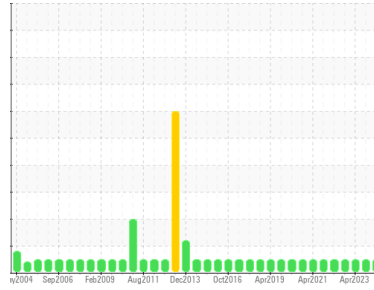




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**[22192071]**

Machine Id  
**161-120**

Component  
**Hydraulic System**

Fluid  
**ESSO NUTO H ISO 46 (320 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>WC0870424</b>	WC0870417	WC0782463
Sample Date	Client Info		<b>12 Apr 2024</b>	24 Oct 2023	24 Apr 2023
Machine Age	mths	Client Info	<b>0</b>	0	0
Oil Age	mths	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

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.05	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >30	<b>11</b>	12	11
Chromium	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m) >10	<b>0</b>	1	<1
Copper	ppm	ASTM D5185(m) >25	<b>4</b>	5	4
Tin	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
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	<1
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m) 5	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185(m) 50	<b>34</b>	38	39
Phosphorus	ppm	ASTM D5185(m) 330	<b>326</b>	370	372
Zinc	ppm	ASTM D5185(m) 410	<b>332</b>	377	356
Sulfur	ppm	ASTM D5185(m) 2700	<b>4968</b>	5540	5198
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

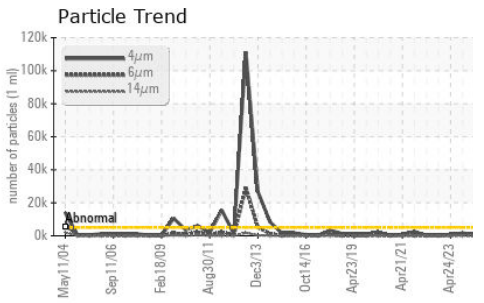
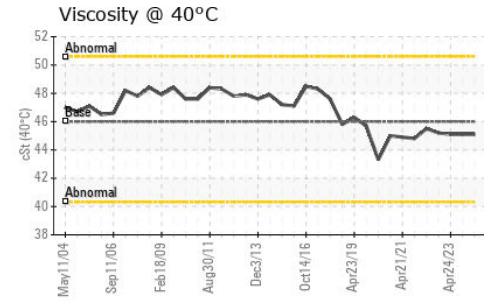
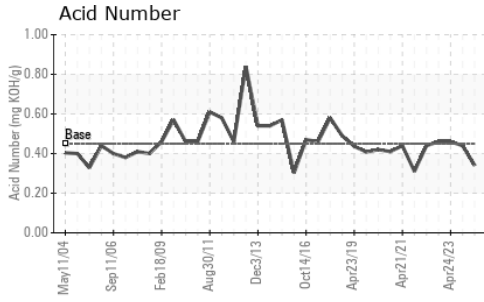
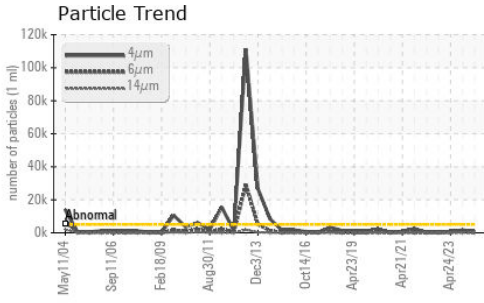
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>0</b>	<1	<1
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	0
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	0	0

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>846</b>	1655	835
Particles >6µm	ASTM D7647	>1300	<b>263</b>	711	313
Particles >14µm	ASTM D7647	>160	<b>20</b>	104	50
Particles >21µm	ASTM D7647	>40	<b>5</b>	33	19
Particles >38µm	ASTM D7647	>10	<b>0</b>	3	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>17/15/11</b>	18/17/14	17/15/13



# OIL ANALYSIS REPORT

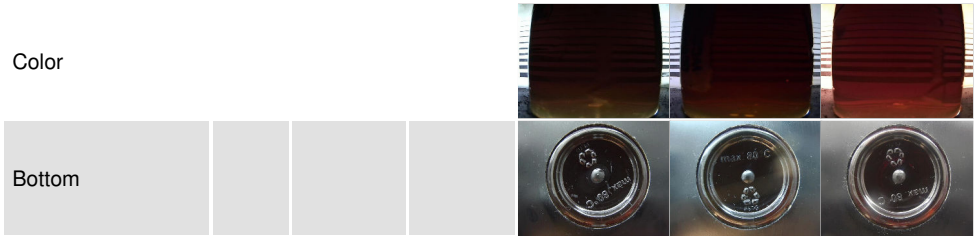


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.45	<b>0.34</b>	0.44	0.46

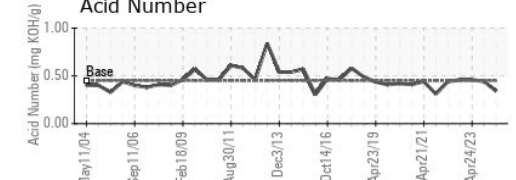
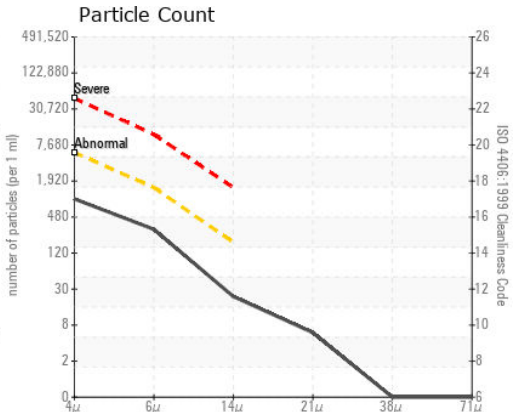
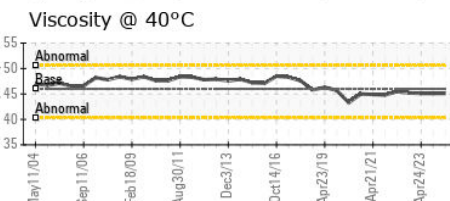
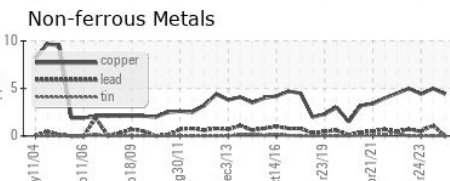
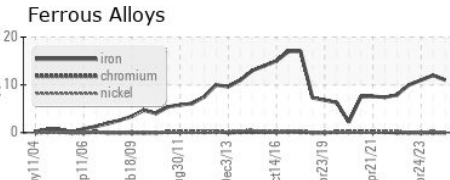
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>VLITE</b>	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)	46	<b>45.1</b>	45.1	45.1

## SAMPLE IMAGES



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0870424 **Received** : 19 Apr 2024  
**Lab Number** : 02630231 **Tested** : 22 Apr 2024  
**Unique Number** : 5763363 **Diagnosed** : 22 Apr 2024 - Wes Davis  
**Test Package** : IND 2

**ARAUCO - St. Stephen**  
 151 Church Street  
 St. Stephen, NB  
 CA E3L 3A6  
 Contact: Jim Sears  
 Jim.Sears@arauco.com  
 T: (506)465-2858  
 F: (506)465-2831

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.