



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
MACK 83
Component
Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (10 GAL)

RECOMMENDATION

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013207	KL0011767	KL0011744
Sample Date		Client Info		24 Jan 2024	16 Oct 2023	08 Sep 2023
Machine Age	mls	Client Info		507882	500909	489808
Oil Age	mls	Client Info		45696	38723	27622
Filter Age	mls	Client Info		45696	38723	27622
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	75	67	55
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	5	5
Lead	ppm	ASTM D5185m	>40	12	13	12
Copper	ppm	ASTM D5185m	>330	33	30	26
Tin	ppm	ASTM D5185m	>15	1	1	1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

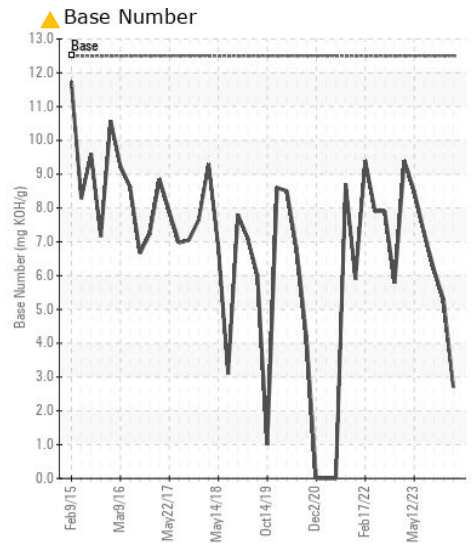
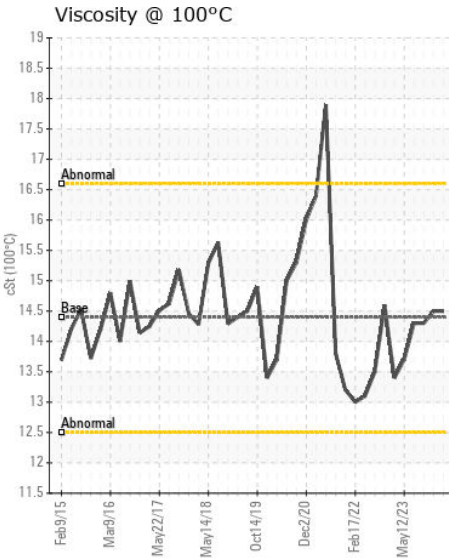
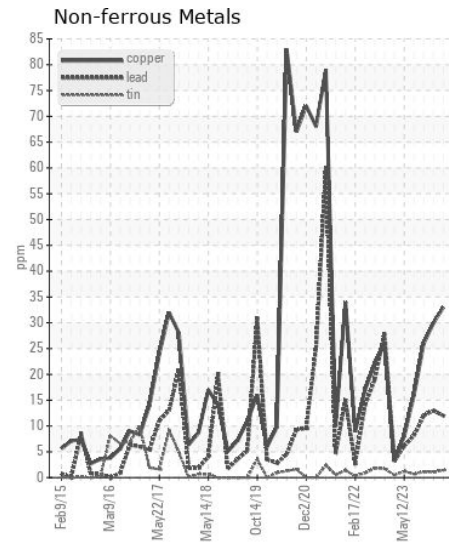
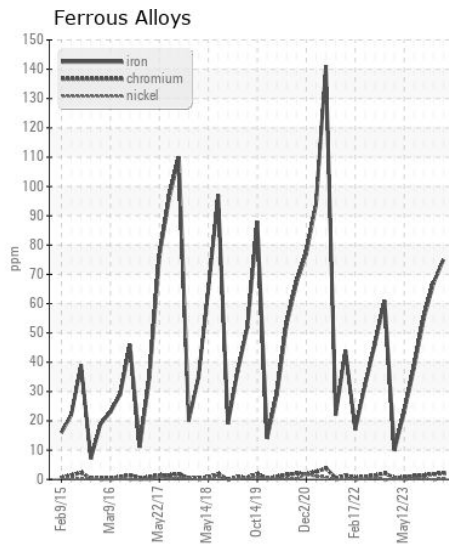
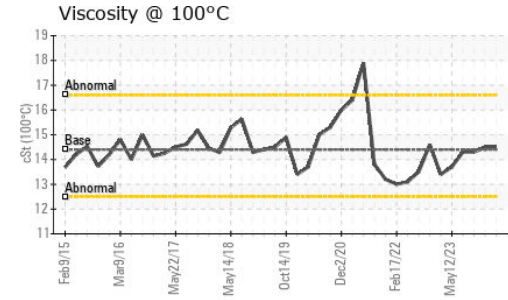
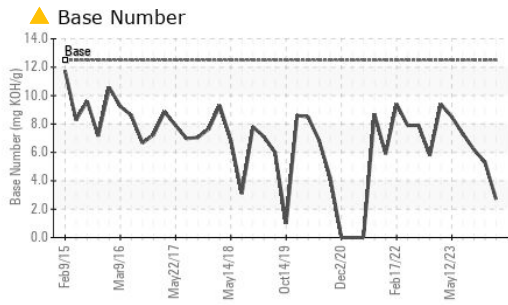
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	11	11	12
Potassium	ppm	ASTM D5185m	>20	3	4	4
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	3.9	3.5	3
Nitration	Abs/cm	*ASTM D7624	>20	14.0	13.0	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	31.8	30.8	28.9
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 level is low.

Sodium	ppm	ASTM D5185m		8	8	7
Boron	ppm	ASTM D5185m	151	61	88	92
Barium	ppm	ASTM D5185m	0.4	0	0	0
Molybdenum	ppm	ASTM D5185m	250	111	121	121
Manganese	ppm	ASTM D5185m		<1	1	1
Magnesium	ppm	ASTM D5185m	0	639	692	711
Calcium	ppm	ASTM D5185m	2046	1528	1582	1694
Phosphorus	ppm	ASTM D5185m	1043	647	764	744
Zinc	ppm	ASTM D5185m	943	842	919	919
Sulfur	ppm	ASTM D5185m	5012	2079	2463	2986
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.0	23.6	21.0
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	▲ 2.7	5.3	6.2
Visc @ 100°C	cSt	ASTM D445	14.4	14.5	14.5	14.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013207 **Received** : 30 Jan 2024
Lab Number : 06074521 **Diagnosed** : 01 Feb 2024
Unique Number : 10856612 **Diagnostician** : Jonathan Hester
Test Package : FLEET

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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)