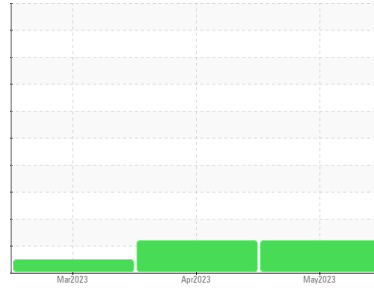




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**USACE - Old Hickory Power Plant**  
 Machine Id  
**Governor #4 Main Reservoir**  
 Component  
**Governor System**  
 Fluid  
**PETRO CANADA TURBOFLO R&O 68 (1500 GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

### 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>KFS0000421</b>	WC0542721	WC0391789
Sample Date	Client Info	<b>15 May 2023</b>	23 Apr 2023	21 Mar 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	Filtered	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.1	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >50	<b>&lt;1</b>	0	1
Chromium	ppm ASTM D5185m >10	<b>0</b>	0	0
Nickel	ppm ASTM D5185m >10	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >3	<b>1</b>	0	<1
Lead	ppm ASTM D5185m >75	<b>1</b>	0	4
Copper	ppm ASTM D5185m >15	<b>2</b>	0	<1
Tin	ppm ASTM D5185m >55	<b>0</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	<b>0</b>	0	0
Barium	ppm ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m	<b>0</b>	0	<1
Manganese	ppm ASTM D5185m	<b>0</b>	<1	0
Magnesium	ppm ASTM D5185m	<b>0</b>	0	<1
Calcium	ppm ASTM D5185m 0	<b>4</b>	0	22
Phosphorus	ppm ASTM D5185m 4	<b>34</b>	30	11
Zinc	ppm ASTM D5185m 0	<b>13</b>	0	5
Sulfur	ppm ASTM D5185m	<b>244</b>	27	386

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >8	<b>0</b>	0	0
Sodium	ppm ASTM D5185m	<b>0</b>	0	0
Potassium	ppm ASTM D5185m >20	<b>0</b>	0	0

## FLUID CLEANLINESS

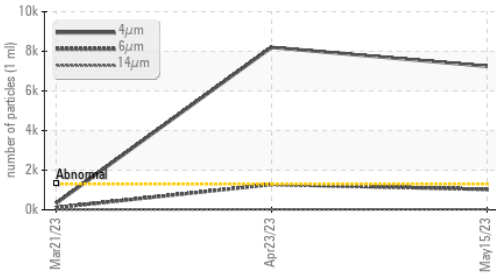
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >1300	<b>▲ 7243</b>	▲ 8201	322
Particles >6µm	ASTM D7647 >320	<b>▲ 1031</b>	▲ 1281	113
Particles >14µm	ASTM D7647 >40	<b>26</b>	21	10
Particles >21µm	ASTM D7647 >10	<b>5</b>	2	3
Particles >38µm	ASTM D7647 >3	<b>0</b>	0	1
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >17/15/12	<b>▲ 20/17/12</b>	▲ 20/17/12	16/14/10

## FLUID DEGRADATION

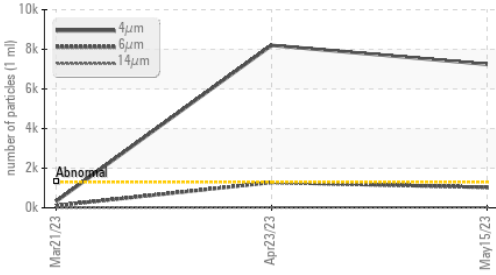
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045 0.11	<b>0.10</b>	0.09	0.09

# OIL ANALYSIS REPORT

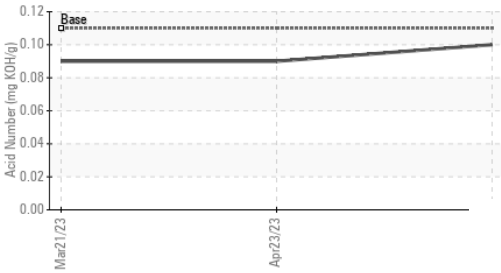
### ▲ Particle Trend



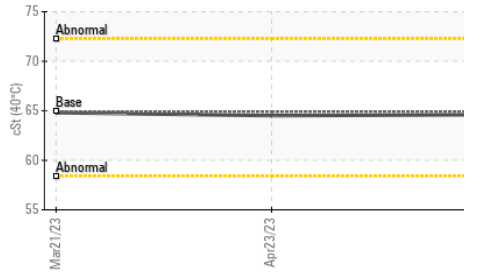
### ▲ Particle Trend



### Acid Number



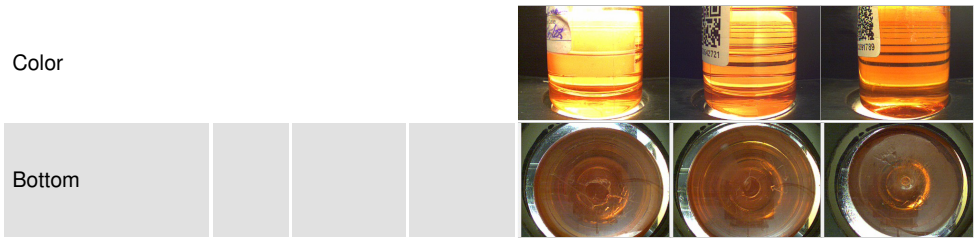
### Viscosity @ 40°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

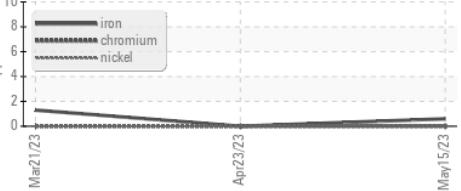
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	64.9	<b>64.6</b>	64.5	64.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
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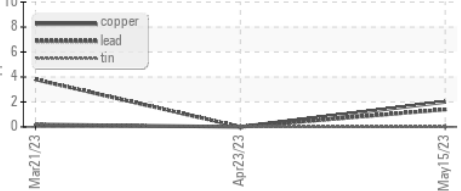


### GRAPHS

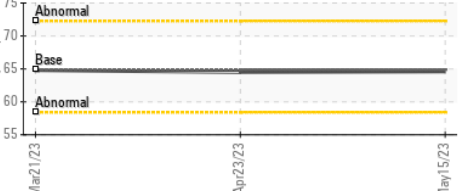
#### Ferrous Alloys



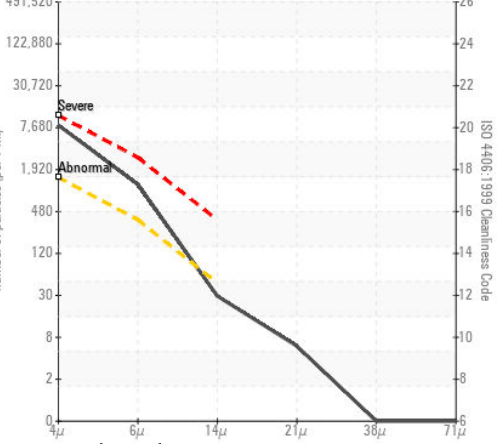
#### Non-ferrous Metals



#### Viscosity @ 40°C



#### ▲ Particle Count



#### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KFS0000421 **Received** : 17 May 2023  
**Lab Number** : 05849634 **Diagnosed** : 19 May 2023  
**Unique Number** : 10473741 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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