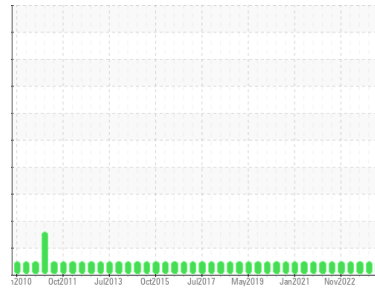




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

[22171648]

Machine Id

**139-201A TRUCK DUMPER #2**

Component

**Hydraulic System**

Fluid

**ESSO NUTO H ISO32 (1400 GAL)**

## 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>WC0900442</b>	WC0870405	WC0840188
Sample Date	Client Info	<b>02 Apr 2024</b>	07 Dec 2023	03 Aug 2023
Machine Age	mths	Client Info	<b>0</b>	0
Oil Age	mths	Client Info	<b>0</b>	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	<b>&gt;0.05</b>	<b>NEG</b>	NEG

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0
Nickel	ppm	ASTM D5185(m)	>20	<b>0</b>	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>0</b>	0
Lead	ppm	ASTM D5185(m)	>20	<b>2</b>	3
Copper	ppm	ASTM D5185(m)	>20	<b>18</b>	18
Tin	ppm	ASTM D5185(m)	>20	<b>0</b>	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0
Magnesium	ppm	ASTM D5185(m)		<b>1</b>	<1
Calcium	ppm	ASTM D5185(m)		<b>53</b>	52
Phosphorus	ppm	ASTM D5185(m)		<b>291</b>	284
Zinc	ppm	ASTM D5185(m)		<b>347</b>	345
Sulfur	ppm	ASTM D5185(m)		<b>2366</b>	2312
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	<b>0</b>	<1
Sodium	ppm	ASTM D5185(m)		<b>2</b>	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0

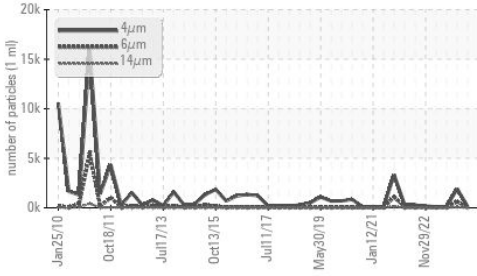
## FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647			<b>121</b>	1921
Particles >6µm	ASTM D7647	>1300		<b>27</b>	626
Particles >14µm	ASTM D7647	>160		<b>4</b>	65
Particles >21µm	ASTM D7647	>40		<b>1</b>	23
Particles >38µm	ASTM D7647	>10		<b>1</b>	3
Particles >71µm	ASTM D7647	>3		<b>0</b>	1
Oil Cleanliness	ISO 4406 (c)	>--/17/14		<b>14/12/9</b>	18/16/13

