



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
135-12
Component
Natural Gas Engine
Fluid
LO-ASH ENGINE OIL SAE 40 (30 QTS)

RECOMMENDATION

The oil change at the time of sampling has been noted. 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		KL0012994	KL0012997	KL0011517
Sample Date		Client Info		11 Apr 2024	05 Mar 2024	22 Jan 2024
Machine Age	hrs	Client Info		12378	11557	10627
Oil Age	hrs	Client Info		1356	1863	1034
Filter Age	hrs	Client Info		0	1863	1034
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>50	18	15	6
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		30	29	36
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	3	1
Lead	ppm	ASTM D5185m	>30	▲ 22	13	9
Copper	ppm	ASTM D5185m	>35	▲ 49	23	14
Tin	ppm	ASTM D5185m	>4	2	<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

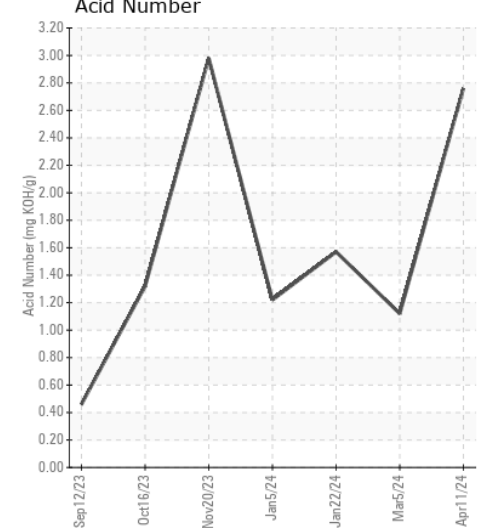
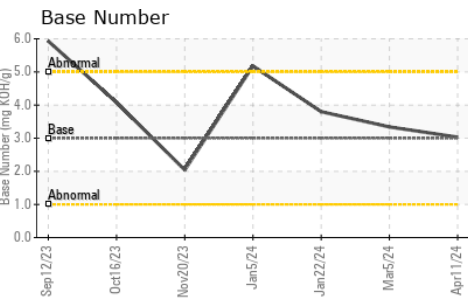
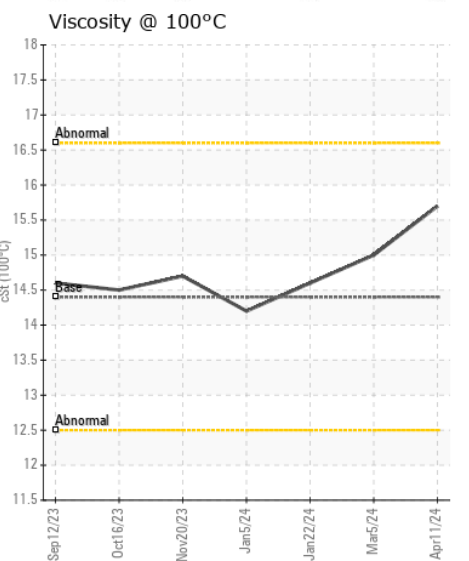
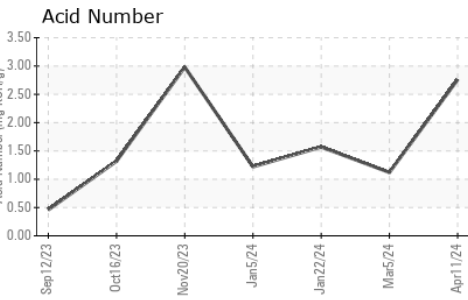
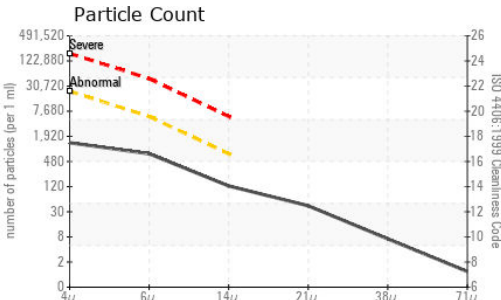
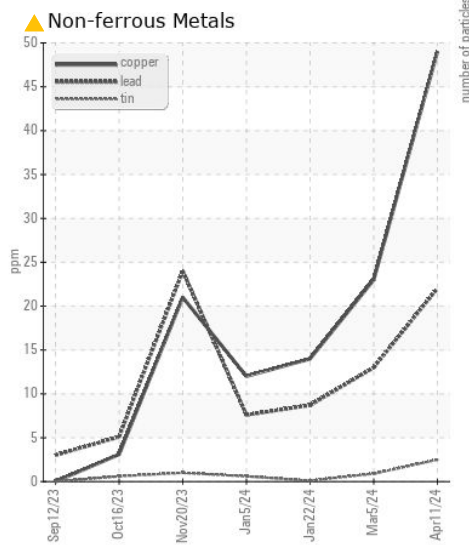
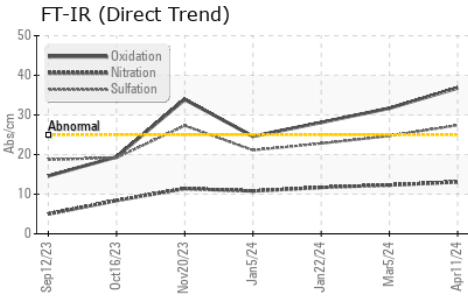
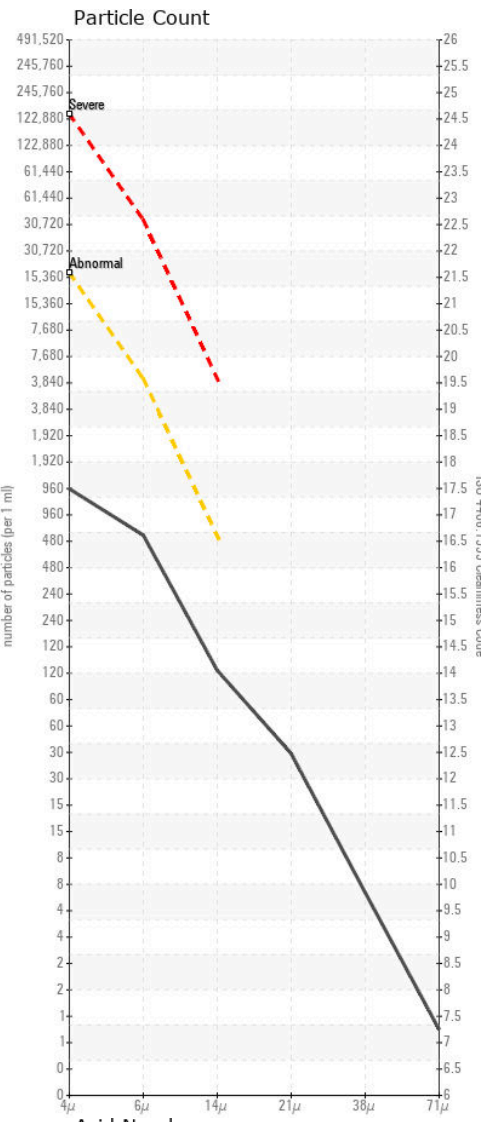
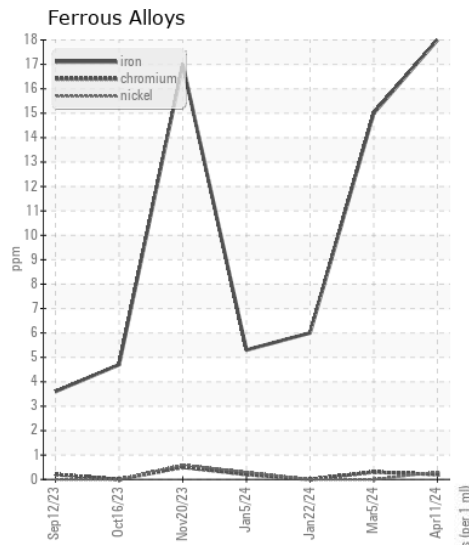
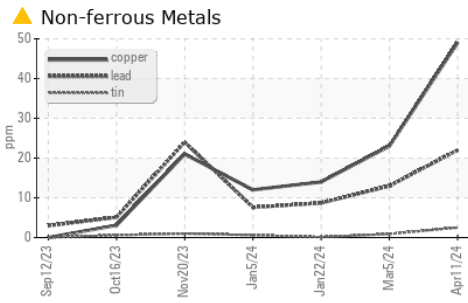
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	6	11	3
Potassium	ppm	ASTM D5185m	>20	3	2	0
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	13.1	12.3	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.4	24.7	22.8
