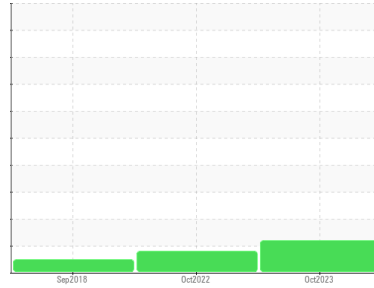




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**FREIGHTLINER 2442**  
 Component  
**Hydraulic System**  
 Fluid  
**PROGARD ARCTIC AW 15 (40 GAL)**

## DIAGNOSIS

### Recommendation

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a light 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>RW0004880</b>	RW0003974	RWM2320004	
Sample Date	Client Info	<b>27 Oct 2023</b>	24 Oct 2022	25 Sep 2018	
Machine Age	hrs	Client Info	<b>5362</b>	4540	1230
Oil Age	hrs	Client Info	<b>0</b>	1800	1230
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Changed	
Sample Status		<b>ATTENTION</b>	ATTENTION	NORMAL	

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >40	<b>0</b>	<1	1
Chromium	ppm	ASTM D5185m >5	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >8	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185m >5	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >20	<b>2</b>	3	2
Tin	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m >2	<b>---</b>	---	0
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	<1
Barium	ppm	ASTM D5185m	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	<b>0</b>	4	2
Calcium	ppm	ASTM D5185m	<b>147</b>	76	47
Phosphorus	ppm	ASTM D5185m	<b>373</b>	387	345
Zinc	ppm	ASTM D5185m	<b>424</b>	442	426
Sulfur	ppm	ASTM D5185m	<b>899</b>	1162	756

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	3
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	1	<1

## FLUID CLEANLINESS

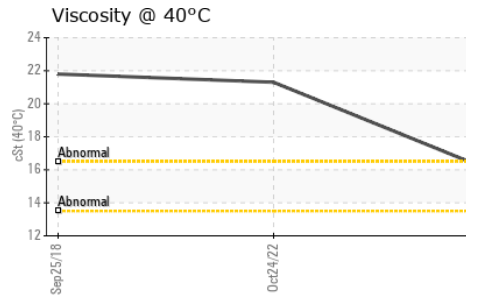
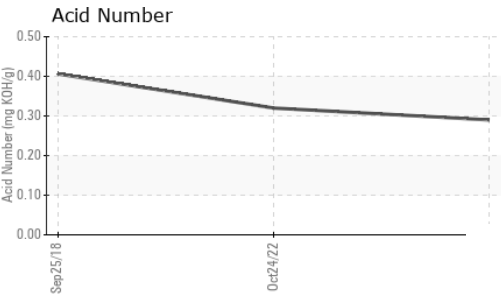
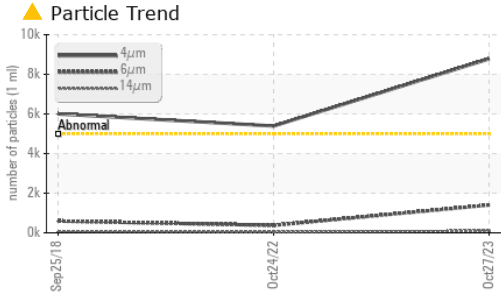
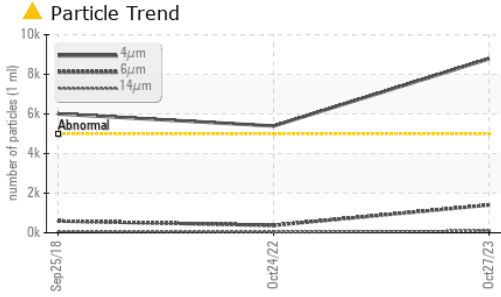
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>▲ 8783</b>	▲ 5391	6002
Particles >6µm	ASTM D7647 >1300	<b>▲ 1402</b>	376	593
Particles >14µm	ASTM D7647 >160	<b>100</b>	38	80
Particles >21µm	ASTM D7647 >40	<b>19</b>	9	22
Particles >38µm	ASTM D7647 >10	<b>1</b>	1	2
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>▲ 20/18/14</b>	▲ 20/16/12	20/16/13

