

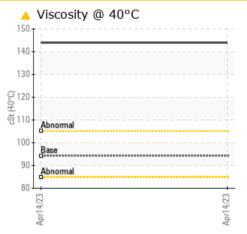
## **PROBLEM SUMMARY**

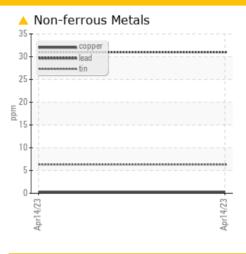
#### Area **Propulsion Shaft Bearings** Machine dd **Propulsion Shaft Bearings Port** Component

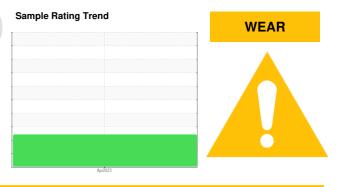
Front Left Bearing

PETRO CANADA TURBOFLO R&O 100 (--- GAL)

### COMPONENT CONDITION SUMMARY







Additives

#### RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA TURBOFLO R&O 100, however, a fluid match indicates that this fluid is ISO 150 Synthetic (PAO) Gear Oil. Please confirm the oil type and grade on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL				
Lead	ppm	ASTM D5185(m)	>25	<b>A</b> 31				
Boron	ppm	ASTM D5185(m)		<b>4</b> 0				
Phosphorus	ppm	ASTM D5185(m)	4	<u> </u>				
Sulfur	ppm	ASTM D5185(m)		<b>A</b> 3492				
Visc @ 40°C	cSt	ASTM D7279(m)	94.3	<u> </u>				

Customer Id: VMASSEY Sample No.: WC0810868 Lab Number: 02552961 Test Package: MAR 1



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RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Alert	MISSED	Aug 16 2023	?	The fluid was specified as PETRO CANADA TURBOFLO R&O 100, however, a fluid match indicates that this fluid is ISO 150 Synthetic (PAO) Gear Oil. Please confirm the oil type and grade on your next sample.			
Information Required	MISSED	Aug 16 2023	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.			
Check Fluid Source	MISSED	Aug 16 2023	?	Confirm the source of the lubricant being utilized for top-up/fill.			

HISTORICAL DIAGNOSIS



## **OIL ANALYSIS REPORT**

Sample Number

hrs

hrs

Sample Date

Machine Age

Oil Changed

Sample Status

WEAR METALS

Oil Age

Propulsion Shaft Bearings **Propulsion Shaft Bearings Port** Compo

Front Left Bearing

PETRO CANADA TURBOFLO R&O 100 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA TURBOFLO R&O 100, however, a fluid match indicates that this fluid is ISO 150 Synthetic (PAO) Gear Oil. Please confirm the oil type and grade on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

#### A Wear

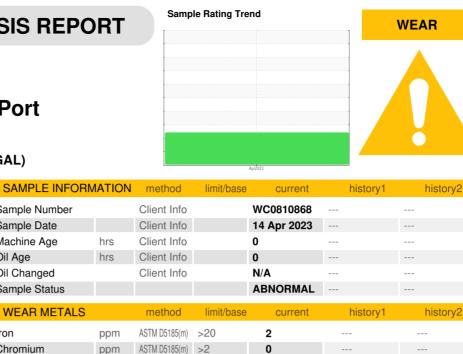
Lead ppm levels are noted. All other component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

Viscosity of sample indicates oil is within ISO 150 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.



Iron	ppm	ASTM D5185(m)	>20	2	 
Chromium	ppm	ASTM D5185(m)	>2	0	 
Nickel	ppm	ASTM D5185(m)	>2	0	 
Titanium	ppm	ASTM D5185(m)		0	 
Silver	ppm	ASTM D5185(m)		0	 
Aluminum	ppm	ASTM D5185(m)	>5	<1	 
Lead	ppm	ASTM D5185(m)	>25	<b>4</b> 31	 
Copper	ppm	ASTM D5185(m)	>5	<1	 
Tin	ppm	ASTM D5185(m)	>15	6	 
Antimony	ppm	ASTM D5185(m)		6	 
Vanadium	ppm	ASTM D5185(m)		0	 
Beryllium	ppm	ASTM D5185(m)		0	 
Cadmium	ppm	ASTM D5185(m)		1	 

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>4</b> 0		
Barium	ppm	ASTM D5185(m)		0		
Molybdenum	ppm	ASTM D5185(m)		0		
Manganese	ppm	ASTM D5185(m)		0		
Magnesium	ppm	ASTM D5185(m)		<1		
Calcium	ppm	ASTM D5185(m)	0	13		
Phosphorus	ppm	ASTM D5185(m)	4	🔺 244		
Zinc	ppm	ASTM D5185(m)	0	14		
Sulfur	ppm	ASTM D5185(m)		<b>A</b> 3492		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS		method	limit/base	current	history1	history2

	-				,	,
Silicon	ppm	ASTM D5185(m)	>15	7		
Sodium	ppm	ASTM D5185(m)		2		
Potassium	ppm	ASTM D5185(m)	>20	<1		

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

Report Id: VMASSEY [WCAMIS] 02552961 (Generated: 11/09/2023 07:26:25) Rev: 1

Submitted By: Vincent Massey



# **OIL ANALYSIS REPORT**

