



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2004 FREIGHTLINER 309E
 Component
Front Diesel Engine
 Fluid
CHEVRON RPM HEAVY DUTY SAE 15W40 (29 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013580	KL0013275	KL0013265
Sample Date		Client Info		06 Jun 2024	26 Jan 2024	11 Oct 2023
Machine Age	hrs	Client Info		8948	53175	8092
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	2	11	16
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	4	4
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	0	2	3
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

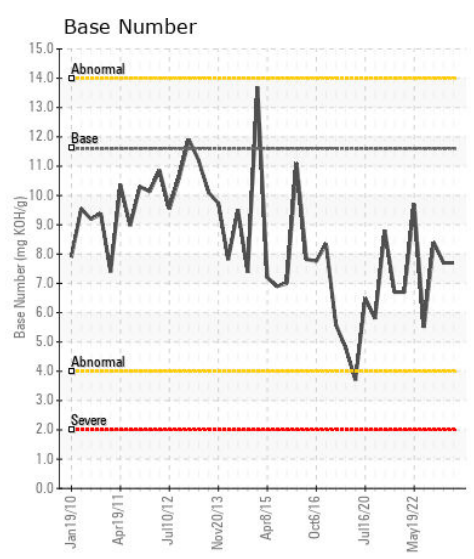
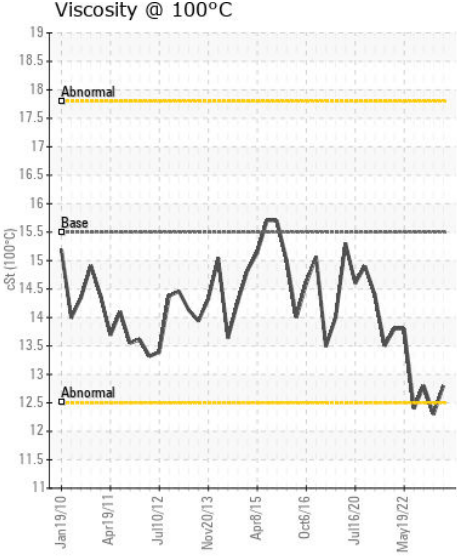
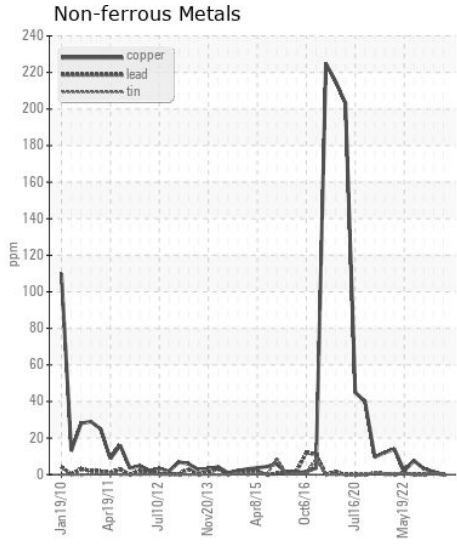
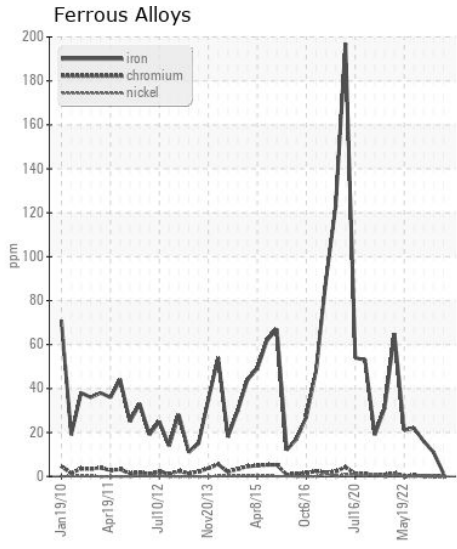
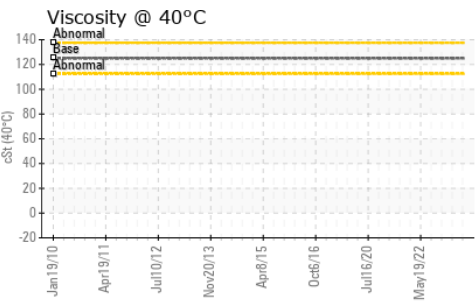
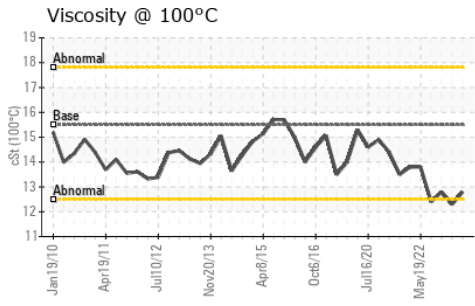
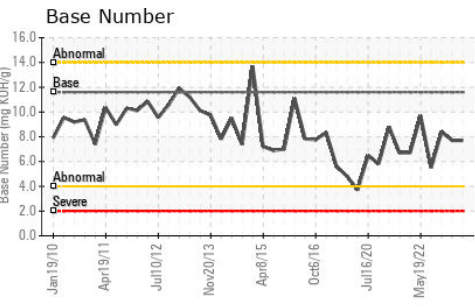
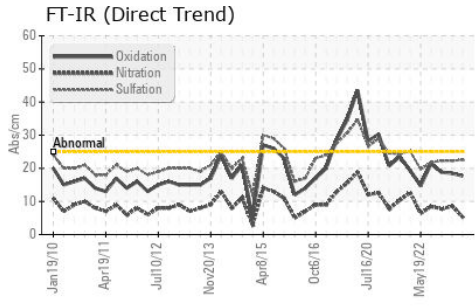
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	8
Potassium	ppm	ASTM D5185m	>20	1	2	3
Fuel		WC Method	>5	<1.0	▲ 2.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	5.3	8.6	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	22.3	22.3
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

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	2	<1
Boron	ppm	ASTM D5185m	0	290	173	259
Barium	ppm	ASTM D5185m	0	0	0	3
Molybdenum	ppm	ASTM D5185m		103	● 83	108
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		479	● 461	487
Calcium	ppm	ASTM D5185m		1252	● 1114	1324
Phosphorus	ppm	ASTM D5185m	1370	869	724	793
Zinc	ppm	ASTM D5185m	1480	918	870	1006
Sulfur	ppm	ASTM D5185m		4133	● 2406	3201
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	18.5	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	11.6	7.7	7.7	8.4
Visc @ 100°C	cSt	ASTM D445	15.5	12.8	12.3	12.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013580 **Received** : 02 Jul 2024
Lab Number : 06226866 **Tested** : 05 Jul 2024
Unique Number : 11110359 **Diagnosed** : 05 Jul 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: KV40)

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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)