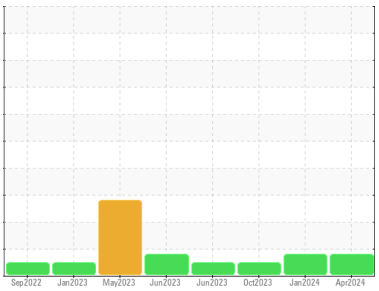
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
PETERBILT 1
Component
Diesel Engine
Fluid
MOBIL 1 5W30 (--- QTS)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
The aluminum level is abnormal. All other component wear rates are normal.

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

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KLM2340218**	KLM2340288	KLM2340144
Sample Date		Client Info		**05 Apr 2024**	27 Jan 2024	06 Oct 2023
Machine Age	mls	Client Info		**169720**	163344	153030
Oil Age	mls	Client Info		**27000**	0	0
Oil Changed		Client Info		**Not Changd**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	**39**	31	21
Chromium	ppm	ASTM D5185m	>4	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	▲ **31**	▲ 26	14
Lead	ppm	ASTM D5185m	>45	**0**	<1	0
Copper	ppm	ASTM D5185m	>85	**14**	11	7
Tin	ppm	ASTM D5185m	>4	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	94	**58**	56	77
Barium	ppm	ASTM D5185m	0.0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0.0	**46**	45	46
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1388	**837**	903	922
Calcium	ppm	ASTM D5185m	820	**1158**	1055	1103
Phosphorus	ppm	ASTM D5185m	720	**911**	1029	1022
Zinc	ppm	ASTM D5185m	780	**1118**	1269	1299
Sulfur	ppm	ASTM D5185m	2240	**3212**	3089	3134

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	**7**	6	5
Sodium	ppm	ASTM D5185m		**3**	<1	<1
Potassium	ppm	ASTM D5185m	>20	**17**	17	7

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**11.8**	11.5	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**41.8**	40.7	39.0

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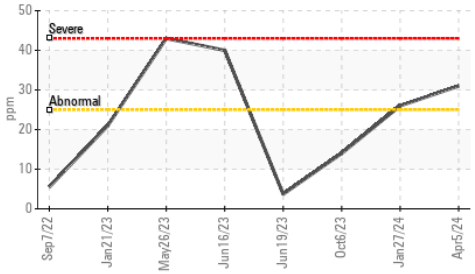
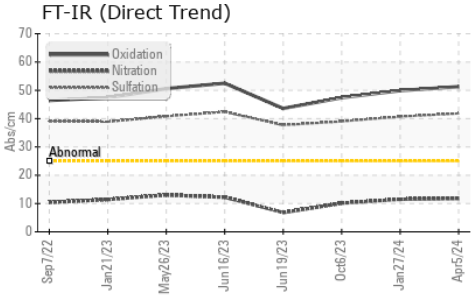
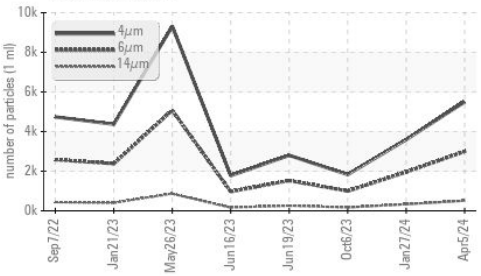
Aluminum (ppm)



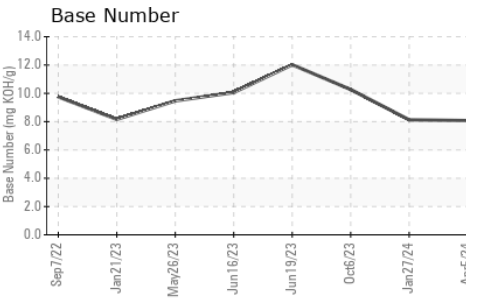
FT-IR (Direct Trend)



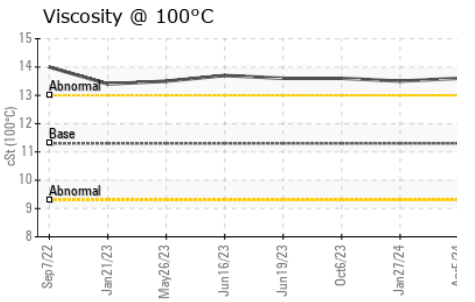
Particle Trend



Base Number



Viscosity @ 100°C



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**5498**	3593	1827
Particles >6µm		ASTM D7647	>5000	**2995**	1957	995
Particles >14µm		ASTM D7647	>640	**510**	333	169
Particles >21µm		ASTM D7647	>160	**172**	112	57
Particles >38µm		ASTM D7647	>40	**27**	17	9
Particles >71µm		ASTM D7647	>10	**3**	2	1
Oil Cleanliness		ISO 4406 (c)	>19/16	**19/16**	18/16	17/15

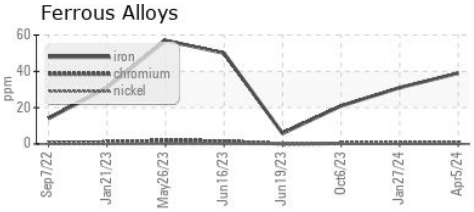
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**51.3**	49.9	47.4
Base Number (BN)	mg KOH/g	ASTM D2896		**8.07**	8.13	10.27

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

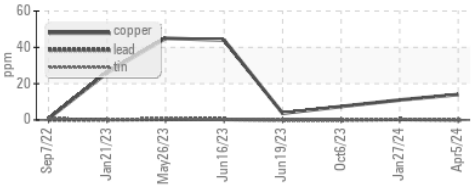
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.3	**13.6**	13.5	13.6

GRAPHS

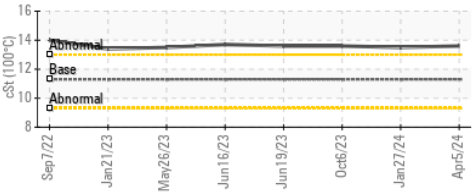
Ferrous Alloys



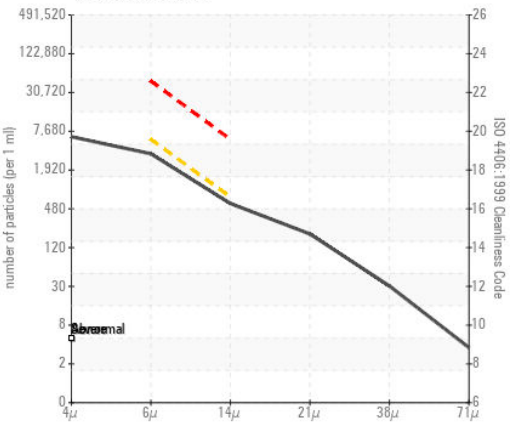
Non-ferrous Metals



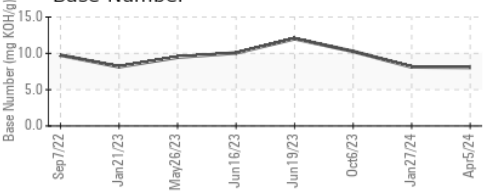
Viscosity @ 100°C



Particle Count



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLM2340218
Lab Number : 06148899
Unique Number : 10978977
Test Package : MOB 2 (Additional Tests: PrtCount)

Received : 15 Apr 2024
Tested : 16 Apr 2024
Diagnosed : 17 Apr 2024 - Sean Felton

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)

CURTIS DICE MATCO TOOLS
3026 LEPINE ST
ELKO, NV
US 89801
Contact: Service Manager
CD4321GO@HOTMAIL.COM
T: (725)785-7705
F: