OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
FREIGHTLINER 9353
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (24 QTS)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

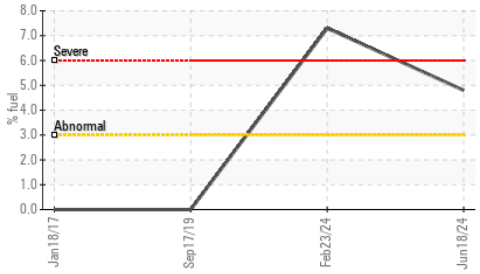
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

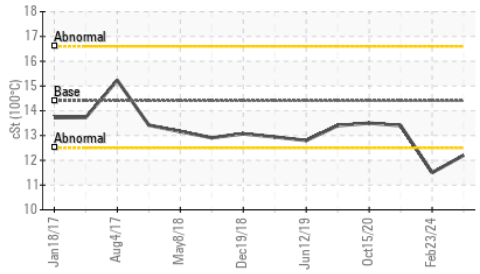
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0936728	WC0904413	WC0651792
Sample Date		Client Info		18 Jun 2024	23 Feb 2024	30 Mar 2022
Machine Age	mls	Client Info		233140	224306	530534
Oil Age	mls	Client Info		0	10000	25000
Filter Age	mls	Client Info		0	10000	25000
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL
Iron	ppm	ASTM D5185m	>90	17	33	7
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	6	10	2
Lead	ppm	ASTM D5185m	>50	0	0	1
Copper	ppm	ASTM D5185m	>55	1	0	<1
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>15	8	6	4
Potassium	ppm	ASTM D5185m	>20	5	5	0
Fuel	%	ASTM D3524	>3.0	▲ 4.8	▲ 7.3	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.5	0.7	0.3
Nitration	Abs/cm	*ASTM D7624	>20	11.1	12.7	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.0	23.9	21.7
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	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>44	2	0	1
Boron	ppm	ASTM D5185m	250	133	10	5
Barium	ppm	ASTM D5185m	10	0	1	0
Molybdenum	ppm	ASTM D5185m	100	104	68	55
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	635	894	970
Calcium	ppm	ASTM D5185m	3000	1402	992	1123
Phosphorus	ppm	ASTM D5185m	1150	834	963	1004
Zinc	ppm	ASTM D5185m	1350	1027	1169	1200
Sulfur	ppm	ASTM D5185m	4250	3157	2615	2621
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.0	23.2	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.3	6.4	10
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 12.2	▲ 11.5	13.4

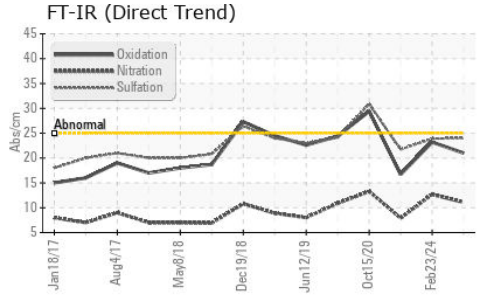
Fuel Dilution



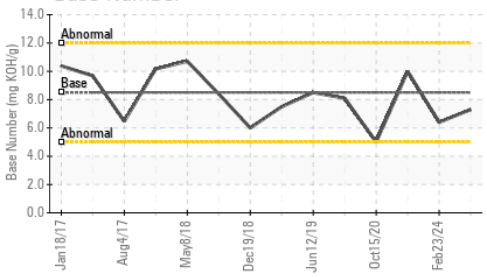
Viscosity @ 100°C



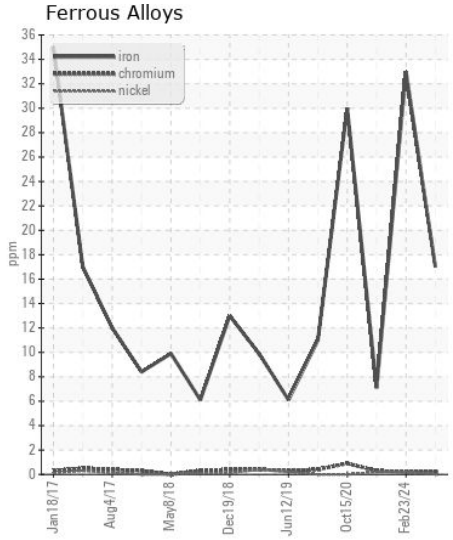
FT-IR (Direct Trend)



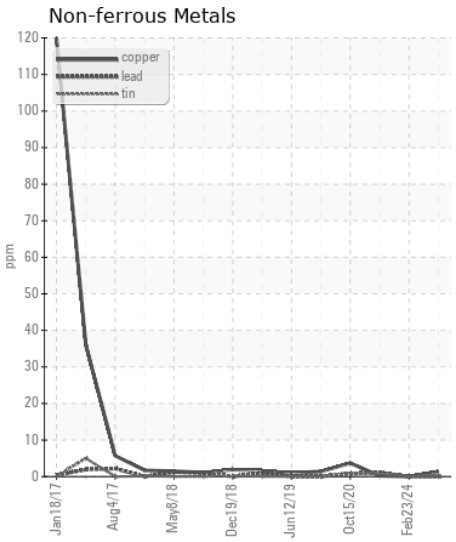
Base Number



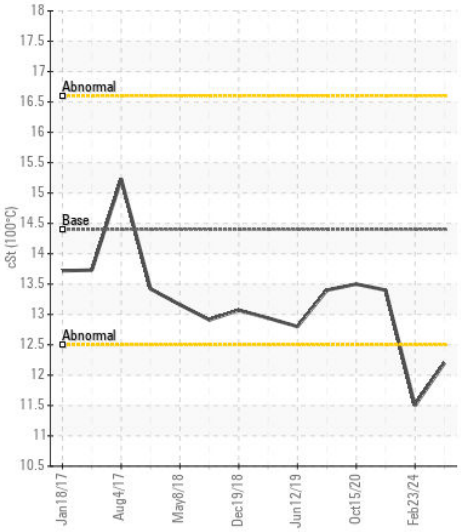
Ferrous Alloys



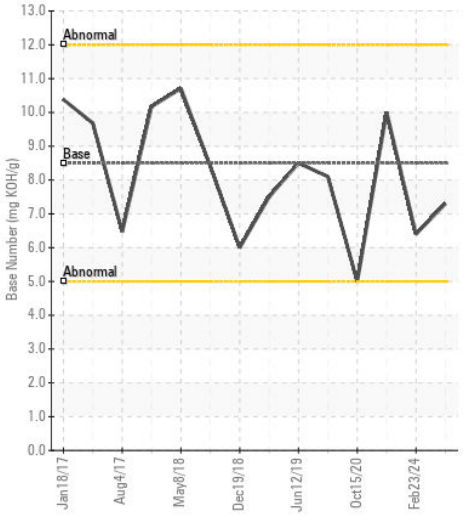
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0936728
Lab Number : 06220539
Unique Number : 11098736
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 25 Jun 2024
Tested : 27 Jun 2024
Diagnosed : 27 Jun 2024 - Wes Davis

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)

SALEM NATIONALEASE CORPORATION
198 PARK PLAZA DRIVE
WINSTON SALEM, NC
US 27105
Contact: Audrey Hopkins
Audrey.Hopkins@salemcorp.com
T: (336)767-9642
F: x: