MAR II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
AH8240 - Chain Handling Winch
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX MV ARCTIC 15 (300 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

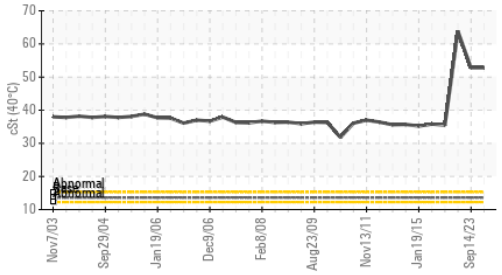
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

FLUID CONDITION

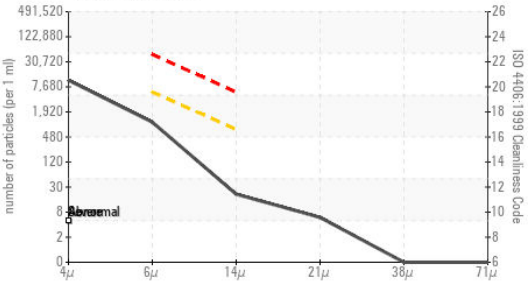
Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0860188	WC0855662	WC0740105
Sample Date		Client Info		12 Dec 2023	14 Sep 2023	10 Sep 2022
Machine Age	hrs	Client Info		673	657	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>20	<1	<1	<1
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	0
Lead	ppm	ASTM D5185(m)	>20	<1	0	<1
Copper	ppm	ASTM D5185(m)	>20	7	6	4
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>15	0	<1	0
Potassium	ppm	ASTM D5185(m)	>20	4	0	<1
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647		9630	31321	21927
Particles >6µm		ASTM D7647	>5000	955	▲ 8615	4674
Particles >14µm		ASTM D7647	>640	18	▲ 808	166
Particles >21µm		ASTM D7647	>160	5	▲ 225	27
Particles >38µm		ASTM D7647	>40	0	5	1
Particles >71µm		ASTM D7647	>10	0	1	0
Oil Cleanliness		ISO 4406 (c)	>--/19/16	20/17/11	▲ 22/20/17	22/19/15
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		<1	1	<1
Boron	ppm	ASTM D5185(m)	0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	0	<1
Calcium	ppm	ASTM D5185(m)	50	47	48	51
Phosphorus	ppm	ASTM D5185(m)	330	331	359	359
Zinc	ppm	ASTM D5185(m)	430	402	423	413
Sulfur	ppm	ASTM D5185(m)	760	805	809	773
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	0.44	0.44	0.45
Visc @ 40°C	cSt	ASTM D7279(m)	13.6	▲ 52.8	▲ 52.8	▲ 63.8

