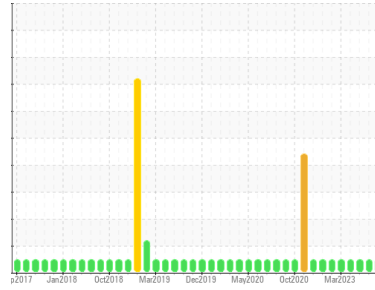


Area  
**Aft Machinery Space [450188488]**  
Machine Id  
**Thruster Aft Center - Steering System (S/N Sample Tag CL-06001-S2)**  
Component  
**Hydraulic System**  
Fluid  
**PETRO CANADA HYDREX MV 36 (200 LTR)**



**DIAGNOSIS**

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

**SAMPLE INFORMATION**

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PC</b>	PC	PC0040114
Sample Date	Client Info	<b>14 Aug 2023</b>	19 Jul 2023	11 Jun 2023
Machine Age	hrs Client Info	<b>0</b>	0	0
Oil Age	hrs Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

**WEAR METALS**

method	limit/base	current	history1	history2
PQ	ASTM D8184*	<b>0</b>	8	0
Iron	ppm ASTM D5185(m) >20	<b>1</b>	<1	<1
Chromium	ppm ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm ASTM D5185(m) >10	<b>&lt;1</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>	<1	0
Lead	ppm ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Copper	ppm ASTM D5185(m) >20	<b>2</b>	2	2
Tin	ppm ASTM D5185(m) >10	<b>0</b>	0	0
Antimony	ppm ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm ASTM D5185(m)	<b>0</b>	0	0

**ADDITIVES**

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 0	<b>&lt;1</b>	<1	0
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) 135	<b>74</b>	73	74
Phosphorus	ppm ASTM D5185(m) 236	<b>357</b>	342	340
Zinc	ppm ASTM D5185(m) 317	<b>421</b>	405	380
Sulfur	ppm ASTM D5185(m) 561	<b>777</b>	750	750
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

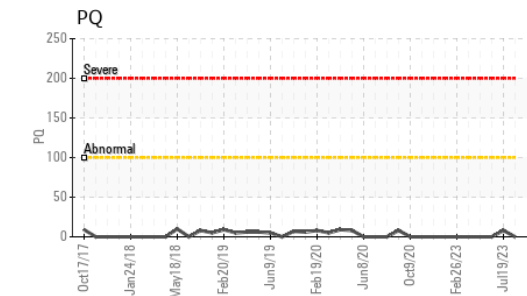
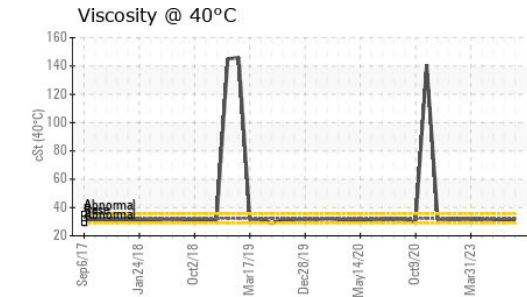
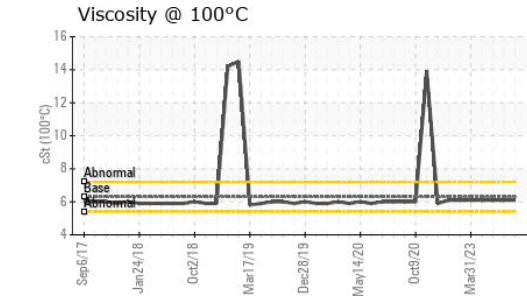
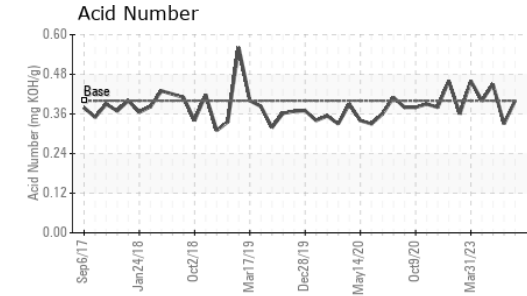
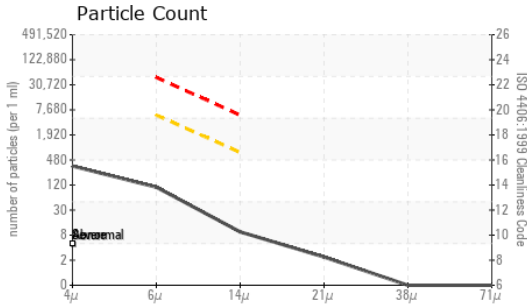
**CONTAMINANTS**

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	<b>&lt;1</b>	<1	0
Sodium	ppm ASTM D5185(m)	<b>0</b>	0	<1
Potassium	ppm ASTM D5185(m) >20	<b>&lt;1</b>	<1	0

**FLUID CLEANLINESS**

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	<b>302</b>	306	1317
Particles >6µm	ASTM D7647 >5000	<b>94</b>	99	254
Particles >14µm	ASTM D7647 >640	<b>8</b>	12	10
Particles >21µm	ASTM D7647 >160	<b>2</b>	3	3
Particles >38µm	ASTM D7647 >40	<b>0</b>	0	0
Particles >71µm	ASTM D7647 >10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >--/19/16	<b>15/14/10</b>	15/14/11	18/15/10

# OIL ANALYSIS REPORT

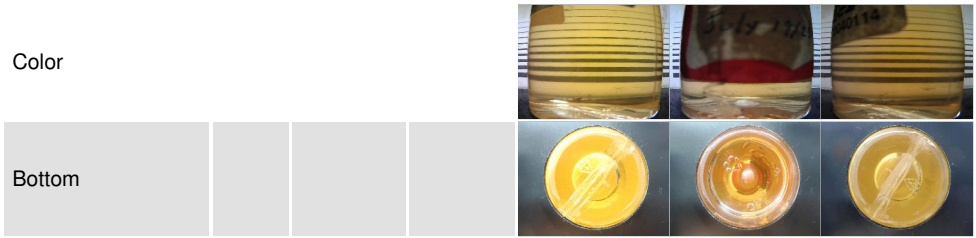


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	<b>0.40</b>	0.33	0.45

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	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
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32.25	<b>31.5</b>	31.5	31.5
Visc @ 100°C	cSt	ASTM D7279(m)	6.3	<b>6.1</b>	6.1	6.1
Viscosity Index (VI)	Scale	ASTM D2270*	148	<b>144</b>	144	144

## SAMPLE IMAGES



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC  
**Lab Number** : **02582126** **Received** : 13 Sep 2023  
**Unique Number** : 5643191 **Diagnosed** : 14 Sep 2023  
**Test Package** : MAR 2 ( Additional Tests: KV100, PQ, VI ) **Diagnostician** : Kevin Marson

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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