



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 2513

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 15 (80 GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RW0004925	RW0001086	RWM2306980
Sample Date		Client Info		18 Jan 2024	22 Sep 2020	10 Jan 2019
Machine Age	hrs	Client Info		5310	4154	3077
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>40	2	2	5
Chromium	ppm	ASTM D5185m	>5	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	1
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>8	0	0	<1
Lead	ppm	ASTM D5185m	>5	0	2	1
Copper	ppm	ASTM D5185m	>20	3	5	6
Tin	ppm	ASTM D5185m	>2	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

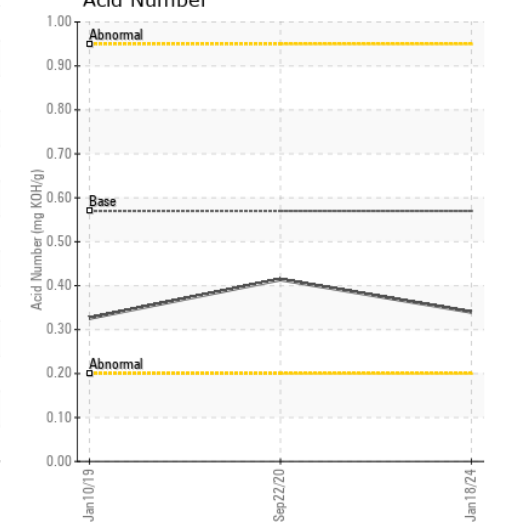
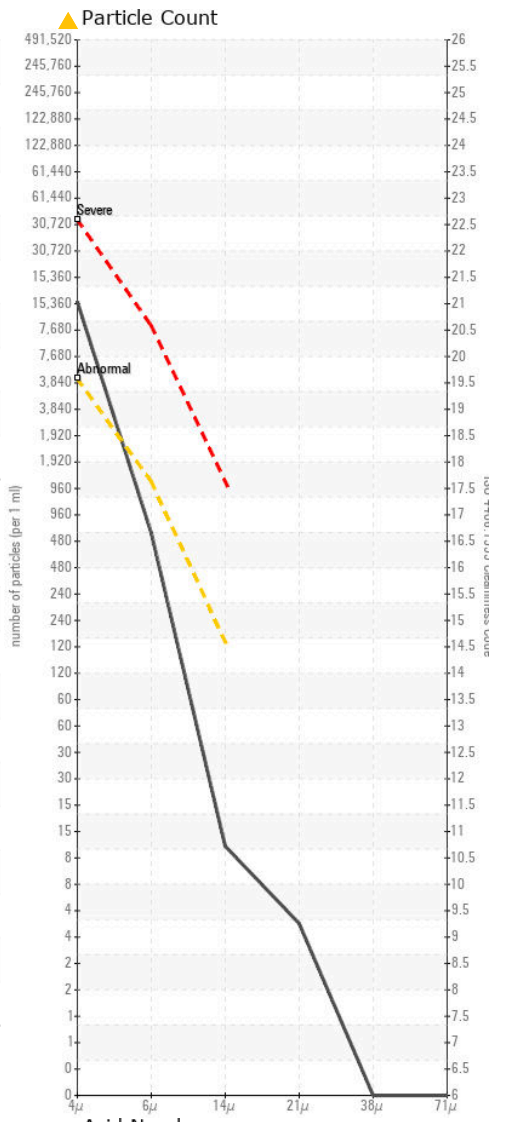
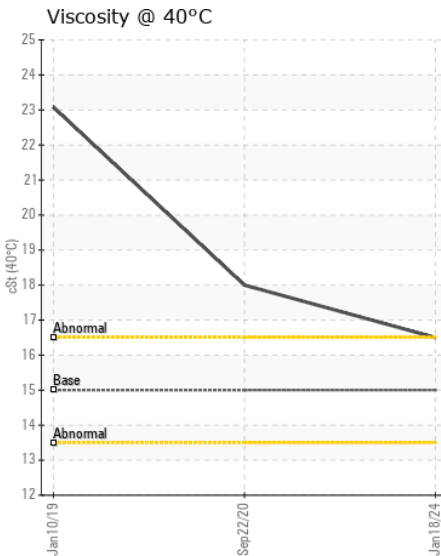
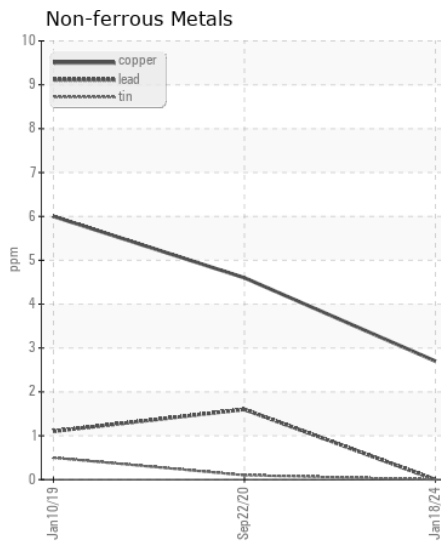
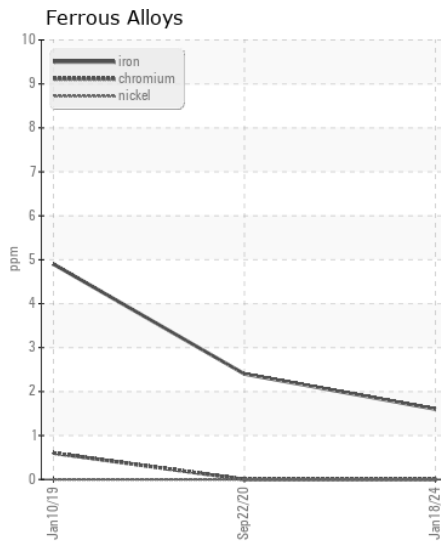
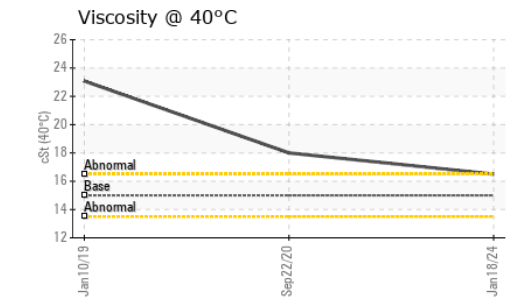
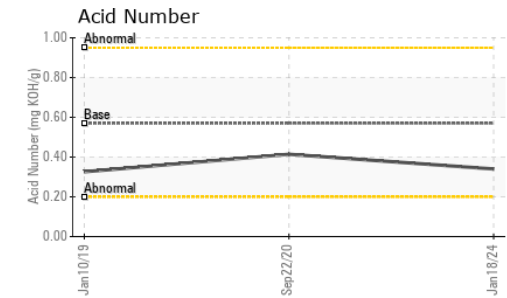
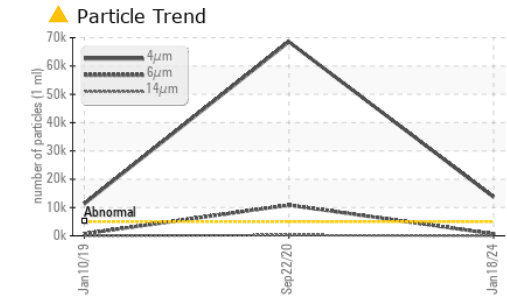
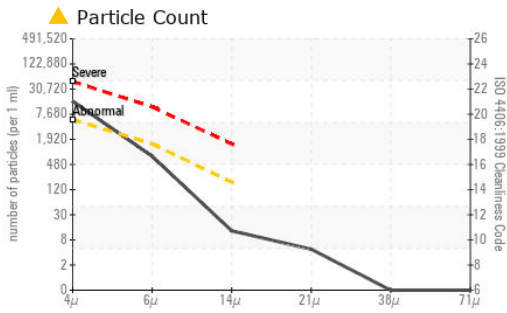
There is a high amount of silt (particulates < 6 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	0	0	<1
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 13702	▲ 68536	▲ 11309
Particles >6µm		ASTM D7647	>1300	664	▲ 10843	706
Particles >14µm		ASTM D7647	>160	11	▲ 247	7
Particles >21µm		ASTM D7647	>40	4	▲ 42	2
Particles >38µm		ASTM D7647	>10	0	1	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/17/11	▲ 23/21/15	▲ 21/17/10
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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		1	1	<1
Boron	ppm	ASTM D5185m	5	0	<1	2
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	0	<1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	25	0	<1	1
Calcium	ppm	ASTM D5185m	200	45	42	79
Phosphorus	ppm	ASTM D5185m	300	295	315	320
Zinc	ppm	ASTM D5185m	370	381	368	387
Sulfur	ppm	ASTM D5185m	2500	808	686	984
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.34	0.414	0.326
Visc @ 40°C	cSt	ASTM D445	15	16.5	18.0	23.08



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0004925 **Received** : 09 Feb 2024
Lab Number : 06084777 **Tested** : 12 Feb 2024
Unique Number : 10872222 **Diagnosed** : 12 Feb 2024 - Doug Bogart
Test Package : MOB 2

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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)