



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
135-12
Component
Natural Gas Engine
Fluid
NOT GIVEN (30 QTS)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: Oil and KO filters were changed @ 9596 hrs. That was the first oil change since KO install.)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0012993	KL0011512	KL0011961
Sample Date		Client Info		05 Jan 2024	20 Nov 2023	16 Oct 2023
Machine Age	hrs	Client Info		10244	9202	8366
Oil Age	hrs	Client Info		648	1783	673
Filter Age	hrs	Client Info		648	40	673
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	5	17	5
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		40	16	17
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	3
Lead	ppm	ASTM D5185m	>30	8	▲ 24	5
Copper	ppm	ASTM D5185m	>35	12	▲ 21	3
Tin	ppm	ASTM D5185m	>4	<1	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

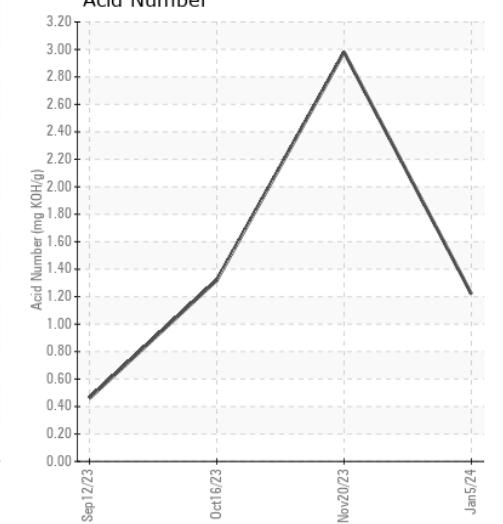
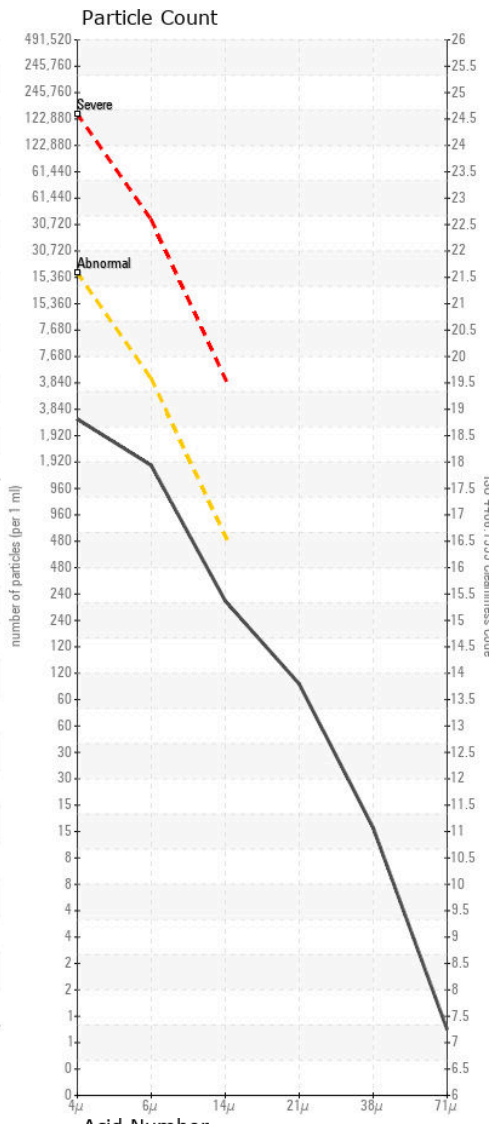
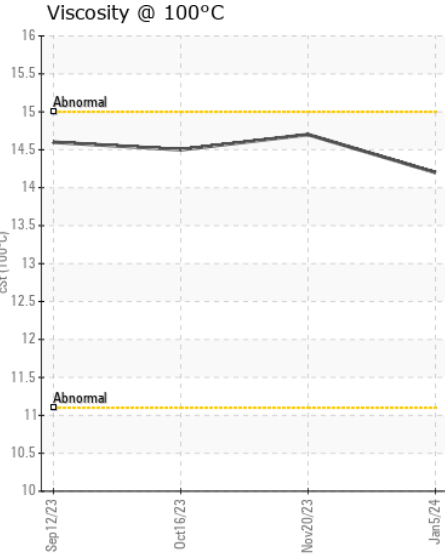
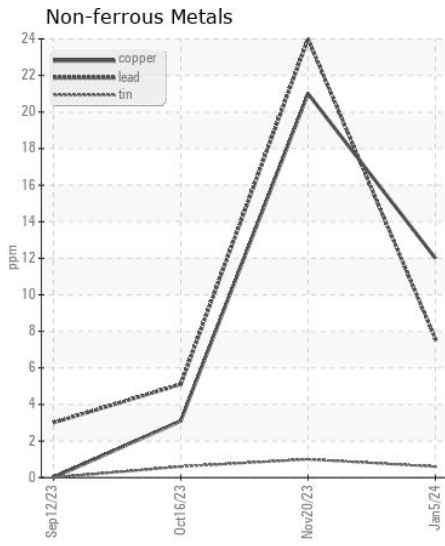
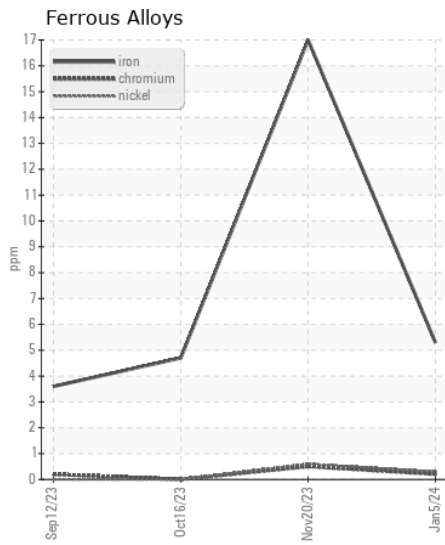
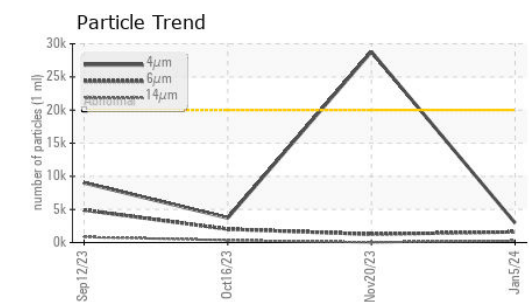
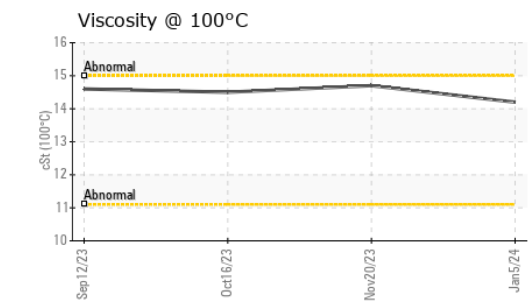
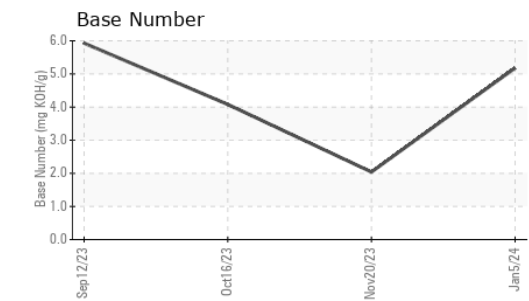
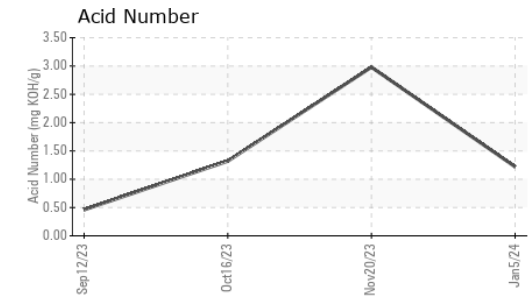
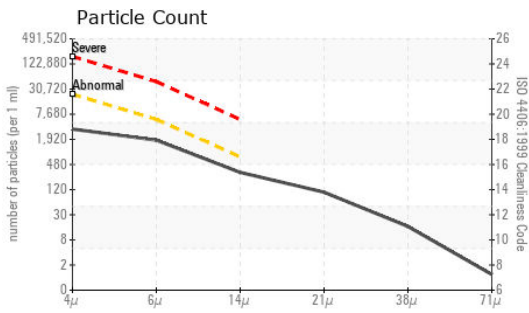
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>+100	4	7	5
