



# OIL ANALYSIS REPORT

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

Area  
**Steering Gear Compartment**  
 Machine Id  
**G5-26135 Port Telemotor**  
 Component  
**Hydraulic System**  
 Fluid  
**PETRO CANADA HYDREX AW 22 (25 LTR)**

## RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0855466</b>	WC62006743	WC62005693
Sample Date		Client Info		<b>21 May 2024</b>	18 Jan 2017	17 Jul 2014
Machine Age	mths	Client Info		<b>0</b>	0	0
Oil Age	mths	Client Info		<b>0</b>	0	0
Filter Age	mths	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR

Copper ppm levels are abnormal.

Iron	ppm	ASTM D5185(m)	>20	<b>3</b>	3	6
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>20	<b>8</b>	1	1
Copper	ppm	ASTM D5185(m)	>20	<b>▲ 68</b>	1	6
Tin	ppm	ASTM D5185(m)	>10	<b>5</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.

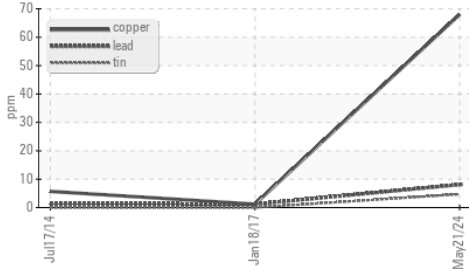
Silicon	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Water		WC Method	>0.05	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>1203</b>	▲ 12689	1144
Particles >6µm		ASTM D7647	>1300	<b>206</b>	▲ 3591	95
Particles >14µm		ASTM D7647	>160	<b>9</b>	● 192	5
Particles >21µm		ASTM D7647	>40	<b>2</b>	31	2
Particles >38µm		ASTM D7647	>10	<b>0</b>	1	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>17/15/10</b>	▲ 21/19/15	17/14/10
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

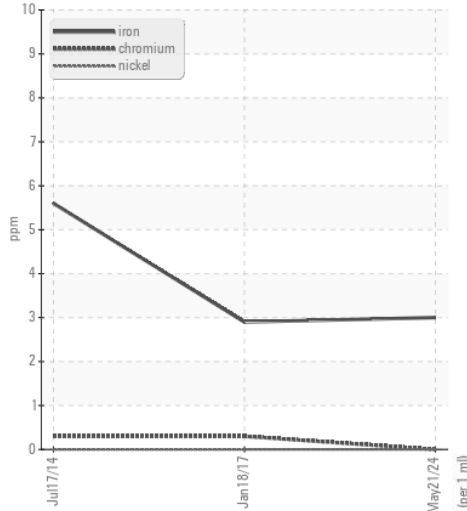
The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	<1
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	0	<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	<1
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	2
Calcium	ppm	ASTM D5185(m)	50	<b>58</b>	147	135
Phosphorus	ppm	ASTM D5185(m)	330	<b>327</b>	246	249
Zinc	ppm	ASTM D5185(m)	430	<b>402</b>	327	324
Sulfur	ppm	ASTM D5185(m)	760	<b>855</b>	593	648
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	<b>0.33</b>	0.36	0.310
Visc @ 40°C	cSt	ASTM D7279(m)	22.0	<b>22.5</b>	21.8	22.5

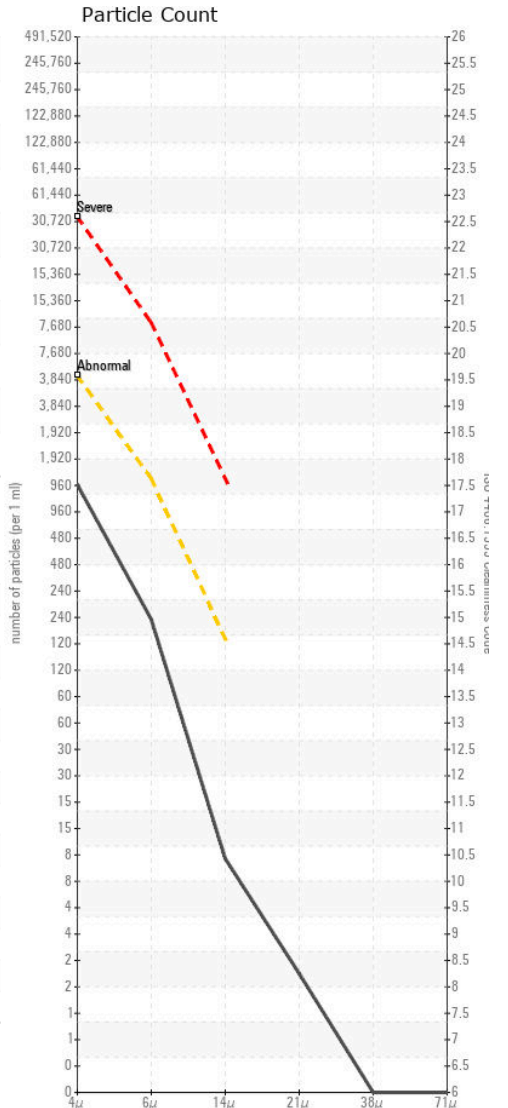
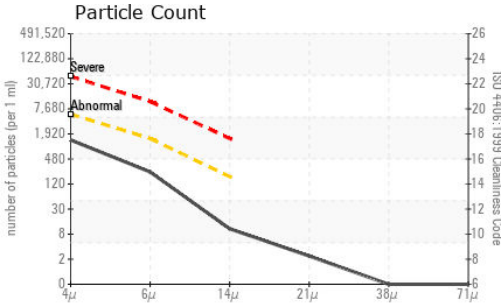
**▲ Non-ferrous Metals**



