OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
FREIGHTLINER 45374
Component
Diesel Engine
Fluid
MOBIL 15W40 (28 QTS)

RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

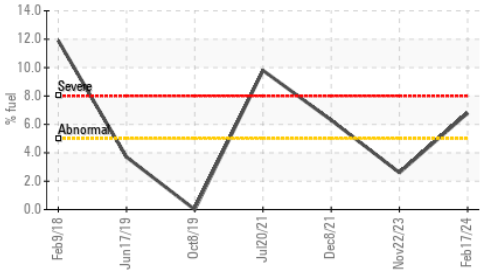
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

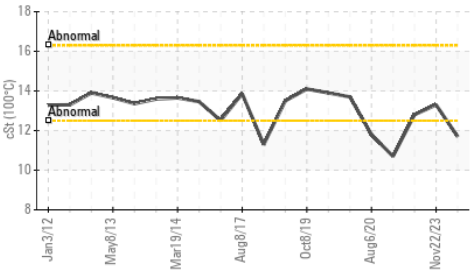
Molybdenum ppm levels are abnormally high. Visc @ 100°C is abnormally low. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0904373	WC0882309	WC0634807
Sample Date		Client Info		17 Feb 2024	22 Nov 2023	08 Dec 2021
Machine Age	mls	Client Info		314795	304035	238389
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>80	44	▲ 117	44
Chromium	ppm	ASTM D5185m	>5	1	2	2
Nickel	ppm	ASTM D5185m	>2	<1	1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	4	3
Lead	ppm	ASTM D5185m	>30	1	0	<1
Copper	ppm	ASTM D5185m	>150	<1	2	<1
Tin	ppm	ASTM D5185m	>5	0	0	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	7	10	8
Potassium	ppm	ASTM D5185m	>20	4	5	3
Fuel	%	ASTM D3524	>5	▲ 6.8	▲ 2.6	▲ 6.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.8	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.7	12.5	12
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.4	25.9	23.5
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	>118	2	<1	<1
Boron	ppm	ASTM D5185m		189	4	4
Barium	ppm	ASTM D5185m		0	5	0
Molybdenum	ppm	ASTM D5185m		▲ 108	80	50
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		720	1015	832
Calcium	ppm	ASTM D5185m		1561	1203	▲ 952
Phosphorus	ppm	ASTM D5185m		780	1085	854
Zinc	ppm	ASTM D5185m		962	1362	1013
Sulfur	ppm	ASTM D5185m		2347	3218	2647
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.7	24.3	23.3
Base Number (BN)	mg KOH/g	ASTM D2896		6.7	6.0	6.9
Visc @ 100°C	cSt	ASTM D445		▲ 11.7	13.3	12.8

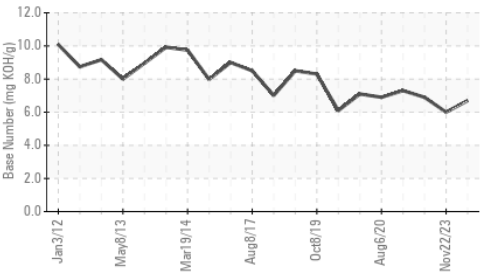
Fuel Dilution



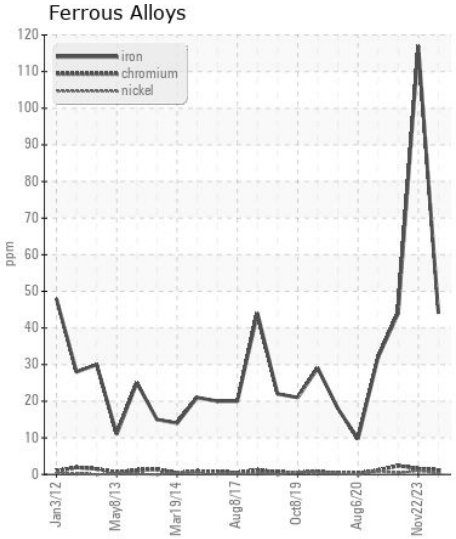
Viscosity @ 100°C



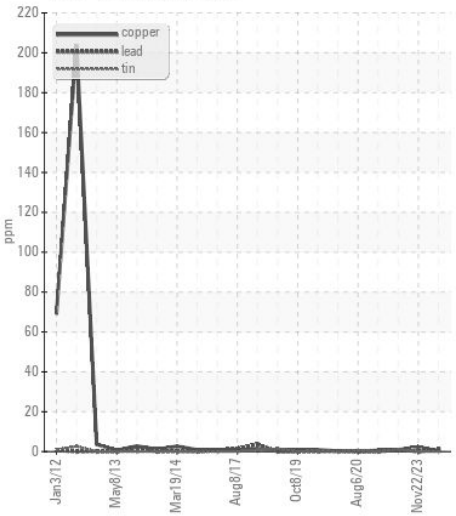
Base Number



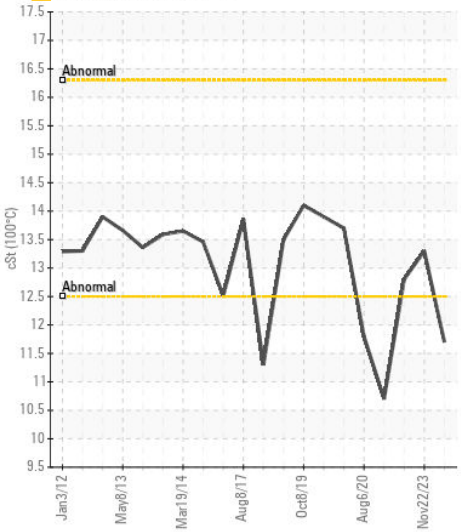
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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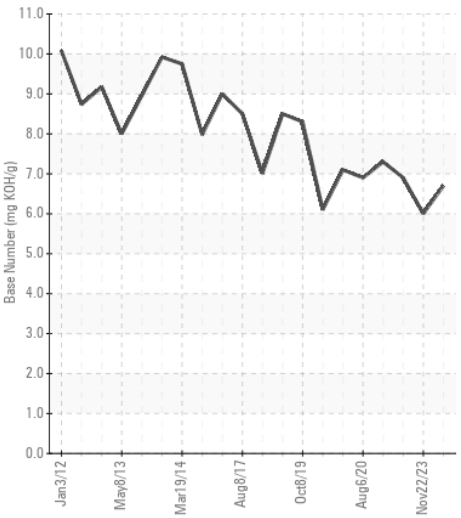

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0904373
Lab Number : 06100783
Unique Number : 10899013
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 26 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 29 Feb 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: