



# OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**[POST FILTER]**  
 Machine Id  
**17D01A05#01 - Barge Davit (S/N 499105)**  
 Component  
**Hydraulic System**  
 Fluid  
**PETRO CANADA HYDREX MV 32 (800 LTR)**

## RECOMMENDATION

We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0839657</b>	WC0839656	WC0747575
Sample Date		Client Info		<b>17 May 2024</b>	15 May 2024	16 May 2023
Machine Age	hrs	Client Info		<b>396</b>	396	38042
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR

Copper ppm levels are abnormal. A sharp increase in the iron level is noted.

Iron	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Lead	ppm	ASTM D5185(m)	>20	<b>2</b>	0	0
Copper	ppm	ASTM D5185(m)	>20	<b>▲ 48</b>	18	2
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

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

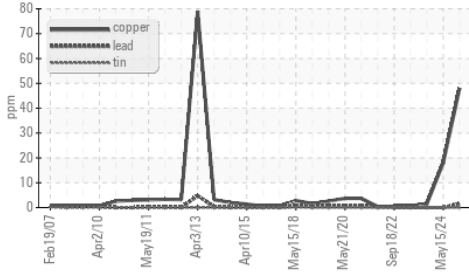
Silicon	ppm	ASTM D5185(m)	>15	<b>0</b>	1	0
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	0
Water		WC Method	>0.05	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>405</b>	1947	694
Particles >6µm		ASTM D7647	>1300	<b>81</b>	627	179
Particles >14µm		ASTM D7647	>160	<b>8</b>	52	22
Particles >21µm		ASTM D7647	>40	<b>2</b>	15	8
Particles >38µm		ASTM D7647	>10	<b>1</b>	1	0
Particles >71µm		ASTM D7647	>3	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>16/14/10</b>	18/16/13	17/15/12
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>VLITE</b>	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

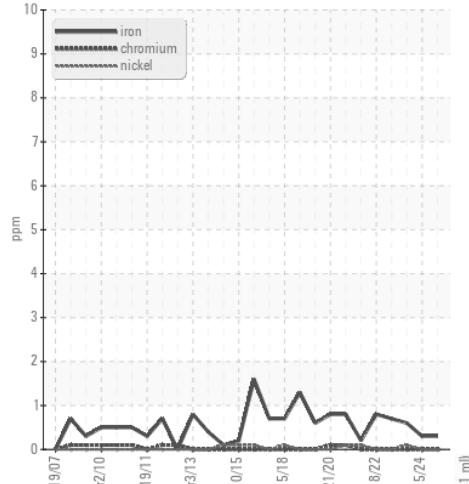
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Boron	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)	50	<b>31</b>	43	51
Phosphorus	ppm	ASTM D5185(m)	330	<b>294</b>	318	345
Zinc	ppm	ASTM D5185(m)	430	<b>347</b>	378	382
Sulfur	ppm	ASTM D5185(m)	760	<b>721</b>	745	766
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	<b>0.30</b>	0.38	0.50
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	<b>31.6</b>	31.6	31.7

