



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT 1
Component
Diesel Engine
Fluid
MOBIL 1 5W30 (--- 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		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
Filter Age	mls	Client Info		7500	0	0
Oil Changed		Client Info		Not Changd	N/A	N/A
Filter Changed		Client Info		Not Changd	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

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

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
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

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

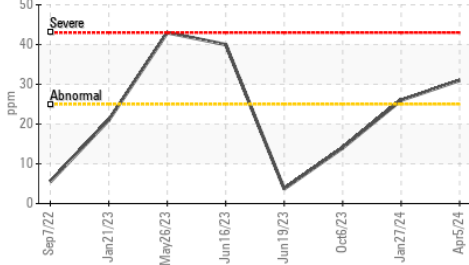
Silicon	ppm	ASTM D5185m	>30	7	6	5
Potassium	ppm	ASTM D5185m	>20	17	17	7
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	11.8	11.5	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	41.8	40.7	39.0
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
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

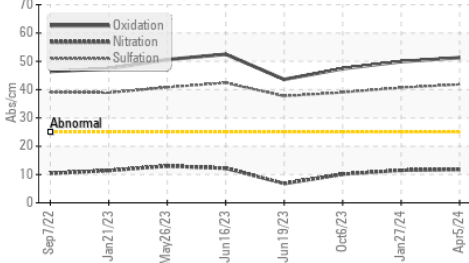
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	<1	<1
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
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
Visc @ 100°C	cSt	ASTM D445	11.3	13.6	13.5	13.6

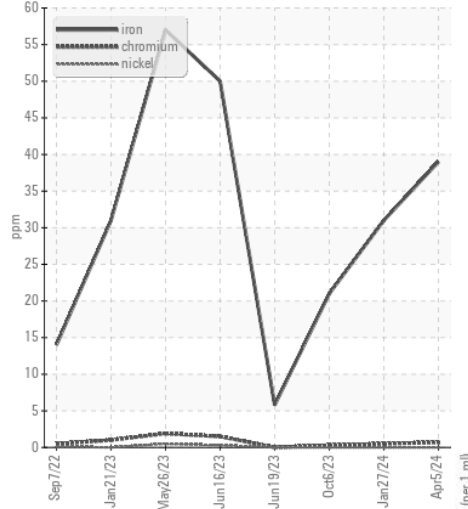
▲ Aluminum (ppm)



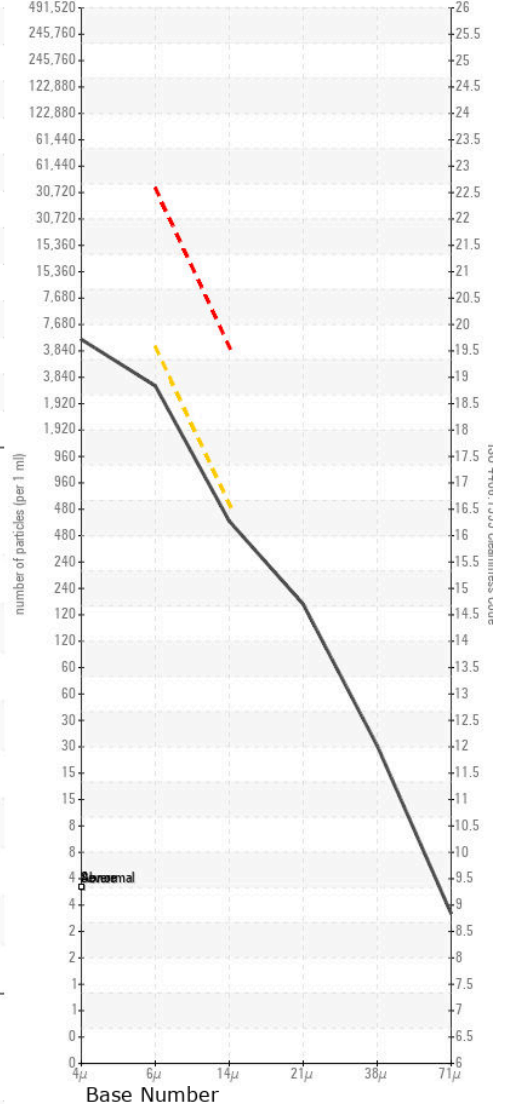
FT-IR (Direct Trend)



