



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
27248
Component
Diesel Engine
Fluid
{not provided} (--- QTS)

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		KL0012146	KL0012076	KL0012053
Sample Date		Client Info		30 Jan 2024	10 Nov 2023	28 Jul 2023
Machine Age	mls	Client Info		106024	104052	102793
Oil Age	mls	Client Info		104052	0	0
Filter Age	mls	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				ATTENTION	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	21	14
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	2
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	<1	<1	0
Tin	ppm	ASTM D5185m	>15	0	0	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

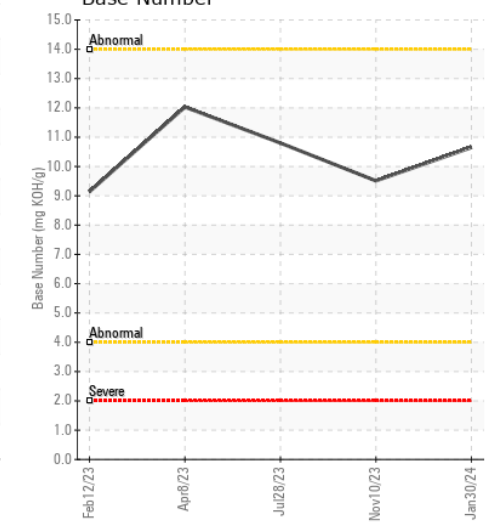
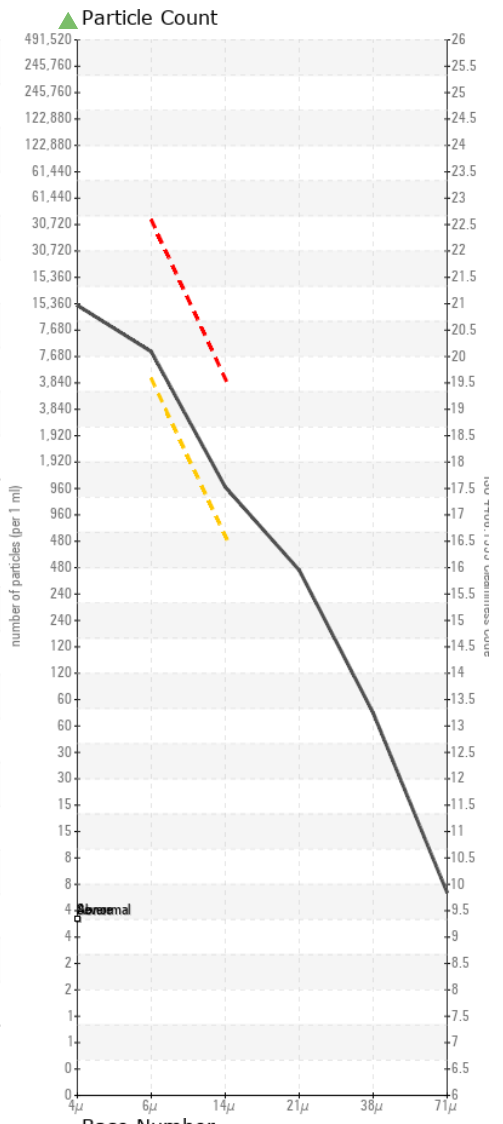
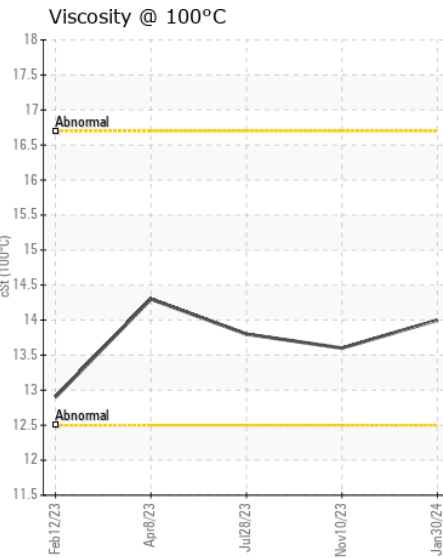
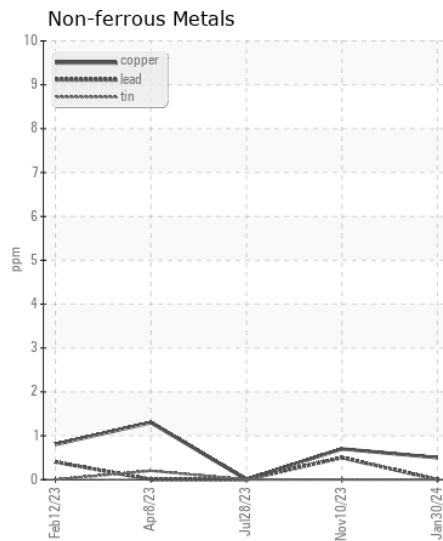
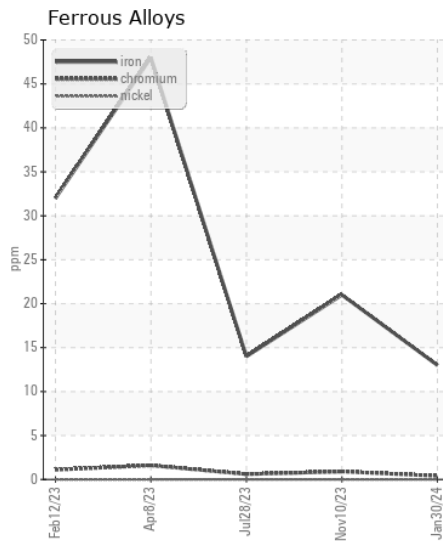
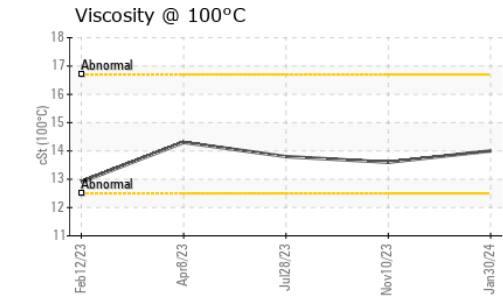
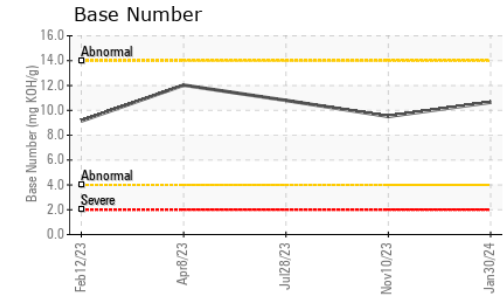
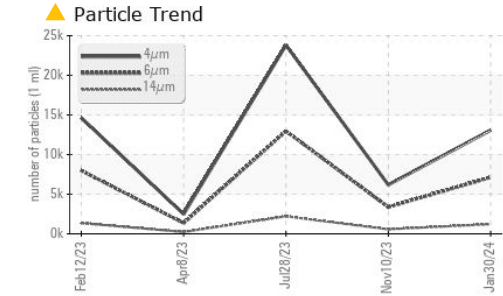
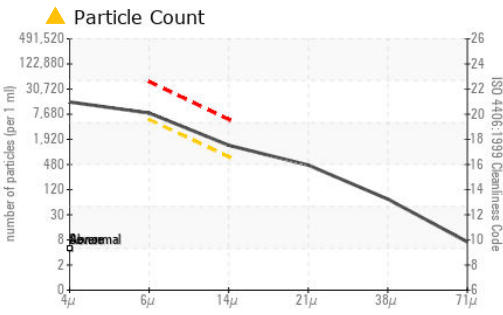
There is a moderate amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	4
Potassium	ppm	ASTM D5185m	>20	8	21	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.9	10.0	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	23.2	20.9