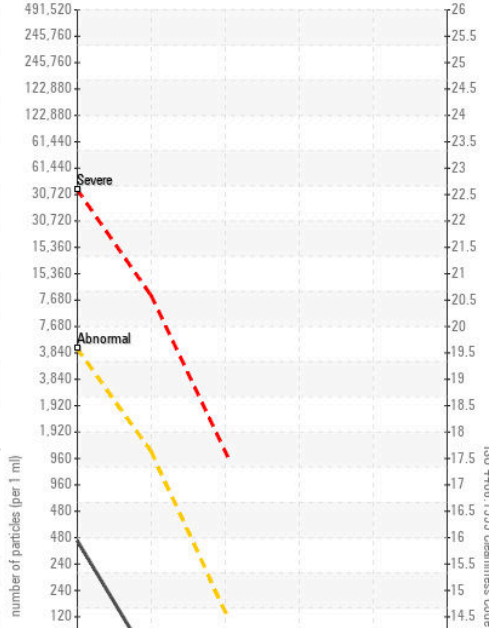
### ▲ Non-ferrous Metals



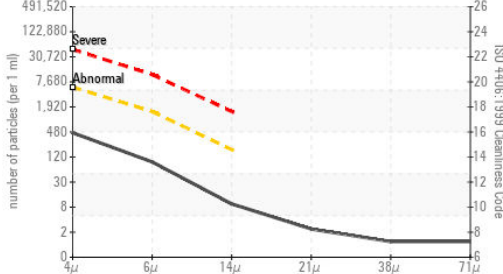
### Ferrous Alloys



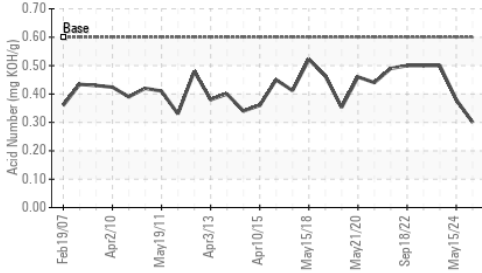
### Particle Count



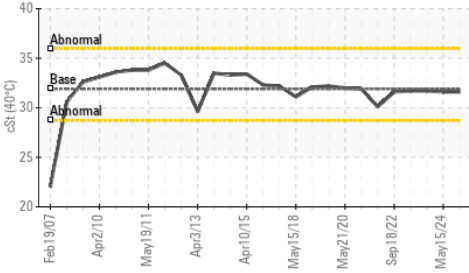
### Particle Count



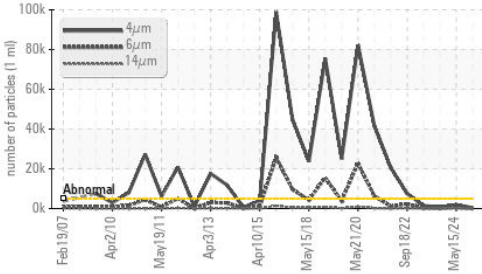
### Acid Number



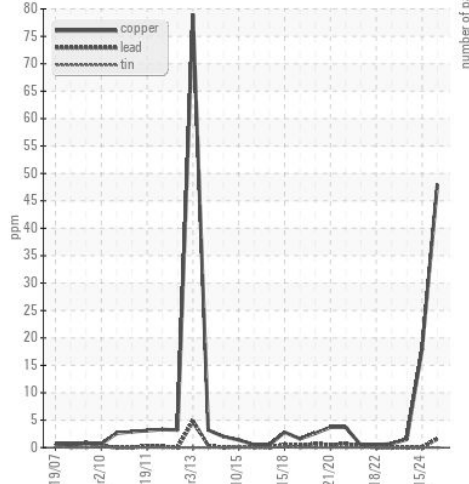
### Viscosity @ 40°C



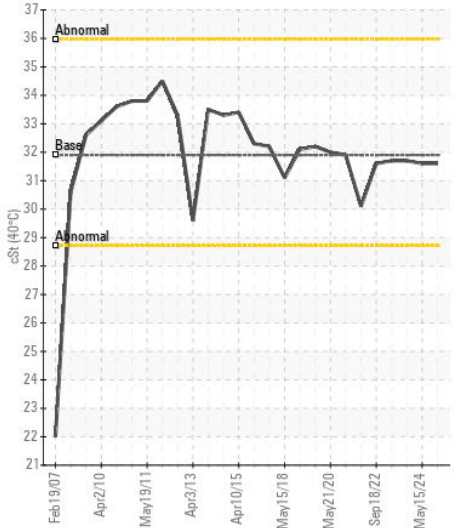
### Particle Trend



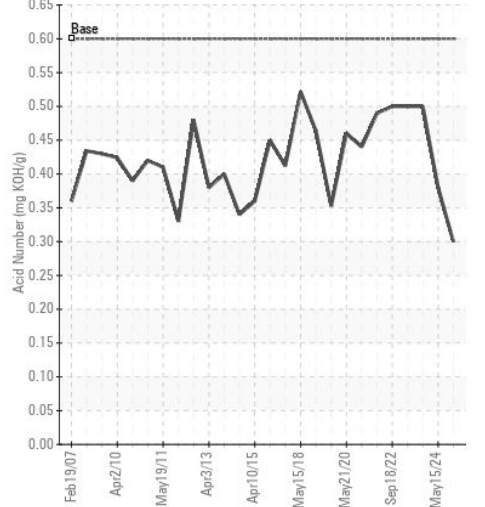
### ▲ Non-ferrous Metals



### Viscosity @ 40°C



### Acid Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0839657  
**Lab Number** : 02638859  
**Unique Number** : 5788021  
**Test Package** : MAR 2

**Received** : 30 May 2024  
**Tested** : 31 May 2024  
**Diagnosed** : 03 Jun 2024 - Kevin Marson

**CANADIAN COAST GUARD**  
 CCGS SIR WILLIAM ALEXANDER, 13 AKERLEY BLVD, DOOR 1A  
 DARTMOUTH, NS  
 CA B3B 1J6  
 Contact: Chief Engineer Senior Engineer  
 sirwilliamalexanderse@nwa.ccgss-ngcc.gc.ca  
 T: (902)456-9281  
 F: (902)701-0593

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.