



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**FREIGHTLINER 2511**  
Component  
**Hydraulic System**  
Fluid  
**PROGARD ARCTIC AW 15 (48 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RW0004927</b>	RW0002094	RW0000320
Sample Date		Client Info		<b>19 Jan 2024</b>	12 Feb 2021	13 Aug 2019
Machine Age	hrs	Client Info		<b>5245</b>	0	9
Oil Age	hrs	Client Info		<b>0</b>	1	1
Filter Age	hrs	Client Info		<b>0</b>	1	1
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>40	<b>&lt;1</b>	1	2
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
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>4</b>	6	7
Tin	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

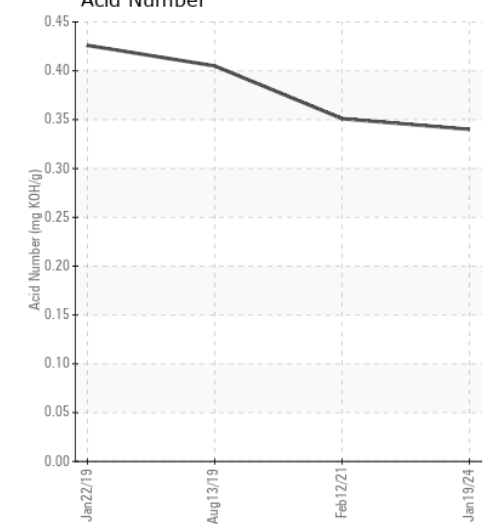
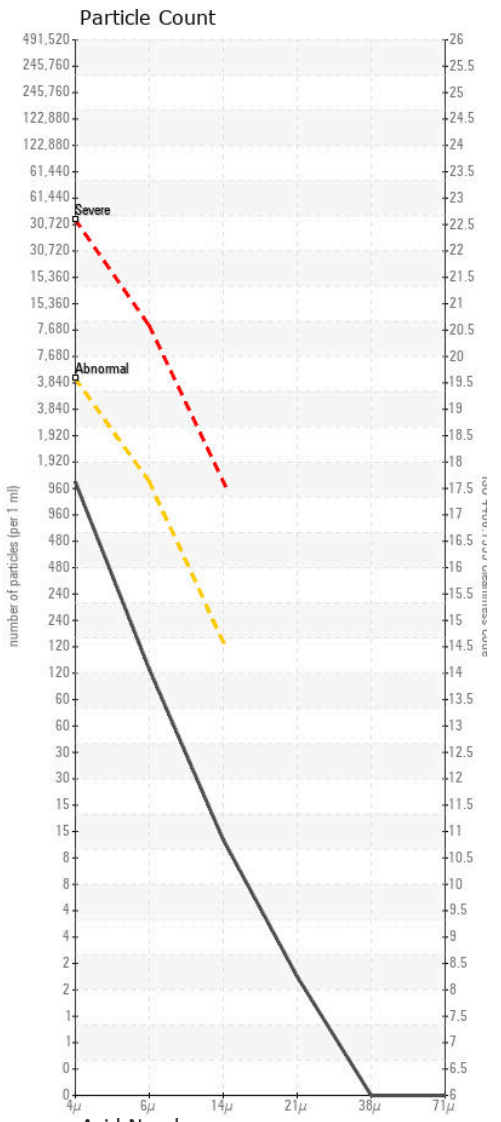
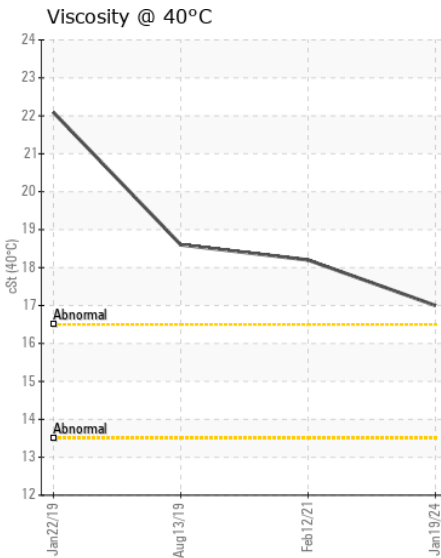
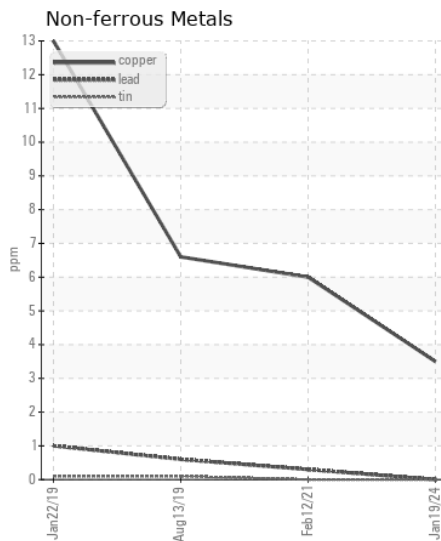
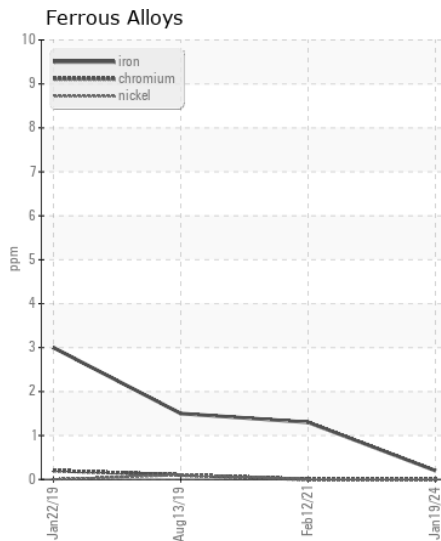
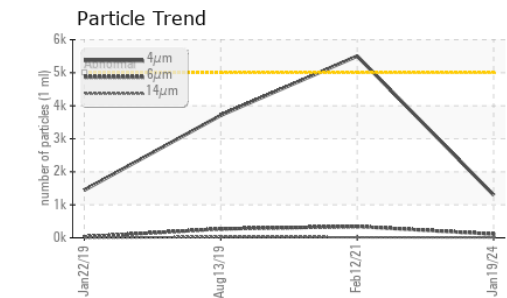
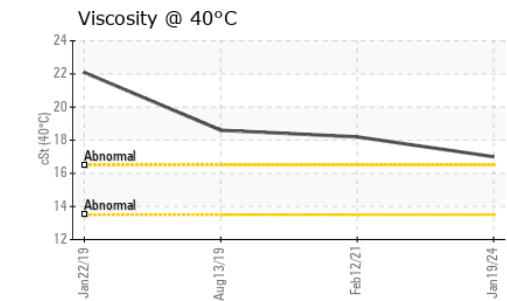
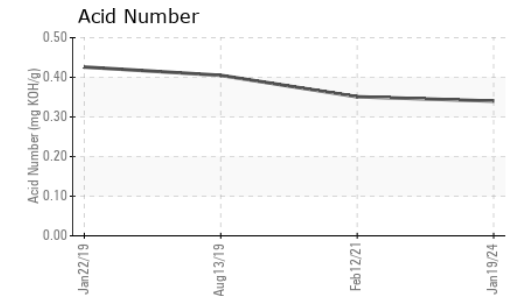
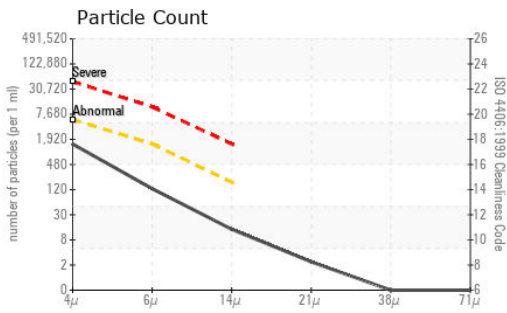
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>1296</b>	▲ 5504	3709
Particles >6µm		ASTM D7647	>1300	<b>112</b>	343	271
Particles >14µm		ASTM D7647	>160	<b>12</b>	16	24
Particles >21µm		ASTM D7647	>40	<b>2</b>	6	7
Particles >38µm		ASTM D7647	>10	<b>0</b>	1	2
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>17/14/11</b>	▲ 20/16/11	19/15/12
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	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>0</b>	0	<1
Calcium	ppm	ASTM D5185m		<b>59</b>	37	45
Phosphorus	ppm	ASTM D5185m		<b>328</b>	322	366
Zinc	ppm	ASTM D5185m		<b>384</b>	361	434
Sulfur	ppm	ASTM D5185m		<b>1052</b>	835	1029
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.34</b>	0.351	0.405
Visc @ 40°C	cSt	ASTM D445		<b>17.0</b>	18.2	18.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : RW0004927

Lab Number : 06084773

Unique Number : 10872218

Test Package : MOB 2

Received : 09 Feb 2024

Tested : 12 Feb 2024

Diagnosed : 12 Feb 2024 - Doug Bogart

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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)