Potassium	ppm	ASTM D5185m	>20	2	2	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.8	11.4	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1	27.3	19.2
Particles >4µm		ASTM D7647	>20000	2949	▲ 28804	3715
Particles >6µm		ASTM D7647	>5000	1607	1258	2024
Particles >14µm		ASTM D7647	>640	273	34	344
Particles >21µm		ASTM D7647	>160	92	6	116
Particles >38µm		ASTM D7647	>40	14	1	18
Particles >71µm		ASTM D7647	>10	1	0	2
Oil Cleanliness		ISO 4406 (c)	>21/19/16	19/18/15	▲ 22/17/12	19/18/16
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	2	1
Boron	ppm	ASTM D5185m		89	25	42
Barium	ppm	ASTM D5185m		2	2	0
Molybdenum	ppm	ASTM D5185m		18	225	183
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		21	10	7
Calcium	ppm	ASTM D5185m		1481	1462	1379
Phosphorus	ppm	ASTM D5185m		407	344	320
Zinc	ppm	ASTM D5185m		402	382	380
Sulfur	ppm	ASTM D5185m		2778	3593	2740
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.6	33.9	19.4
Acid Number (AN)	mg KOH/g	ASTM D8045		1.22	▲ 2.98	1.32
Base Number (BN)	mg KOH/g	ASTM D2896		5.18	▲ 2.04	4.08
Visc @ 100°C	cSt	ASTM D445		14.2	14.7	14.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0012993 **Received** : 11 Jan 2024
Lab Number : 06058837 **Diagnosed** : 15 Jan 2024
Unique Number : 10830219 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

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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