Particles >4µm		ASTM D7647		13076	6186	23802
Particles >6µm		ASTM D7647	>5000	▲ 7123	3370	▲ 12966
Particles >14µm		ASTM D7647	>640	▲ 1212	573	▲ 2207
Particles >21µm		ASTM D7647	>160	▲ 408	193	▲ 743
Particles >38µm		ASTM D7647	>40	▲ 63	30	▲ 115
Particles >71µm		ASTM D7647	>10	6	3	12
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ 20/17	19/16	▲ 21/18
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		3	12	3
Boron	ppm	ASTM D5185m		89	37	72
Barium	ppm	ASTM D5185m		11	0	0
Molybdenum	ppm	ASTM D5185m		60	63	68
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		983	1121	1127
Calcium	ppm	ASTM D5185m		917	992	1030
Phosphorus	ppm	ASTM D5185m		957	1117	1098
Zinc	ppm	ASTM D5185m		1138	1361	1336
Sulfur	ppm	ASTM D5185m		3407	3573	4199
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	22.0	18.2
Base Number (BN)	mg KOH/g	ASTM D2896		10.65	9.51	10.80
Visc @ 100°C	cSt	ASTM D445		14.0	13.6	13.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0012146 **Received** : 14 Feb 2024
Lab Number : 06089633 **Tested** : 16 Feb 2024
Unique Number : 10877078 **Diagnosed** : 16 Feb 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

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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)