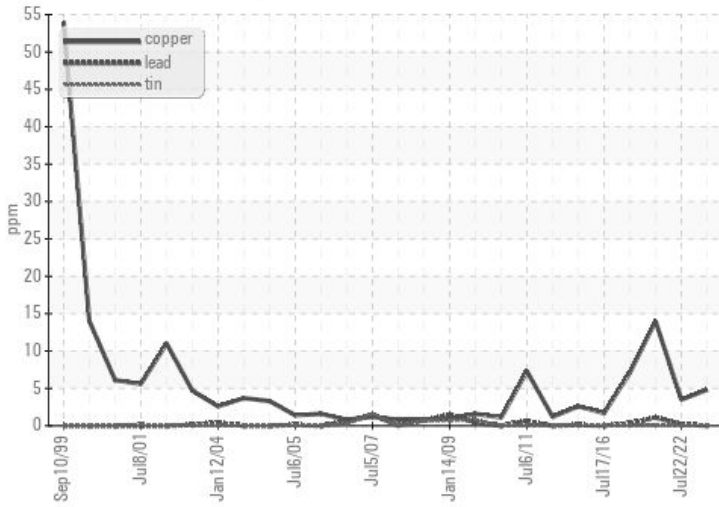
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		3	4	7
Boron	ppm	ASTM D5185(m)	60	43	10	23
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	<1	1
Magnesium	ppm	ASTM D5185(m)	0	<1	1	2
Calcium	ppm	ASTM D5185(m)	0	2	2	3
Phosphorus	ppm	ASTM D5185(m)	270	282	368	465
Zinc	ppm	ASTM D5185(m)	0	5	6	10
Sulfur	ppm	ASTM D5185(m)	11200	9830	4976	5647
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	0.53	0.90	0.48
Visc @ 40°C	cSt	ASTM D7279(m)	220	211	220	223
Lubricant Degradation	Scale 0-10	ASTM D7684*				

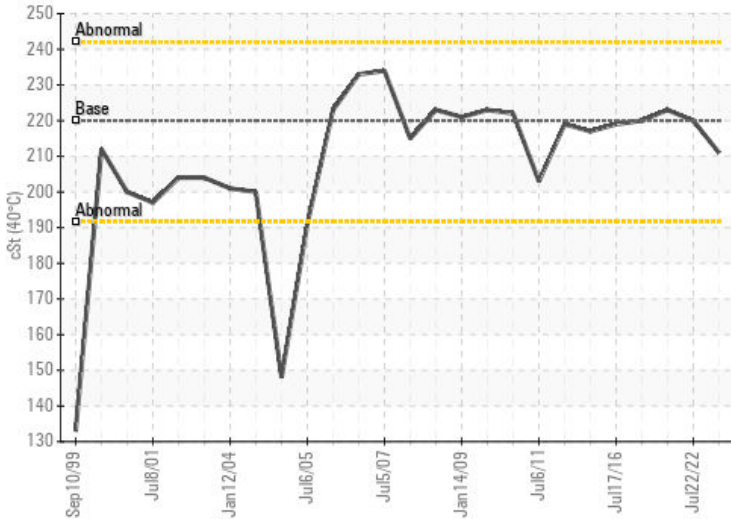
Ferrous Alloys



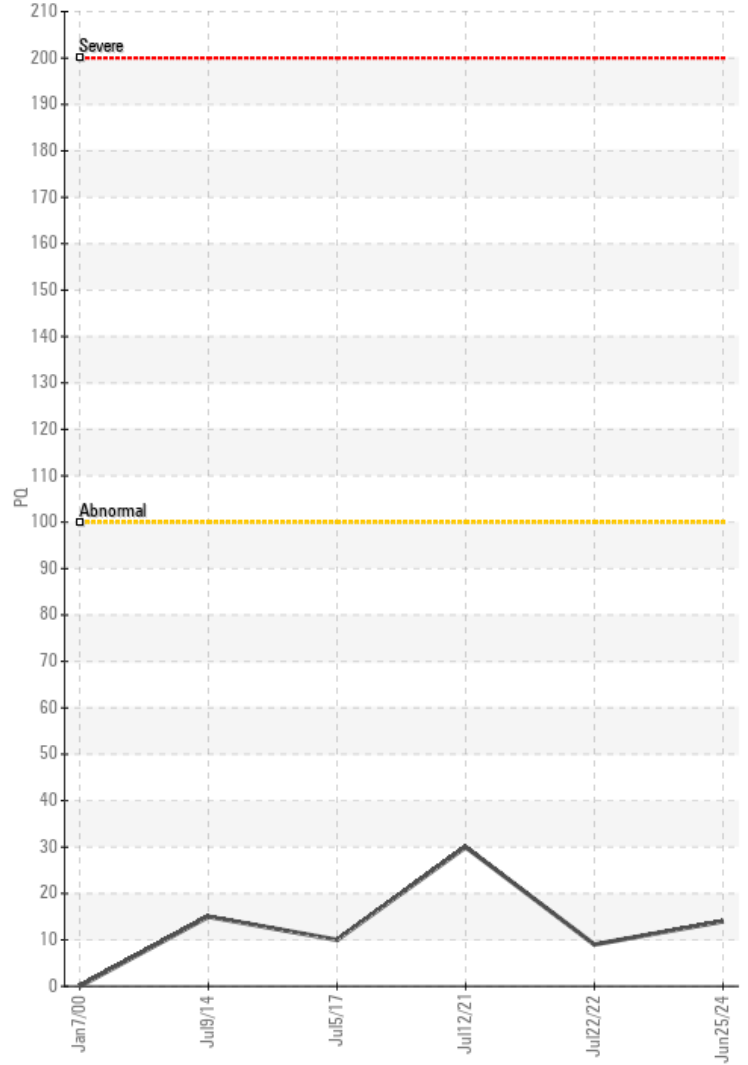
Non-ferrous Metals



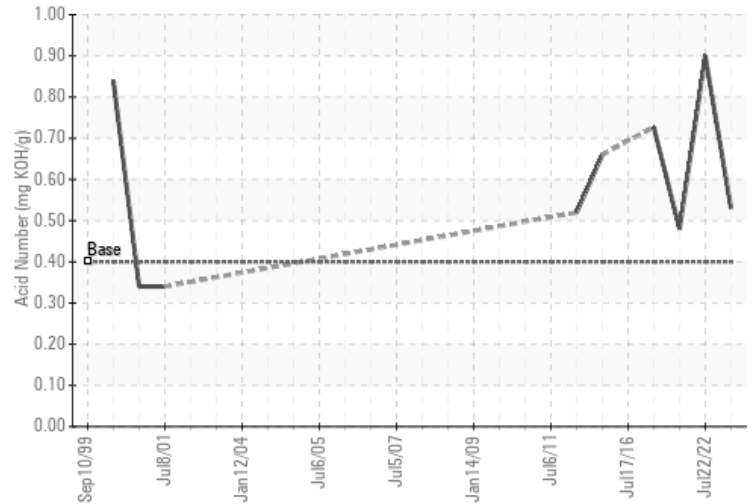
Viscosity @ 40°C



PQ



Acid Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0895912
Lab Number : 02645310
Unique Number : 5802849
Test Package : MAR 3 (Additional Tests: TAN Man)

CANSHIP UGLAND LTD - M/V PLACENTIA PRIDE
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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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