



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
170663

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013936	KL0013937	---
Sample Date		Client Info		15 Feb 2024	05 Feb 2024	---
Machine Age	hrs	Client Info		10432	0	---
Oil Age	hrs	Client Info		87	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	N/A	---
Filter Changed		Client Info		Not Changd	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	2	0	---
Chromium	ppm	ASTM D5185m	>20	0	0	---
Nickel	ppm	ASTM D5185m	>4	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	4	3	---
Lead	ppm	ASTM D5185m	>40	0	<1	---
Copper	ppm	ASTM D5185m	>330	1	0	---
Tin	ppm	ASTM D5185m	>15	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

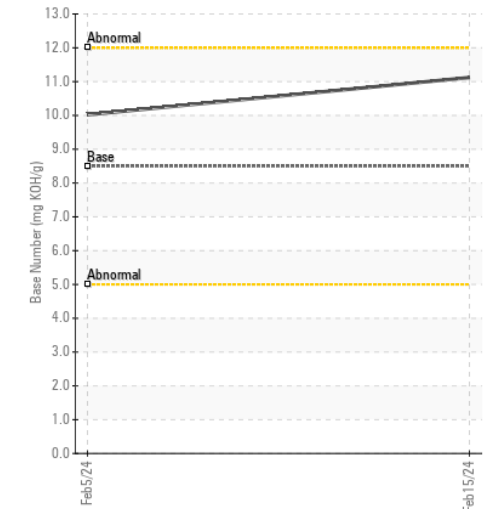
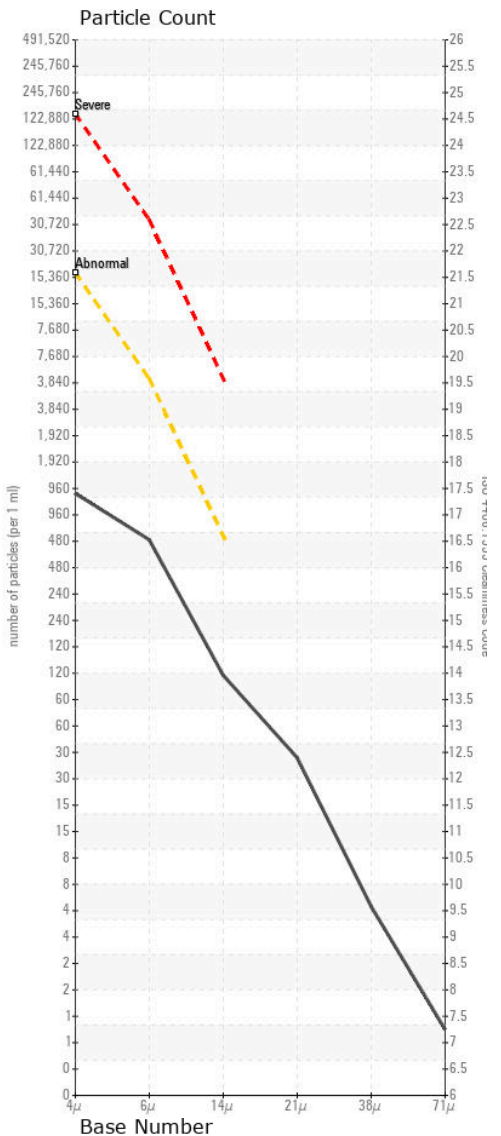
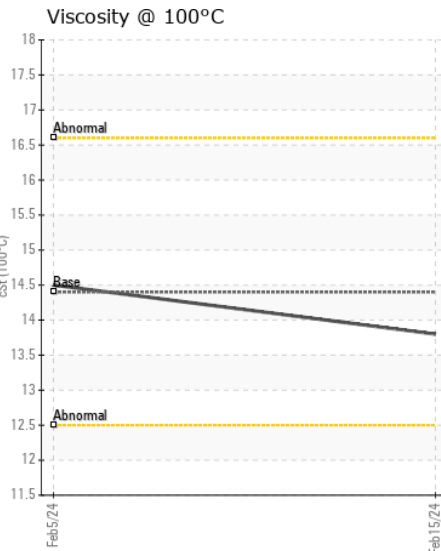
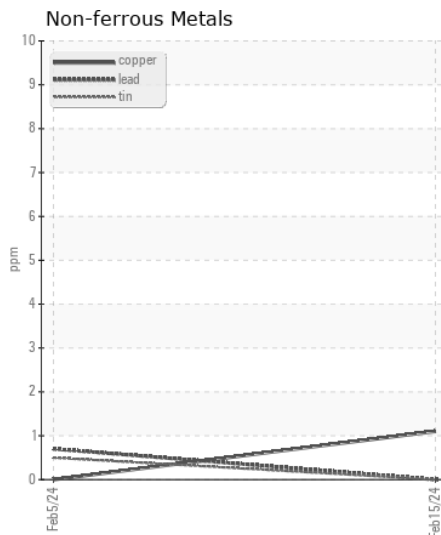
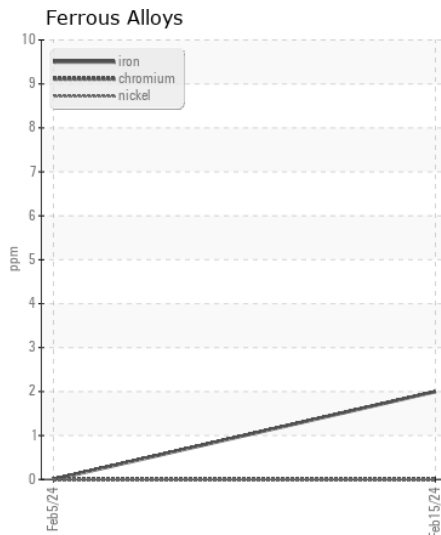
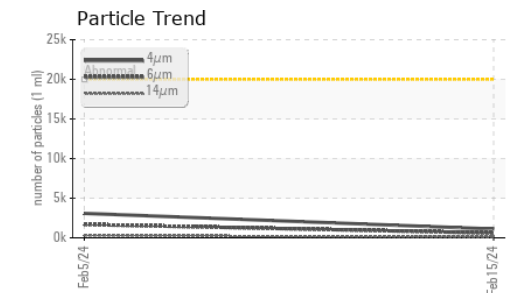
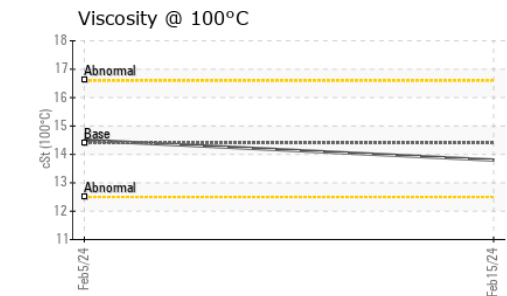
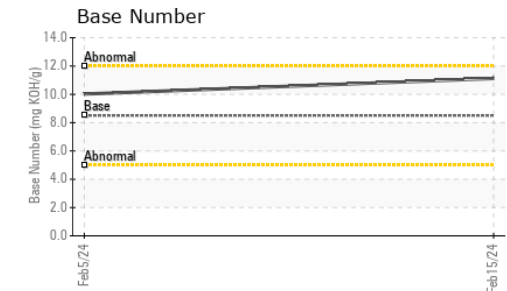
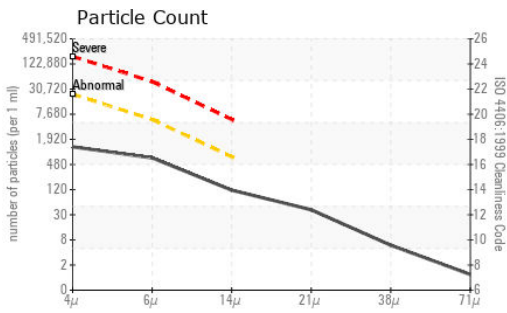
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>25	5	8	---
Potassium	ppm	ASTM D5185m	>20	2	1	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	7.3	7.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.9	16.6	---
Particles >4µm		ASTM D7647	>20000	1114	3088	---
Particles >6µm		ASTM D7647	>5000	607	1682	---
Particles >14µm		ASTM D7647	>640	103	286	---
Particles >21µm		ASTM D7647	>160	35	96	---
Particles >38µm		ASTM D7647	>40	5	15	---
Particles >71µm		ASTM D7647	>10	1	2	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	17/16/14	19/18/15	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	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	>216	2	0	---
Boron	ppm	ASTM D5185m	250	109	75	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	135	85	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m	450	25	18	---
Calcium	ppm	ASTM D5185m	3000	3042	2113	---
Phosphorus	ppm	ASTM D5185m	1150	1445	967	---
Zinc	ppm	ASTM D5185m	1350	1640	1165	---
Sulfur	ppm	ASTM D5185m	4250	5531	3549	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.9	12.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	11.12	10.02	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	14.5	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : KL0013936

Lab Number : 06097222

Unique Number : 10890075

Test Package : MOB 2 (Additional Tests: PrtCount)

Received : 22 Feb 2024

Tested : 23 Feb 2024

Diagnosed : 23 Feb 2024 - Wes Davis

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)

SWIFT WATER

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