



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 88

Component
Diesel Engine

Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0011683	KL0011760	KL0011738
Sample Date		Client Info		18 Mar 2024	07 Dec 2023	31 Aug 2023
Machine Age	mls	Client Info		355812	345027	337780
Oil Age	mls	Client Info		54371	43586	36339
Filter Age	mls	Client Info		54371	43587	36339
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The lead level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	48	49	35
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	6	5
Lead	ppm	ASTM D5185m	>40	▲ 43	▲ 62	▲ 51
Copper	ppm	ASTM D5185m	>330	24	23	16
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

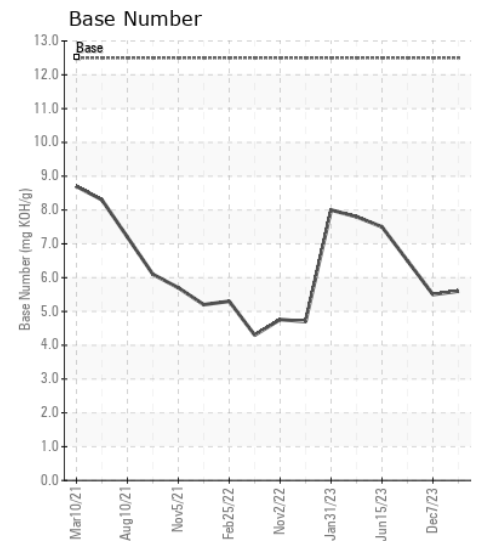
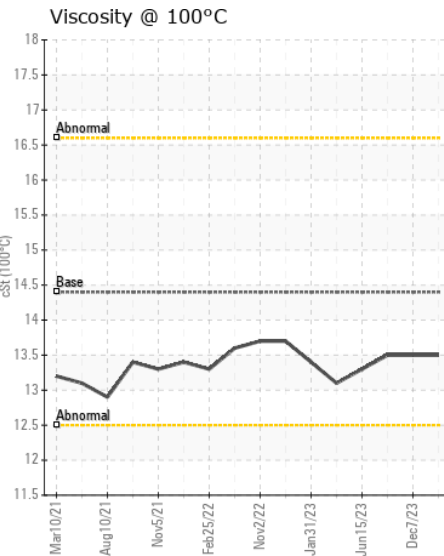
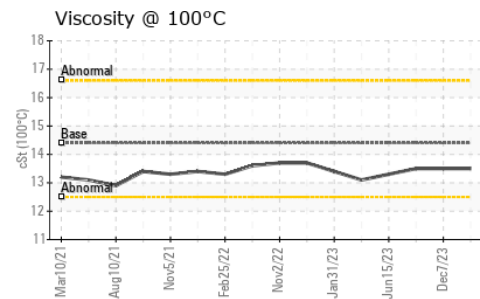
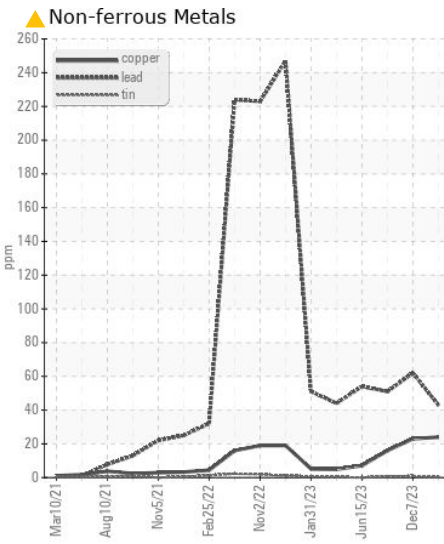
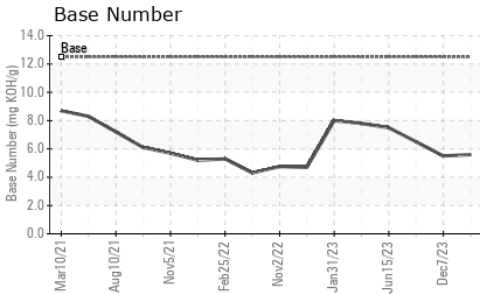
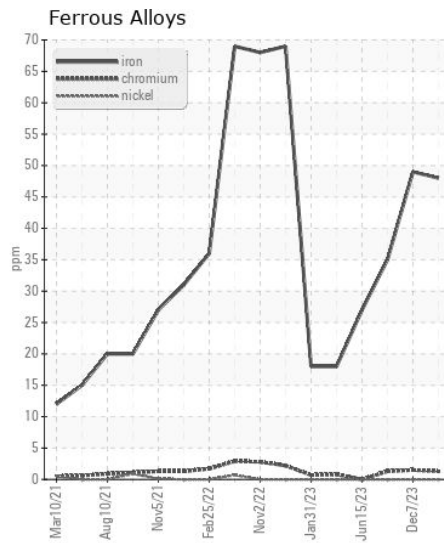
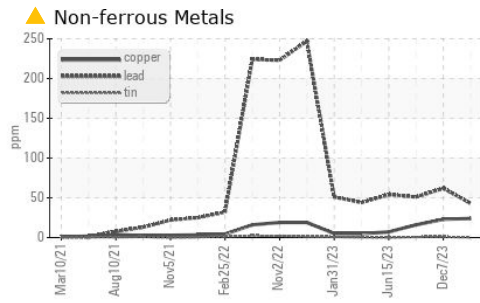
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	8	7
Potassium	ppm	ASTM D5185m	>20	0	3	<1
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.4	1.4	1
Nitration	Abs/cm	*ASTM D7624	>20	10.6	10.7	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.7	26.8	24.4
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		8	11	9
Boron	ppm	ASTM D5185m	151	62	66	109
Barium	ppm	ASTM D5185m	0.4	0	0	<1
Molybdenum	ppm	ASTM D5185m	250	120	136	120
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m	0	656	747	714
Calcium	ppm	ASTM D5185m	2046	1571	1682	1625
Phosphorus	ppm	ASTM D5185m	1043	709	833	753
Zinc	ppm	ASTM D5185m	943	831	1002	897
Sulfur	ppm	ASTM D5185m	5012	2707	3143	2881
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.6	22.5	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	5.6	5.5	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	13.5	13.5	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0011683
Lab Number : 06122989
Unique Number : 10937140
Test Package : FLEET

Received : 19 Mar 2024
Tested : 20 Mar 2024
Diagnosed : 21 Mar 2024 - Don Baldrige

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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)