FLEET WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR PACIFIC CHALLENGER
Component
Port Main Engine
Fluid
MOBIL 15W40 (60 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment:
Top Up Amount: 1 GAL)

WEAR

All component wear rates are normal.

CONTAMINATION

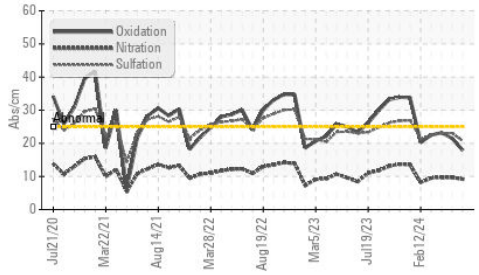
There is no indication of any contamination in the oil.

FLUID CONDITION

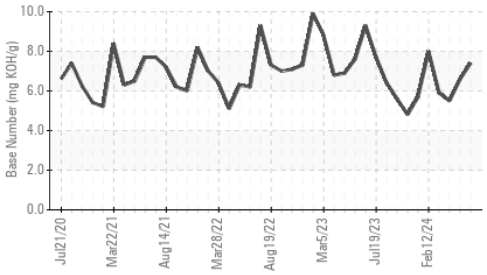
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013530	KL0011778	KL0011779
Sample Date		Client Info		01 Jul 2024	26 May 2024	16 Apr 2024
Machine Age	hrs	Client Info		5740	5240	4700
Oil Age	hrs	Client Info		500	2000	1500
Filter Age	hrs	Client Info		250	540	500
Oil Changed		Client Info		Oil Added	Changed	Oil Added
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	4	12	12
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>3	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	4	2
Lead	ppm	ASTM D5185m	>18	1	2	3
Copper	ppm	ASTM D5185m	>80	3	9	7
Tin	ppm	ASTM D5185m	>14	0	<1	1
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	>20	2	3	4
Potassium	ppm	ASTM D5185m	>20	3	4	3
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.2	9.7	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	23.1	23.1
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	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>118	<1	0	3
Boron	ppm	ASTM D5185m		72	65	60
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		8	14	13
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		568	474	395
Calcium	ppm	ASTM D5185m		1684	1839	1788
Phosphorus	ppm	ASTM D5185m		830	826	899
Zinc	ppm	ASTM D5185m		922	996	973
Sulfur	ppm	ASTM D5185m		3225	3748	4095
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.9	21.5	23.2
Base Number (BN)	mg KOH/g	ASTM D2896		7.4	6.6	5.5
Visc @ 100°C	cSt	ASTM D445		13.9	14.1	14.2

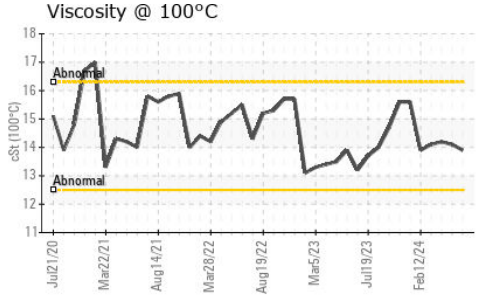
FT-IR (Direct Trend)



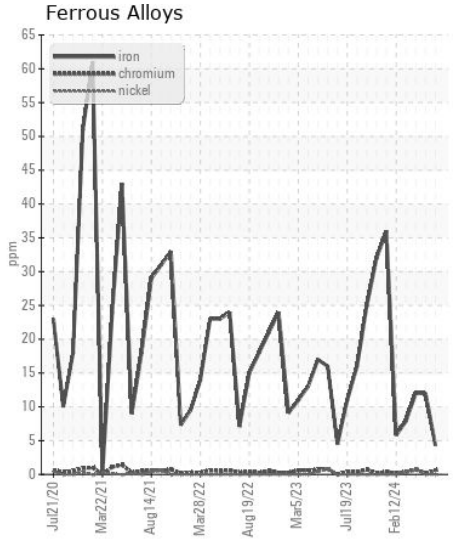
Base Number



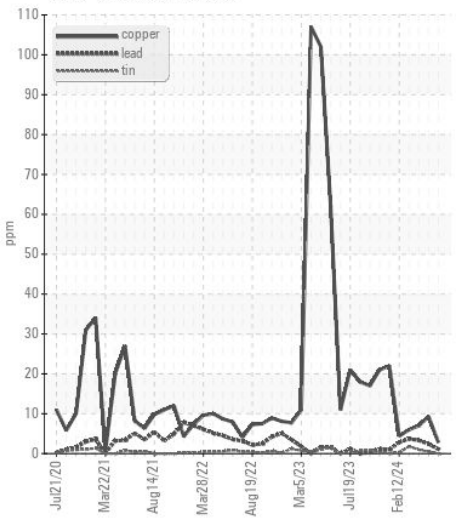
Viscosity @ 100°C



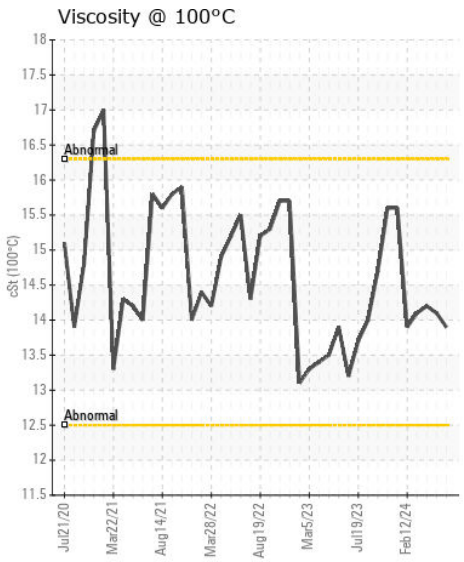
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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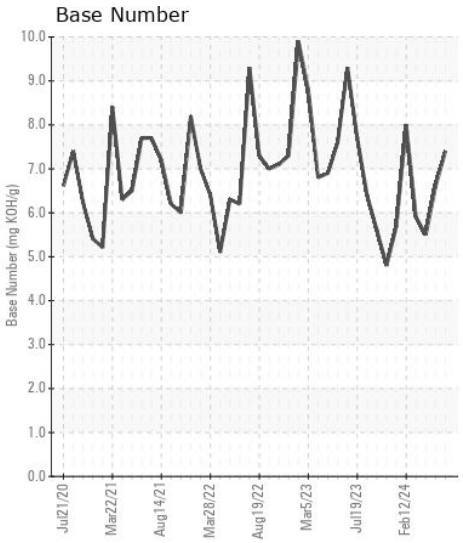

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013530
Lab Number : 06234665
Unique Number : 11123499
Test Package : FLEET

Received : 12 Jul 2024
Tested : 15 Jul 2024
Diagnosed : 15 Jul 2024 - Don Baldridge

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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