



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
R8-G-003
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013874	KL0012487	KL0012585
Sample Date		Client Info		28 Feb 2024	18 Aug 2023	14 Jul 2023
Machine Age	days	Client Info		0	45155	45120
Oil Age	days	Client Info		0	0	0
Filter Age	days	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				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	51	71	69
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	<1	2
Lead	ppm	ASTM D5185m	>40	11	12	10
Copper	ppm	ASTM D5185m	>330	22	38	52
Tin	ppm	ASTM D5185m	>15	1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

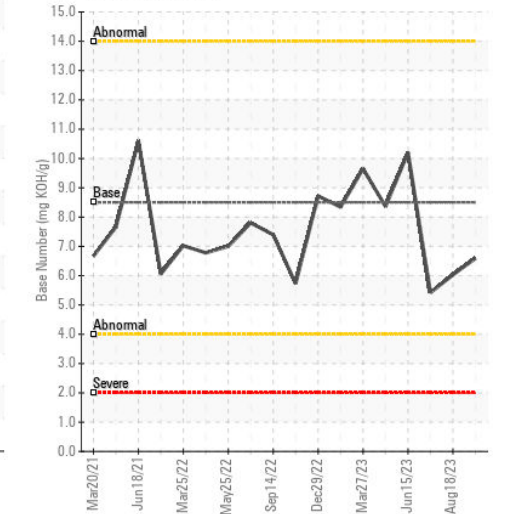
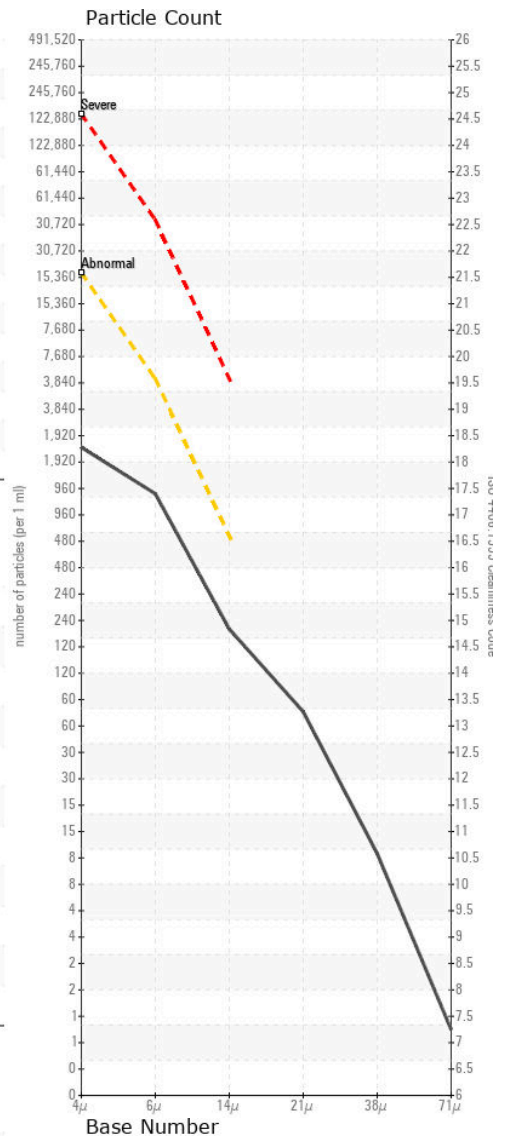
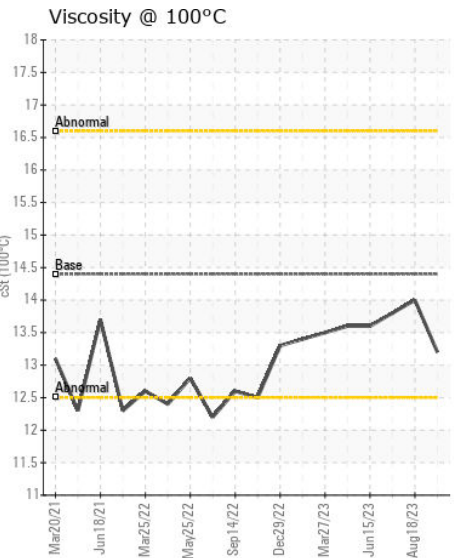
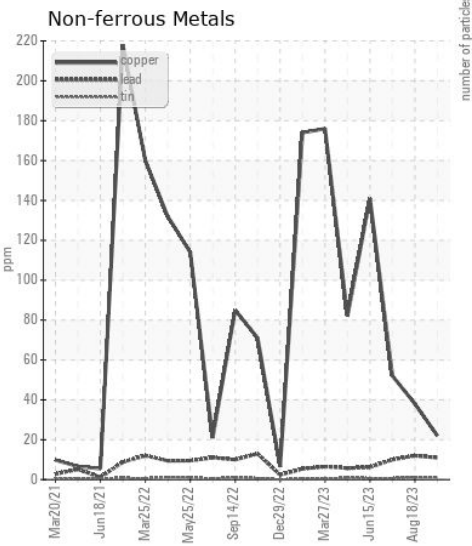
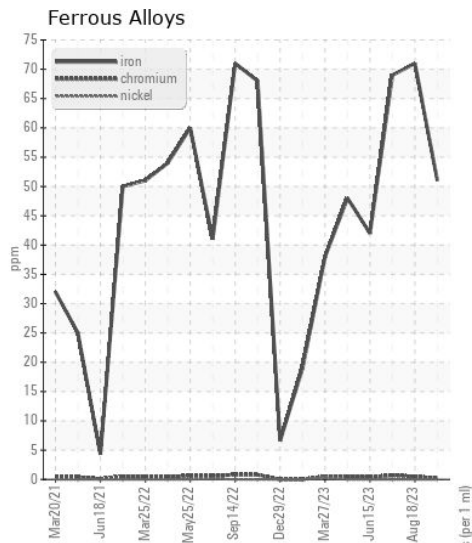
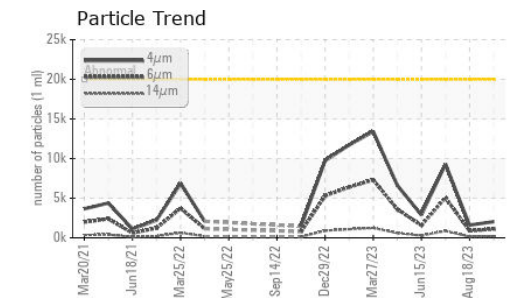
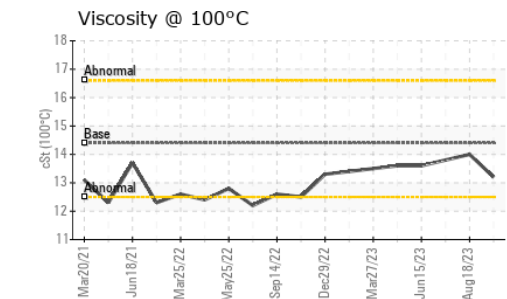
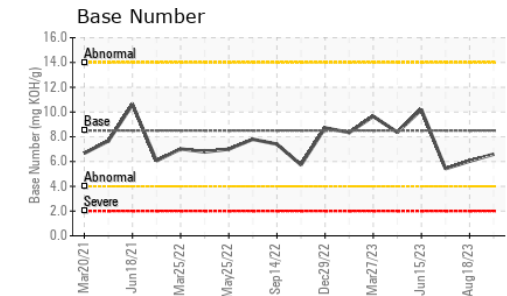
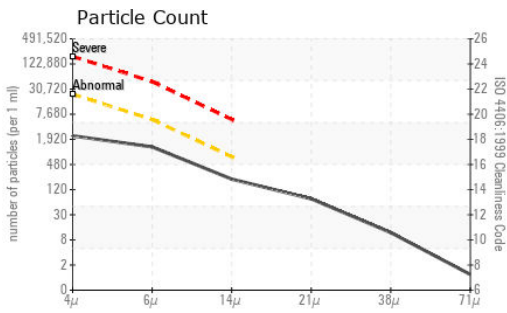
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	6
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
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	0.5	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	11.7	12.9	12.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	28.5	27.0