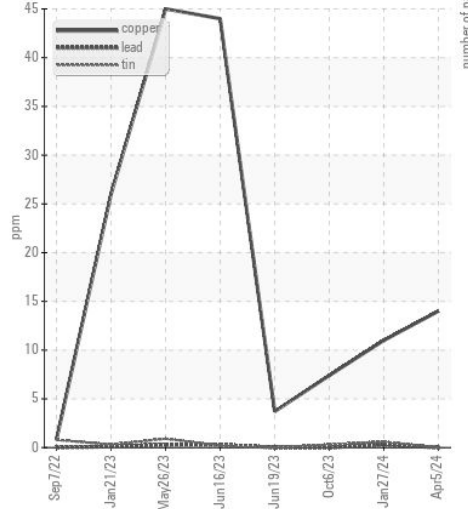
Ferrous Alloys



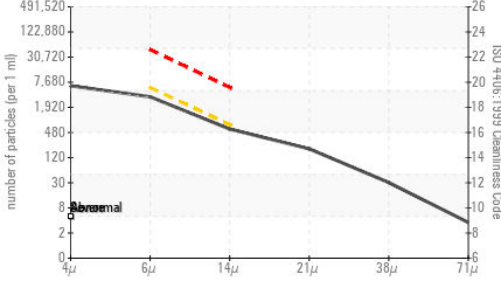
Particle Count



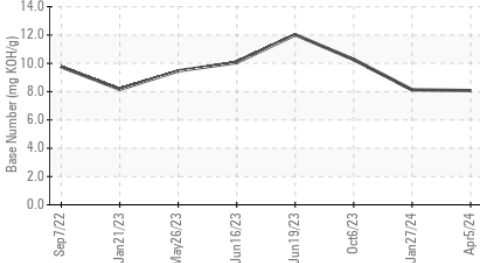
Non-ferrous Metals



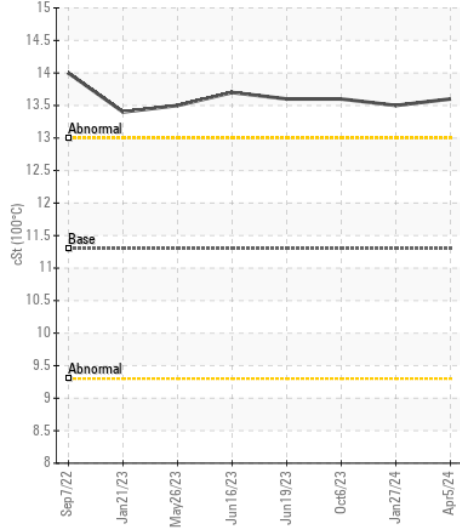
Particle Count



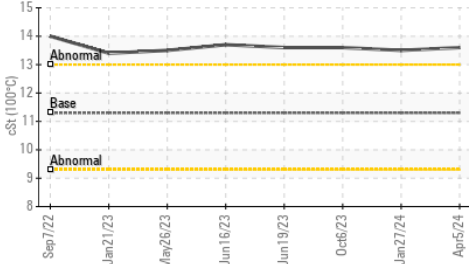
Base Number



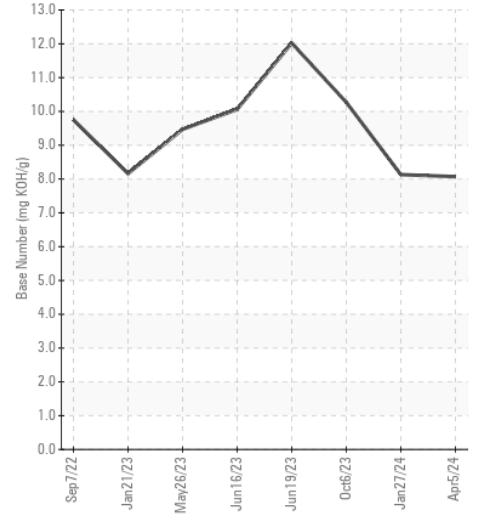
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLM2340218 **Received** : 15 Apr 2024
Lab Number : 06148899 **Tested** : 16 Apr 2024
Unique Number : 10978977 **Diagnosed** : 17 Apr 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: PrtCount)

CURTIS DICE MATCO TOOLS

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

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)