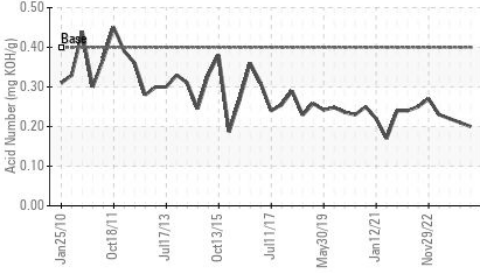


# OIL ANALYSIS REPORT

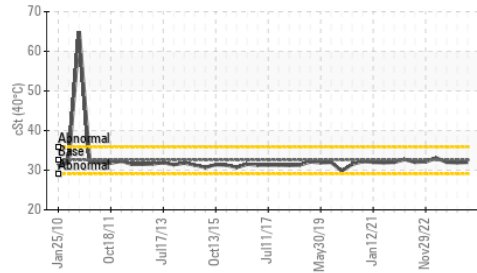
Particle Trend



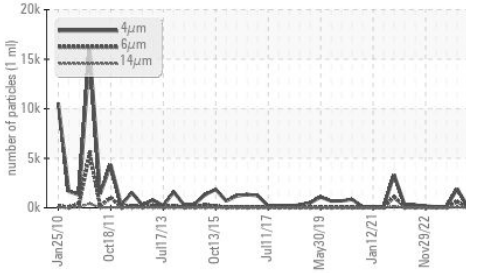
Acid Number



Viscosity @ 40°C



Particle Trend



**FLUID DEGRADATION**    method    limit/base    current    history1    history2

Acid Number (AN)    mg KOH/g    ASTM D974\*    .40    **0.20**    0.21    0.22

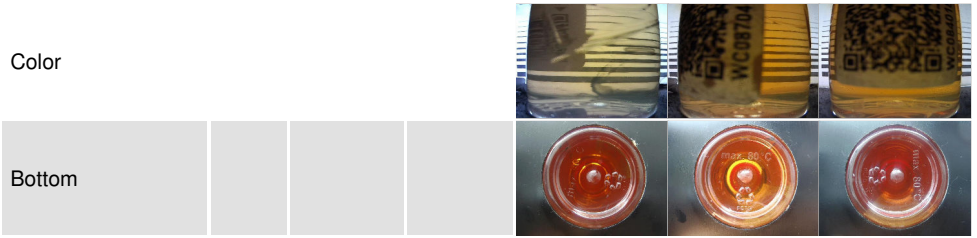
**VISUAL**    method    limit/base    current    history1    history2

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

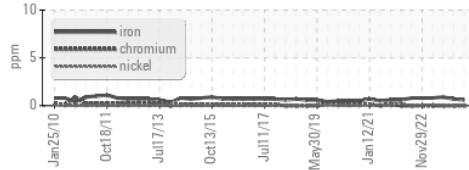
Visc @ 40°C    cSt    ASTM D7279(m)    32.6    **32.0**    31.9    32.0

**SAMPLE IMAGES**    method    limit/base    current    history1    history2

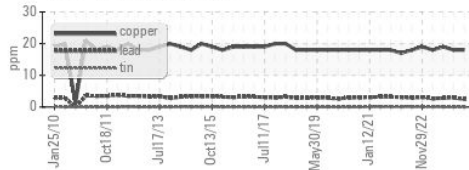


**GRAPHS**

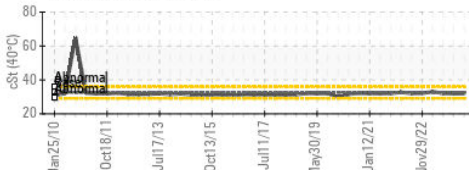
Ferrous Alloys



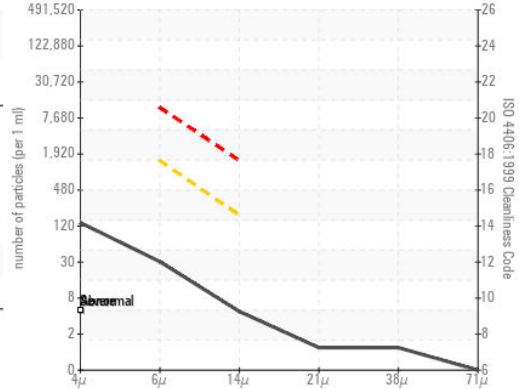
Non-ferrous Metals



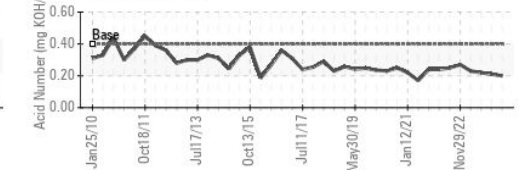
Viscosity @ 40°C



Particle Count



Acid Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0900442    **Received** : 10 Apr 2024  
**Lab Number** : **02627883**    **Tested** : 11 Apr 2024  
**Unique Number** : 5761015    **Diagnosed** : 11 Apr 2024 - Wes Davis  
**Test Package** : IND 2

**ARAUCO - St. Stephen**  
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 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.