OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	ATTENTION

Machine Id
AL-130
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

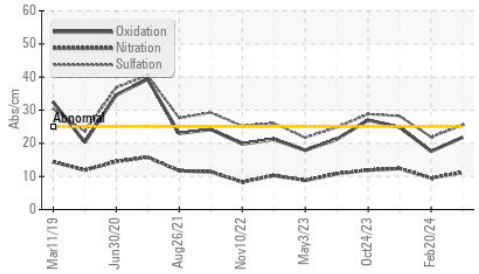
Sodium and/or potassium levels are high. Test for glycol is negative.

FLUID CONDITION

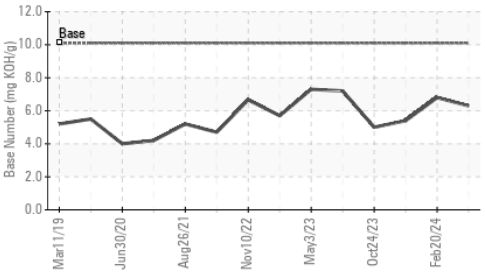
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0011705	KL0011703	KL0011728
Sample Date		Client Info		10 Apr 2024	20 Feb 2024	17 Jan 2024
Machine Age	mls	Client Info		237886	229016	222447
Oil Age	mls	Client Info		15439	6569	17707
Filter Age	mls	Client Info		15439	6569	17707
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				ATTENTION	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	25	15	37
Chromium	ppm	ASTM D5185m	>20	1	<1	3
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	3	7
Lead	ppm	ASTM D5185m	>40	5	2	12
Copper	ppm	ASTM D5185m	>330	2	1	6
Tin	ppm	ASTM D5185m	>15	1	0	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	7	5	10
Potassium	ppm	ASTM D5185m	>20	● 65	39	▲ 113
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	11.2	9.5	12.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.5	21.9	28.2
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
Sodium	ppm	ASTM D5185m		● 84	40	▲ 37
Boron	ppm	ASTM D5185m	316	17	16	19
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	46	44	48
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m	24	405	444	436
Calcium	ppm	ASTM D5185m	2292	1703	1747	1650
Phosphorus	ppm	ASTM D5185m	1064	978	1046	982
Zinc	ppm	ASTM D5185m	1160	1140	1278	1185
Sulfur	ppm	ASTM D5185m	4996	3272	3330	2516
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.8	17.6	24.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.3	6.8	5.4
Visc @ 100°C	cSt	ASTM D445	15.7	13.8	13.4	14.1

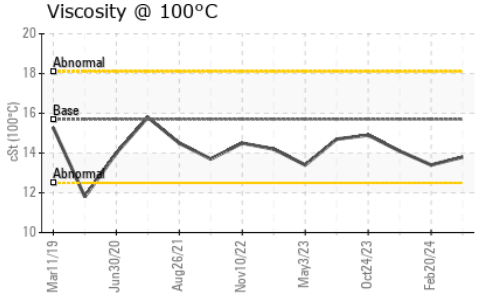
FT-IR (Direct Trend)



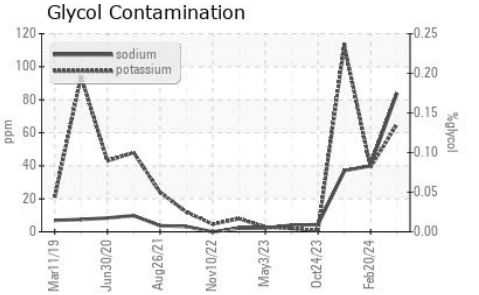
Base Number



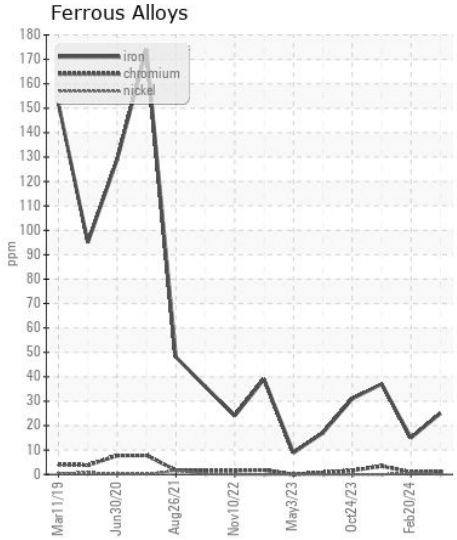
Viscosity @ 100°C



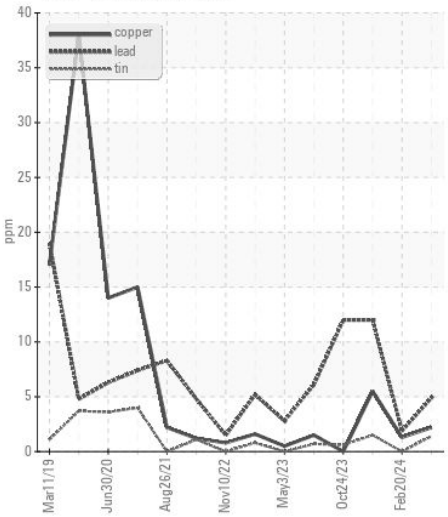
Glycol Contamination



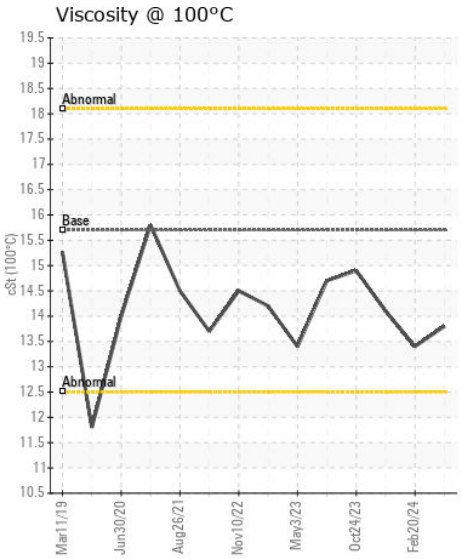
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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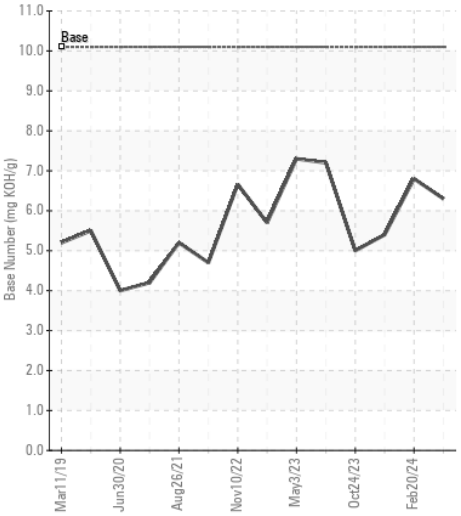

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0011705 **Received** : 19 Apr 2024
Lab Number : 06153909 **Tested** : 23 Apr 2024
Unique Number : 10989332 **Diagnosed** : 23 Apr 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

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)

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