



# OIL ANALYSIS REPORT

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



Machine Id  
**12G02#02A**  
Component  
**Starboard Steering**  
Fluid  
**PETRO CANADA HYDREX MV 32 (550 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0839673</b>	WC0747557	WC0742534
Sample Date		Client Info		<b>07 Jun 2024</b>	12 Mar 2024	26 Jul 2023
Machine Age	hrs	Client Info		<b>16382</b>	15656	14374
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 Changd</b>	Not Changd	N/A
Filter Changed		Client Info		<b>None</b>	Not Changd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>60	<b>2</b>	2	2
Chromium	ppm	ASTM D5185(m)	>12	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>6	<b>&lt;1</b>	0	0
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)	>4	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>12	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>30	<b>4</b>	4	4
Tin	ppm	ASTM D5185(m)		<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

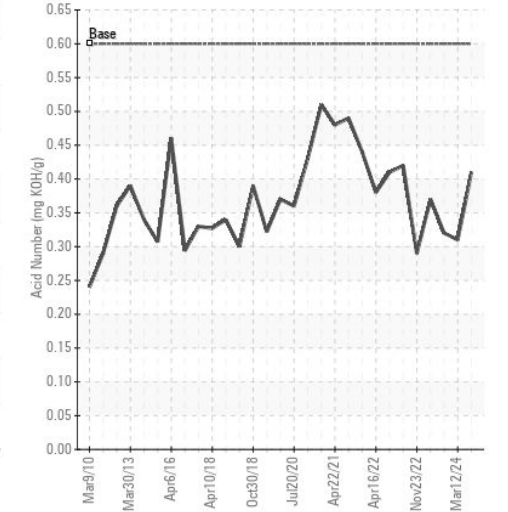
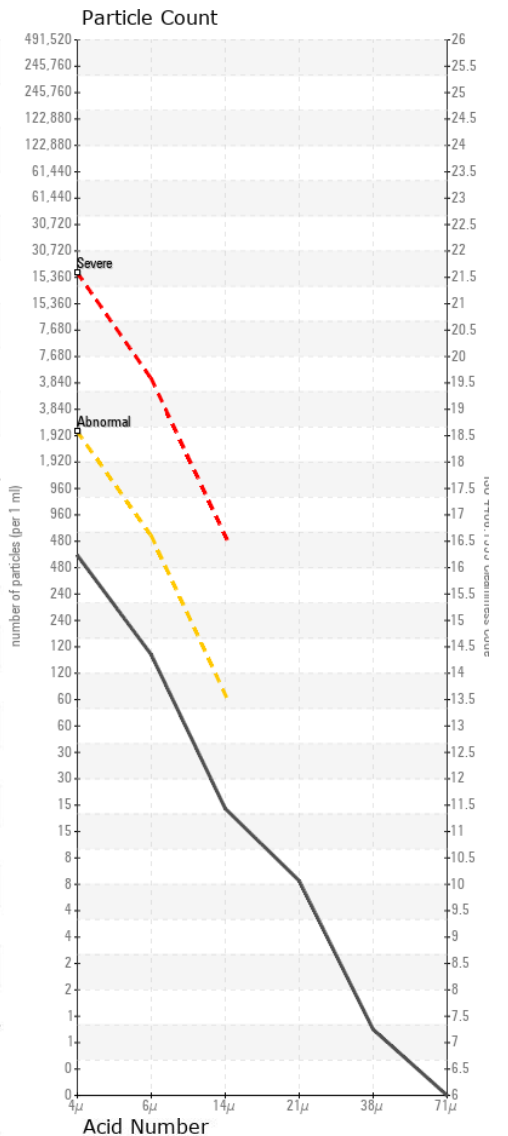
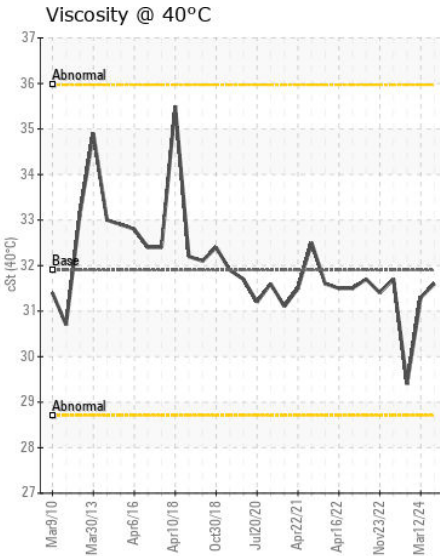
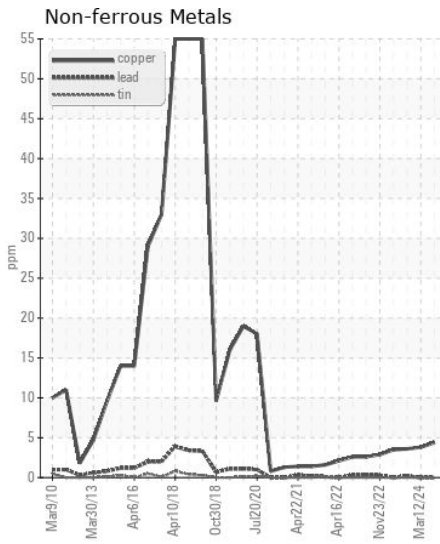
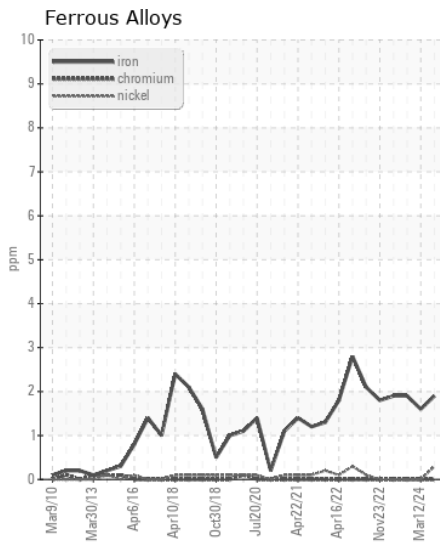
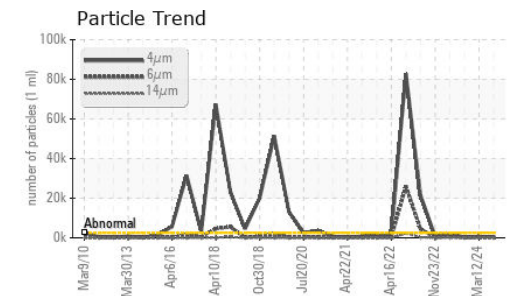
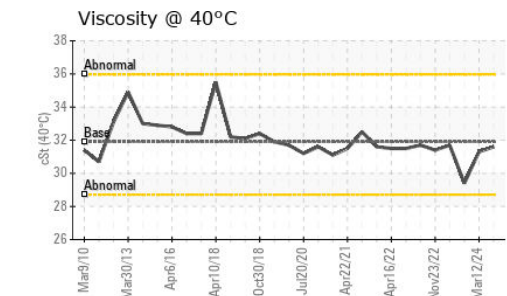
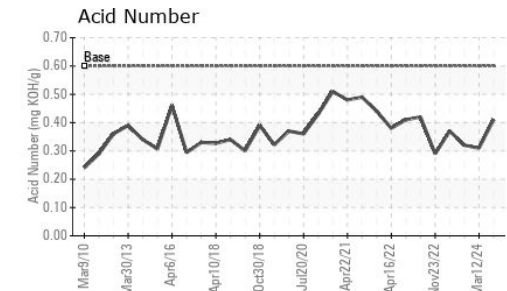
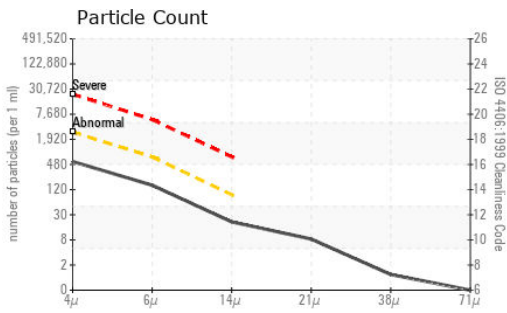
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>10	<b>3</b>	0	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Water		WC Method		<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>2500	<b>496</b>	664	393
Particles >6µm		ASTM D7647	>640	<b>135</b>	204	100
Particles >14µm		ASTM D7647	>80	<b>18</b>	24	14
Particles >21µm		ASTM D7647	>20	<b>7</b>	6	6
Particles >38µm		ASTM D7647	>4	<b>1</b>	1	1
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	<b>16/14/11</b>	17/15/12	16/14/11
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*		<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</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	0
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)	50	<b>53</b>	52	54
Phosphorus	ppm	ASTM D5185(m)	330	<b>318</b>	320	361
Zinc	ppm	ASTM D5185(m)	430	<b>403</b>	404	424
Sulfur	ppm	ASTM D5185(m)	760	<b>804</b>	782	824
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	<b>0.41</b>	0.31	0.32
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	<b>31.6</b>	31.3	29.4



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0839673  
**Lab Number** : 02642414  
**Unique Number** : 5799953  
**Test Package** : MAR 2 ( Additional Tests: TAN Man )

**Received** : 17 Jun 2024  
**Tested** : 18 Jun 2024  
**Diagnosed** : 18 Jun 2024 - Wes Davis

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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