



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
27306
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

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		KL0013827	KL0012079	KL0011946
Sample Date		Client Info		02 Feb 2024	31 Oct 2023	27 Jul 2023
Machine Age	hrs	Client Info		51543	47600	43845
Oil Age	hrs	Client Info		282616	0	0
Filter Age	hrs	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	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	49	25	63
Chromium	ppm	ASTM D5185m	>20	2	1	2
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	4	11
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	3	2	6
Tin	ppm	ASTM D5185m	>15	0	<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

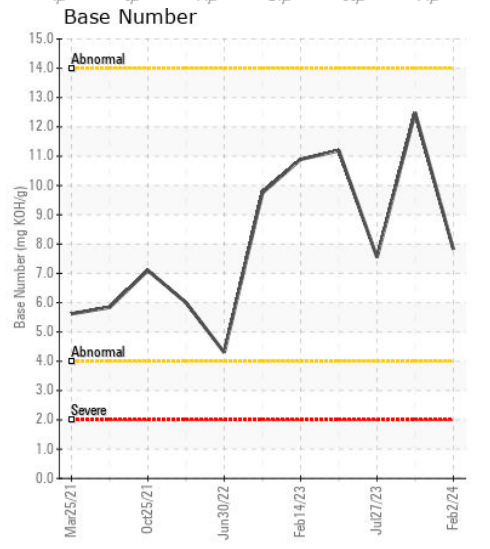
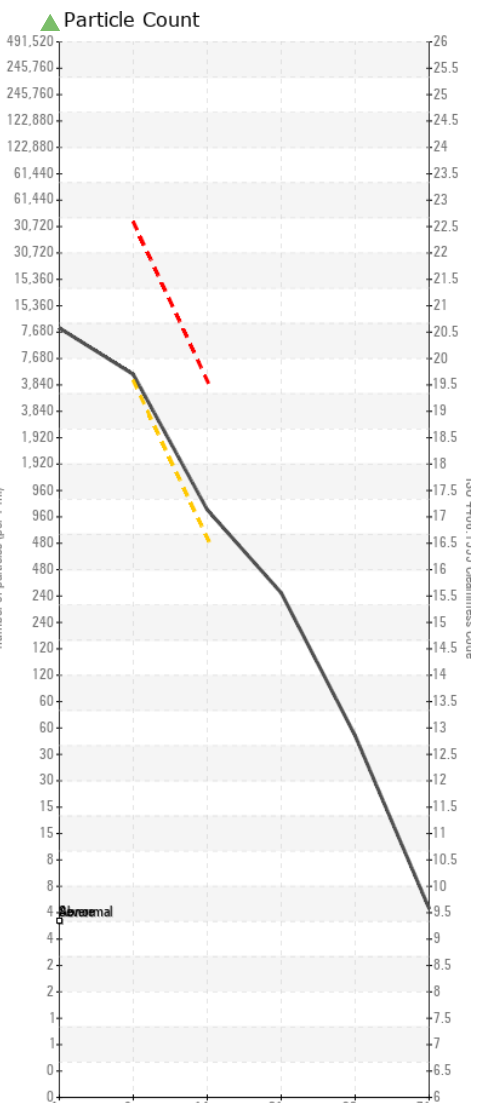
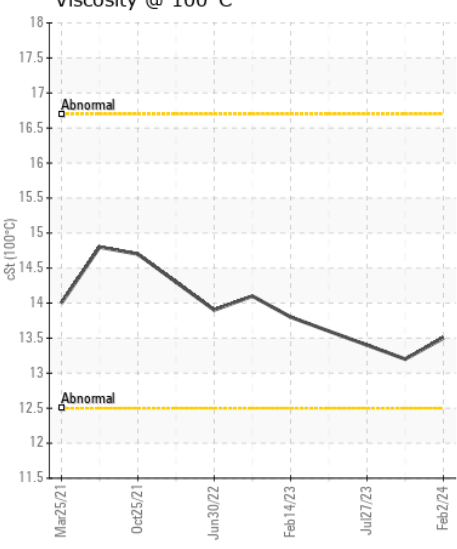
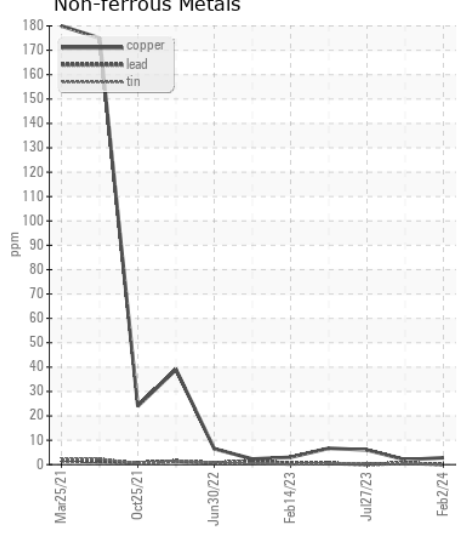
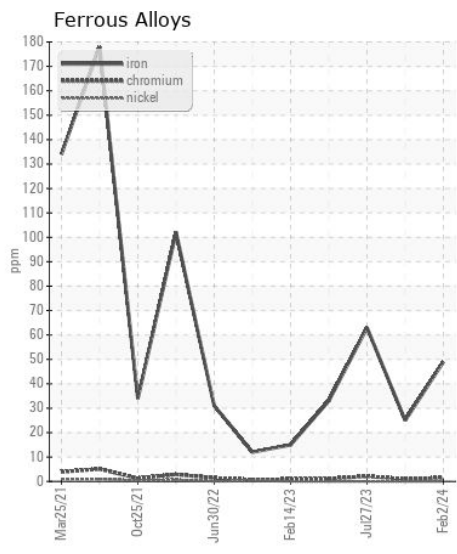
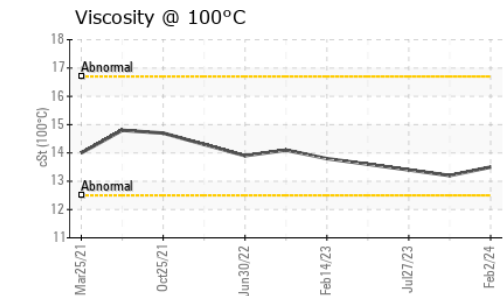
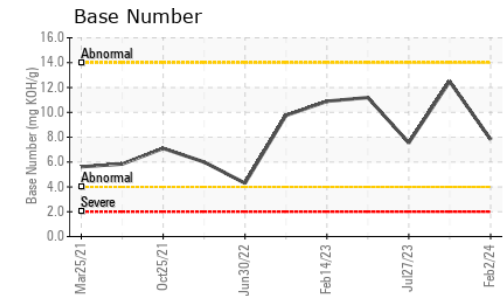
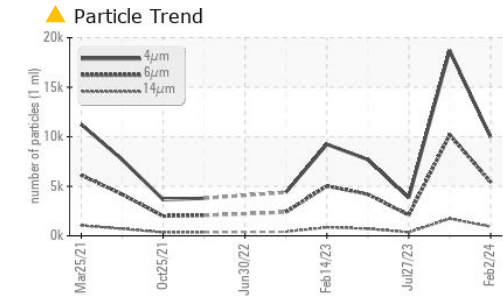
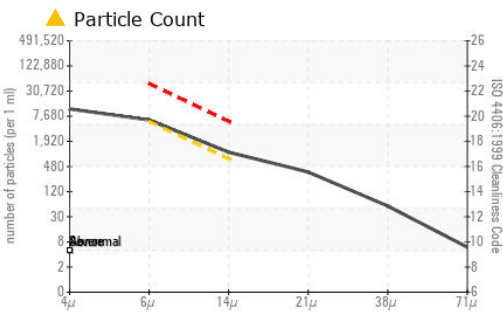
There is a moderate amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	8	6	9
Potassium	ppm	ASTM D5185m	>20	9	6	12
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	1.1	0.7	1.3