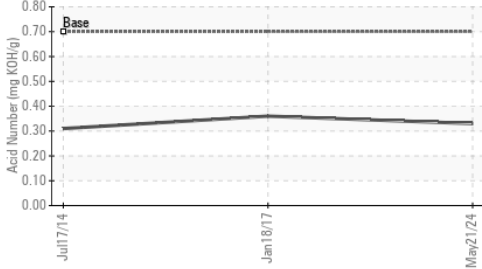
**Ferrous Alloys**



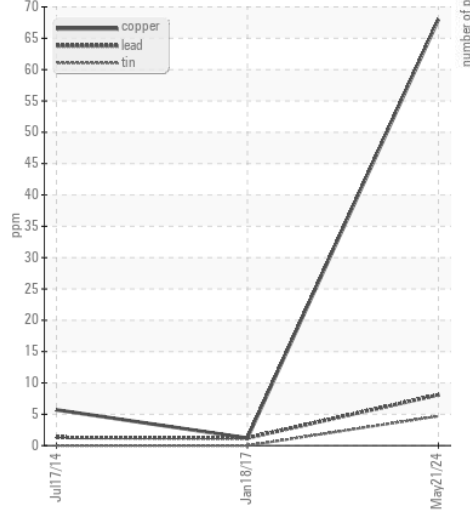
**Particle Count**



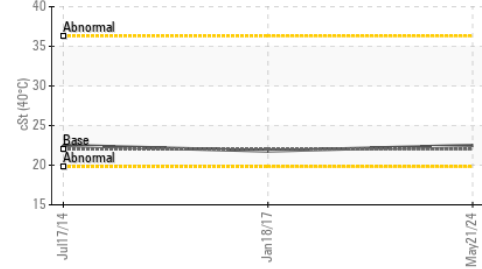
**Acid Number**



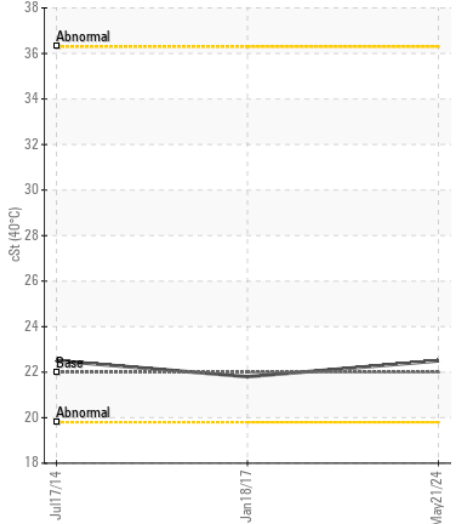
**▲ Non-ferrous Metals**



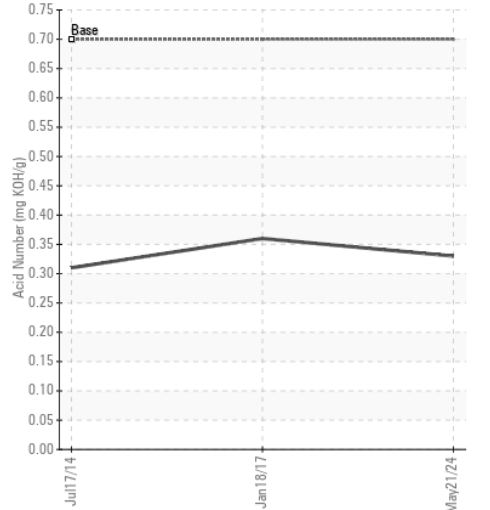
**Viscosity @ 40°C**



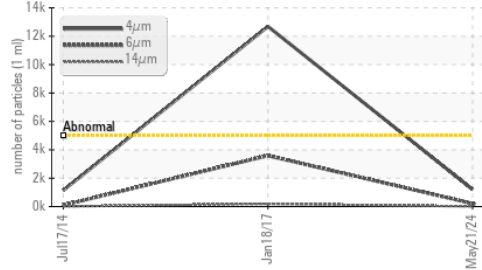
**Viscosity @ 40°C**



**Acid Number**



**Particle Trend**



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0855466  
**Lab Number** : 02637488  
**Unique Number** : 5786650  
**Test Package** : MAR 2

**Received** : 24 May 2024  
**Tested** : 27 May 2024  
**Diagnosed** : 27 May 2024 - Kevin Marson

**CANADIAN COAST GUARD**  
 CCGS GRIFFON, PO BOX 1000, 401 KING ST.W  
 Prescott, ON  
 CA K6V 5T3  
 Contact: Laurie Bosley  
 Laurie.Bosley@dfo-mpo.gc.ca

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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