Particles >4µm		ASTM D7647	>20000	1183	3567	---
Particles >6µm		ASTM D7647	>5000	645	1943	---
Particles >14µm		ASTM D7647	>640	110	331	---
Particles >21µm		ASTM D7647	>160	37	111	---
Particles >38µm		ASTM D7647	>40	6	17	---
Particles >71µm		ASTM D7647	>10	1	2	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	17/17/14	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 level is low. 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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<1	1	2
Boron	ppm	ASTM D5185m	37	48	42	77
Barium	ppm	ASTM D5185m	12	0	0	0
Molybdenum	ppm	ASTM D5185m	200	157	147	32
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m	5	17	19	42
Calcium	ppm	ASTM D5185m	1600	1623	1677	1597
Phosphorus	ppm	ASTM D5185m	300	382	433	361
Zinc	ppm	ASTM D5185m	400	451	470	427
Sulfur	ppm	ASTM D5185m	2600	3134	3274	2559
Oxidation	Abs/.1mm	*ASTM D7414	>25	36.8	31.7	28.1
Acid Number (AN)	mg KOH/g	ASTM D8045		2.76	1.12	1.57
Base Number (BN)	mg KOH/g	ASTM D2896	3.0	3.03	3.34	3.80
Visc @ 100°C	cSt	ASTM D445	14.4	15.7	15.0	14.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0012994 **Received** : 19 Apr 2024
Lab Number : 06155248 **Tested** : 24 Apr 2024
Unique Number : 10990671 **Diagnosed** : 24 Apr 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: PrtCount)

BASELINE ENERGY SOLUTIONS
 1863 2ND AVE
 GREENLEY, CO
 US 80631
 Contact: CARLOS PUENTES

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)

T: (720)670-1616

F: