



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
35169
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		KL0014032	KL0012072	KLM2339318
Sample Date		Client Info		02 Feb 2024	31 Oct 2023	11 Feb 2023
Machine Age	mls	Client Info		40128	32085	21142
Oil Age	mls	Client Info		32085	0	21142
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	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	6	10	20
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	8
Lead	ppm	ASTM D5185m	>40	0	<1	3
Copper	ppm	ASTM D5185m	>330	16	42	297
Tin	ppm	ASTM D5185m	>15	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

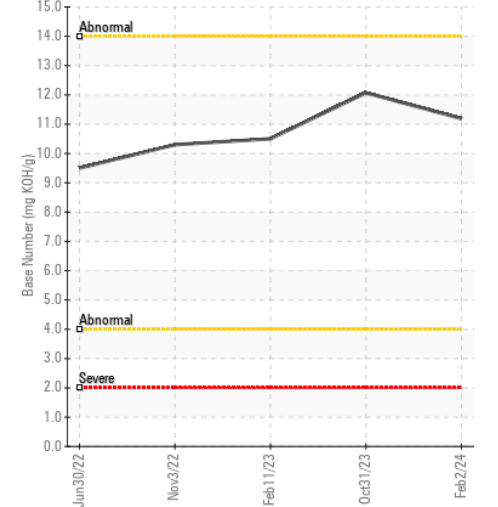
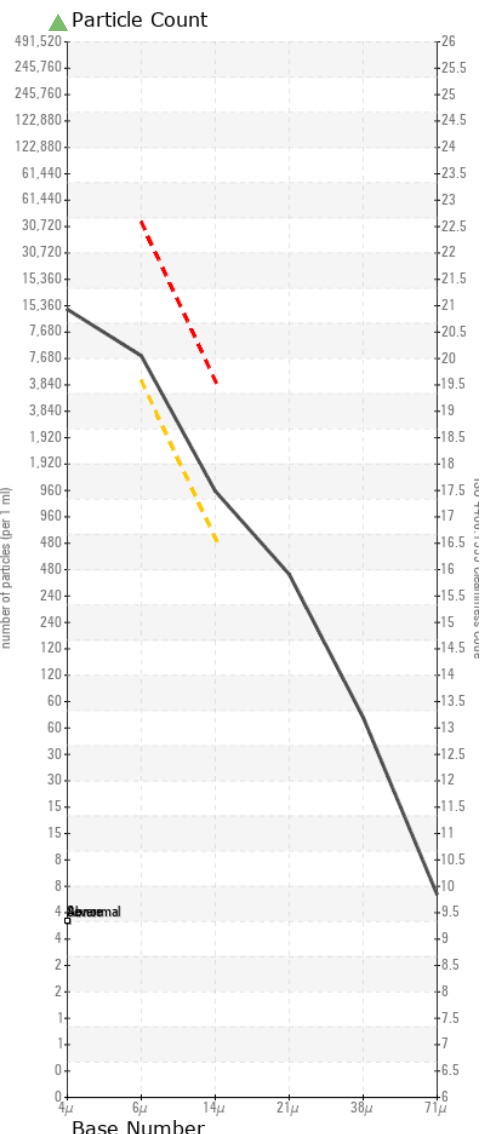
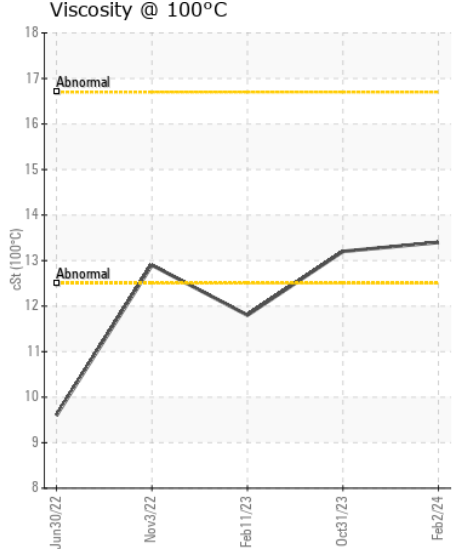
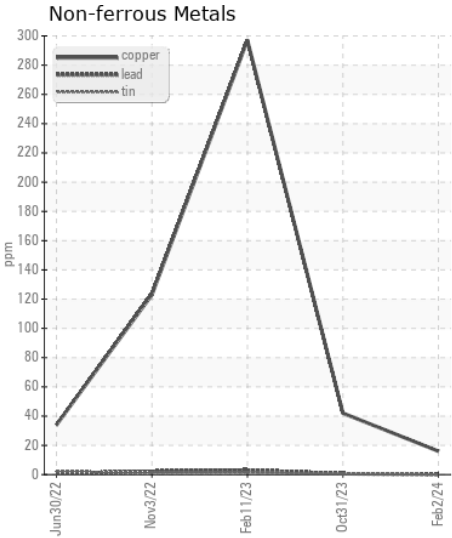
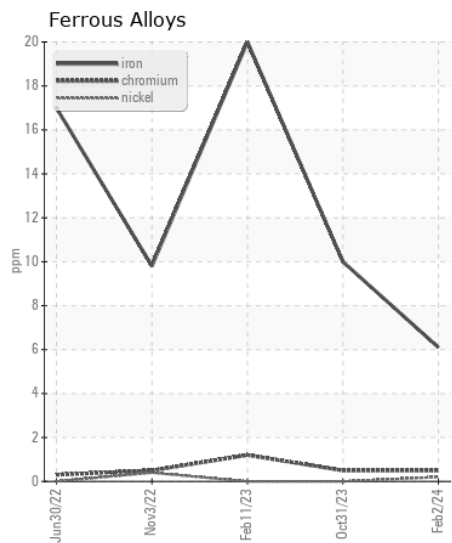
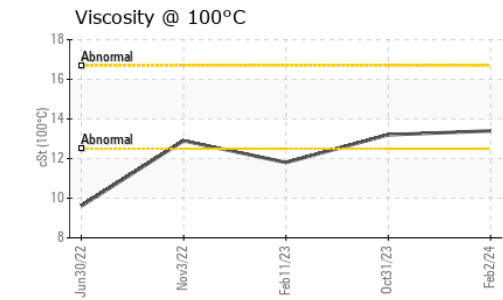
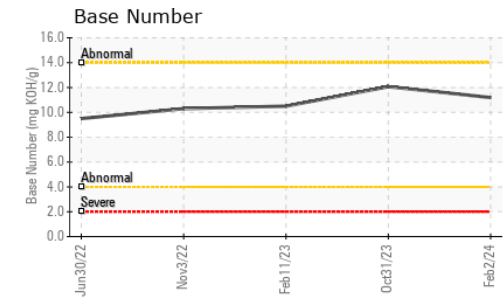
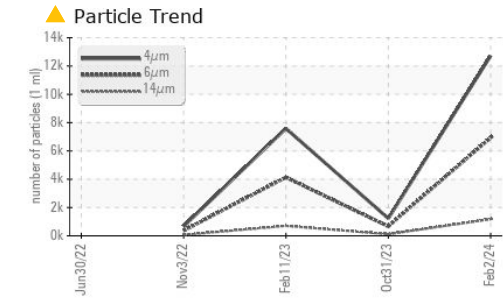
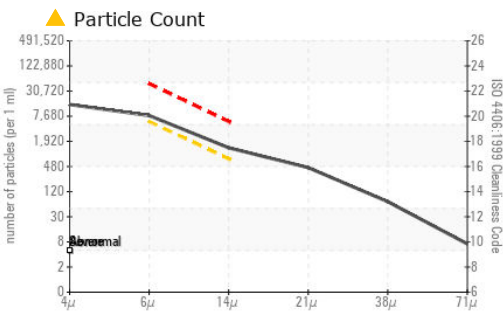
There is a moderate amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	4	3	5
Potassium	ppm	ASTM D5185m	>20	6	8	24
Fuel		WC Method	>5	<1.0	<1.0	0.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	6.5	7.2	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	20.2	21.3
Particles >4µm		ASTM D7647		12719	1226	7586
Particles >6µm		ASTM D7647	>5000	▲ 6929	668	4133
Particles >14µm		ASTM D7647	>640	▲ 1179	114	▲ 703
Particles >21µm		ASTM D7647	>160	▲ 397	38	▲ 237
Particles >38µm		ASTM D7647	>40	▲ 61	6	37
Particles >71µm		ASTM D7647	>10	6	1	4
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ 20/17	17/14	▲ 19/17
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		2	2	2
Boron	ppm	ASTM D5185m		80	82	41
Barium	ppm	ASTM D5185m		5	0	0
Molybdenum	ppm	ASTM D5185m		53	61	54
Manganese	ppm	ASTM D5185m		0	<1	2
Magnesium	ppm	ASTM D5185m		908	1169	1092
Calcium	ppm	ASTM D5185m		784	1019	1105
Phosphorus	ppm	ASTM D5185m		842	1130	947
Zinc	ppm	ASTM D5185m		1040	1359	1263
Sulfur	ppm	ASTM D5185m		3019	3512	3178
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	16.0	17.8
Base Number (BN)	mg KOH/g	ASTM D2896		11.19	12.07	10.50
Visc @ 100°C	cSt	ASTM D445		13.4	13.2	11.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014032 **Received** : 14 Feb 2024
Lab Number : 06089618 **Tested** : 15 Feb 2024
Unique Number : 10877063 **Diagnosed** : 16 Feb 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

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Certificate L2367
 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)