OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Machine Id
FREIGHTLINER 3226
Component
Front Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (44 QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

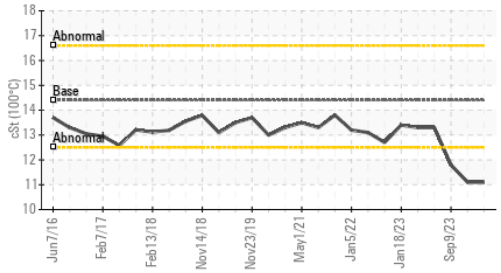
Light fuel dilution occurring.

FLUID CONDITION

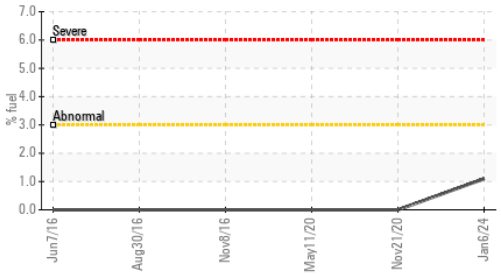
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0878545**	WC0878589	WC0854022
Sample Date		Client Info		**06 Jan 2024**	06 Dec 2023	09 Sep 2023
Machine Age	mls	Client Info		**367633**	507986	491092
Oil Age	mls	Client Info		**23095**	16889	19959
Filter Age	mls	Client Info		**23095**	16889	19959
Oil Changed		Client Info		**N/A**	N/A	N/A
Filter Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>165	**8**	6	12
Chromium	ppm	ASTM D5185m	>5	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	<1
Silver	ppm	ASTM D5185m	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>20	**4**	1	3
Lead	ppm	ASTM D5185m	>150	**2**	0	<1
Copper	ppm	ASTM D5185m	>90	**2**	<1	<1
Tin	ppm	ASTM D5185m	>5	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>35	**3**	3	4
Potassium	ppm	ASTM D5185m	>20	**5**	1	6
Fuel	%	ASTM D3524	>3.0	▲ **1.1**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	**0.3**	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**8.9**	7.3	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.8**	19.3	18.3
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	>158	**0**	3	2
Boron	ppm	ASTM D5185m	250	**2**	4	8
Barium	ppm	ASTM D5185m	10	**0**	<1	0
Molybdenum	ppm	ASTM D5185m	100	**56**	51	15
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	450	**893**	800	73
Calcium	ppm	ASTM D5185m	3000	**1138**	1301	2434
Phosphorus	ppm	ASTM D5185m	1150	**1107**	1061	952
Zinc	ppm	ASTM D5185m	1350	**1284**	1241	1195
Sulfur	ppm	ASTM D5185m	4250	**3148**	3120	4475
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.8**	14.1	10.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**7.6**	8.4	6.3
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **11.1**	11.1	11.8

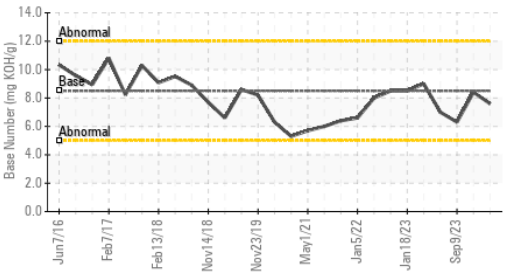
Viscosity @ 100°C



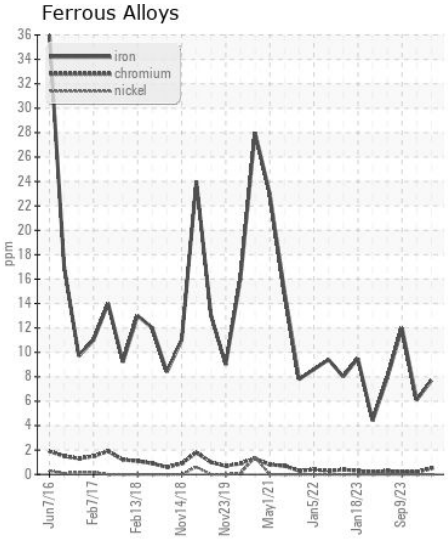
Fuel Dilution



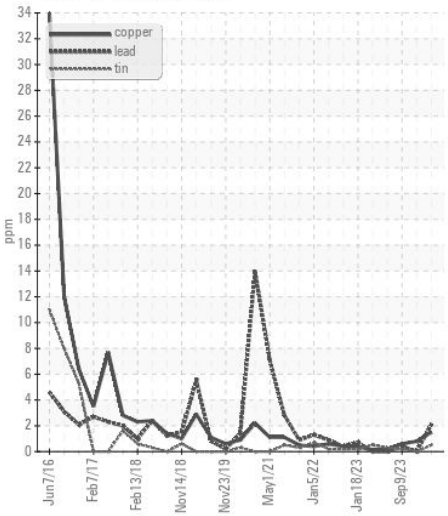
Base Number



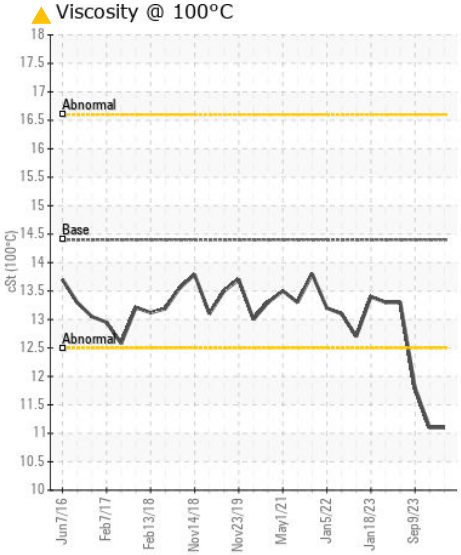
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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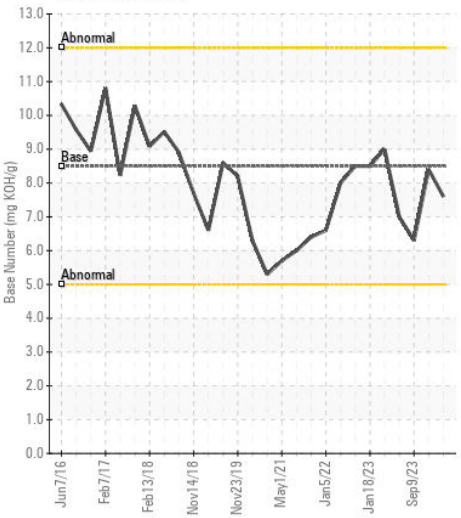

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0878545 **Recieved** : 16 Jan 2024
Lab Number : 06060784 **Diagnosed** : 18 Jan 2024
Unique Number : 10832166 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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)

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