Particles >4µm		ASTM D7647	>20000	2036	1609	9291
Particles >6µm		ASTM D7647	>5000	1109	877	5061
Particles >14µm		ASTM D7647	>640	189	149	861
Particles >21µm		ASTM D7647	>160	64	50	290
Particles >38µm		ASTM D7647	>40	10	8	45
Particles >71µm		ASTM D7647	>10	1	1	5
Oil Cleanliness		ISO 4406 (c)	>21/19/16	18/17/15	18/17/14	20/20/17
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	>216	5	7	8
Boron	ppm	ASTM D5185m	250	147	145	150
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	108	103	108
Manganese	ppm	ASTM D5185m		<1	1	1
Magnesium	ppm	ASTM D5185m	450	698	721	744
Calcium	ppm	ASTM D5185m	3000	1418	1533	1554
Phosphorus	ppm	ASTM D5185m	1150	805	789	773
Zinc	ppm	ASTM D5185m	1350	978	966	947
Sulfur	ppm	ASTM D5185m	4250	2742	3205	3020
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.2	30.8	28.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.59	6.03	5.42
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	14.0	13.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013874 **Received** : 29 Feb 2024
Lab Number : 06105422 **Tested** : 06 Mar 2024
Unique Number : 10903652 **Diagnosed** : 06 Mar 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

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 US 88241

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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)