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.29</b>	0.32	0.406



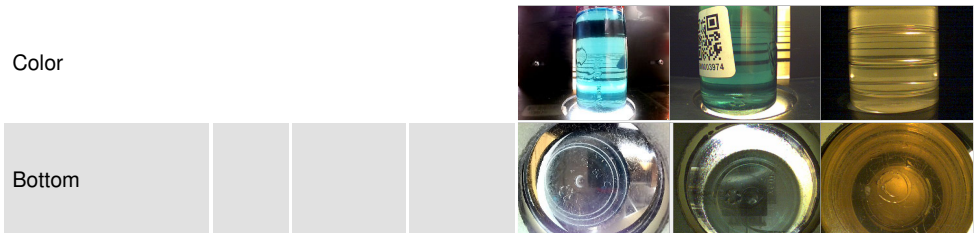
# OIL ANALYSIS REPORT



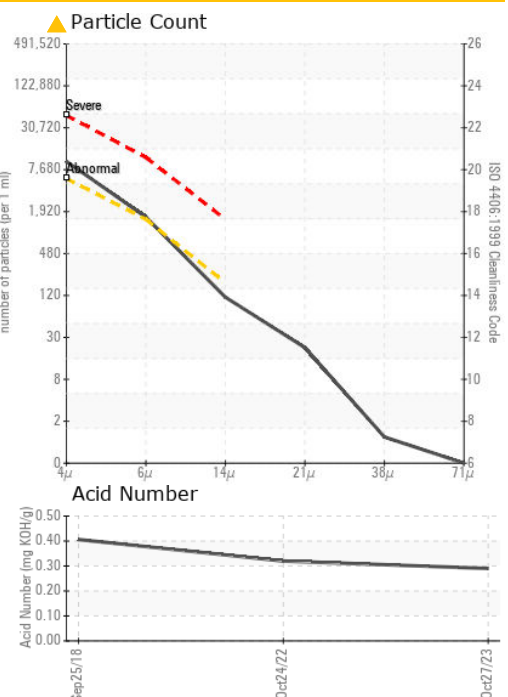
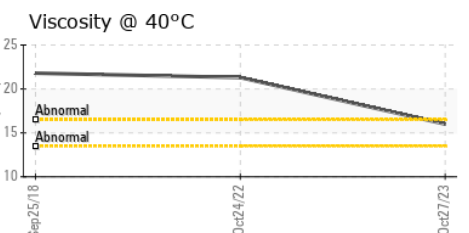
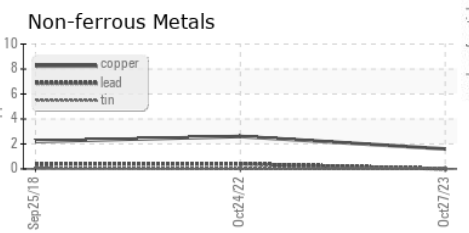
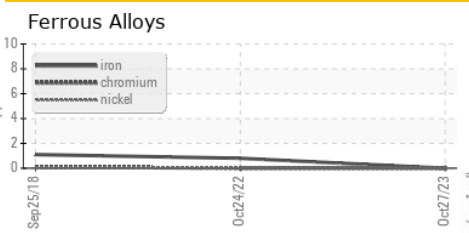
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	16.0	21.3	21.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RW0004880 **Received** : 06 Nov 2023  
**Lab Number** : 05998998 **Diagnosed** : 07 Nov 2023  
**Unique Number** : 10727358 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2

**NEWKIRK ELECTRIC**  
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 US 49442  
 Contact: ERIC KING  
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 T: (231)206-6131  
 F: (231)724-4090

Certificate L2367  
 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)