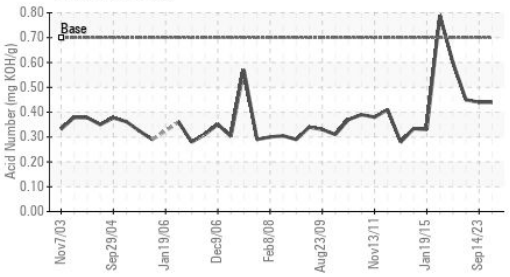
Viscosity @ 40°C



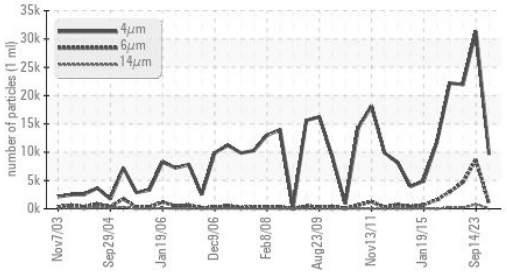
Particle Count



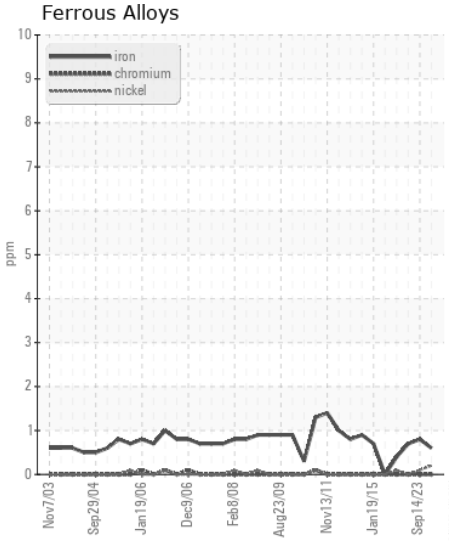
Acid Number



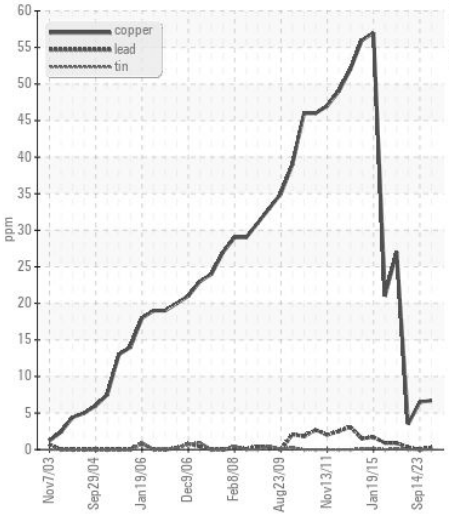
Particle Trend



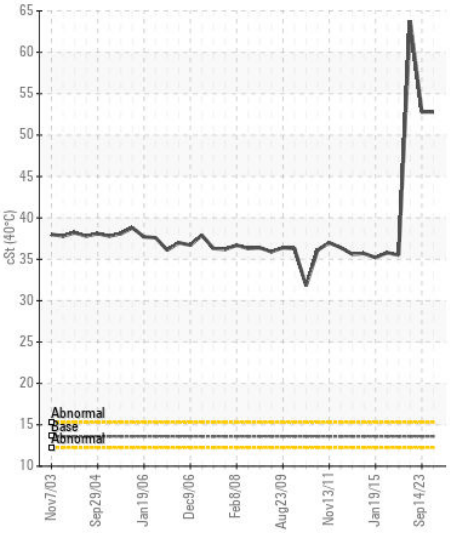
Ferrous Alloys



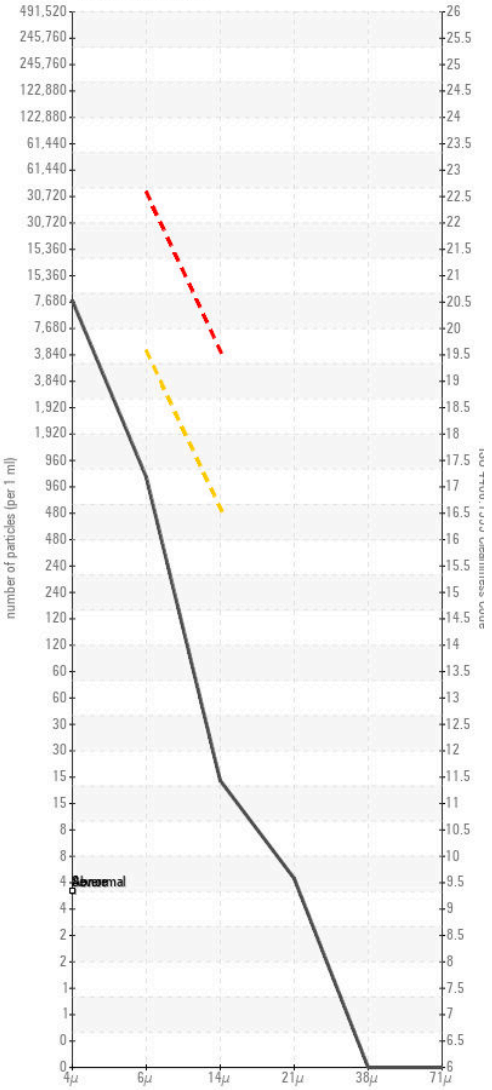
Non-ferrous Metals



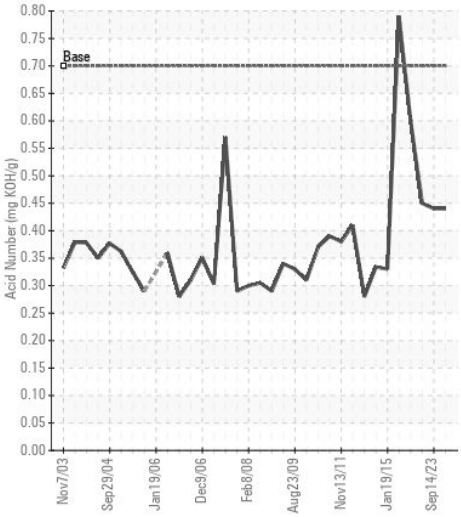
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: WC0860188	**Recieved**	: 11 Jan 2024
Lab Number	: 02608161	**Diagnosed**	: 15 Jan 2024
Unique Number	: 5709247	**Diagnostician**	: Kevin Marson
Test Package	: MAR 2		

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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