Nitration	Abs/cm	*ASTM D7624	>20	12.5	10.4	12.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.1	24.5	28.7
Particles >4µm		ASTM D7647		9970	18696	3845
Particles >6µm		ASTM D7647	>5000	▲ 5431	▲ 10185	2095
Particles >14µm		ASTM D7647	>640	▲ 924	▲ 1733	356
Particles >21µm		ASTM D7647	>160	▲ 311	▲ 584	120
Particles >38µm		ASTM D7647	>40	▲ 48	▲ 90	19
Particles >71µm		ASTM D7647	>10	5	9	2
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ 20/17	▲ 21/18	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	>0.2	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		7	5	7
Boron	ppm	ASTM D5185m		28	38	20
Barium	ppm	ASTM D5185m		11	0	0
Molybdenum	ppm	ASTM D5185m		63	62	61
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1014	1147	1045
Calcium	ppm	ASTM D5185m		922	1018	1213
Phosphorus	ppm	ASTM D5185m		936	1122	1087
Zinc	ppm	ASTM D5185m		1192	1377	1399
Sulfur	ppm	ASTM D5185m		3257	3556	4105
Oxidation	Abs/.1mm	*ASTM D7414	>25	30.6	24.8	29.8
Base Number (BN)	mg KOH/g	ASTM D2896		7.82	12.48	7.55
Visc @ 100°C	cSt	ASTM D445		13.5	13.2	13.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013827 **Received** : 14 Feb 2024
Lab Number : 06089641 **Tested** : 16 Feb 2024
Unique Number : 10877086 **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)