MOB II

TULCO OILS
001 - Tulsa Division

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR 990K 6088 (S/N A9P00362)
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

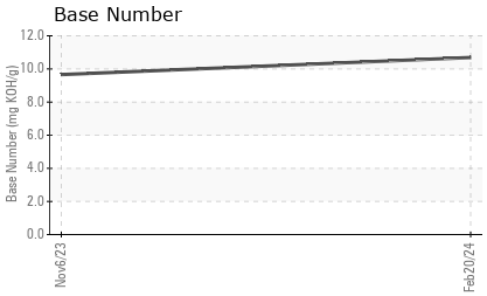
CONTAMINATION

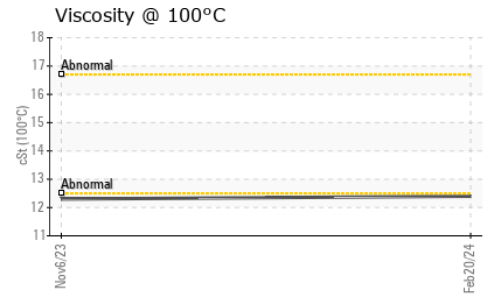
There is no indication of any contamination in the oil.

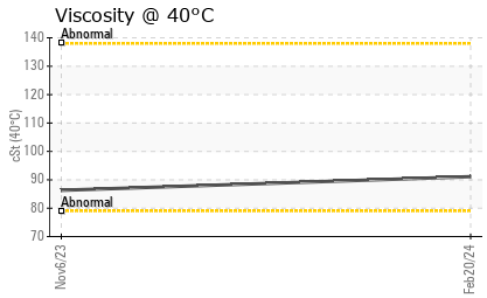
FLUID CONDITION

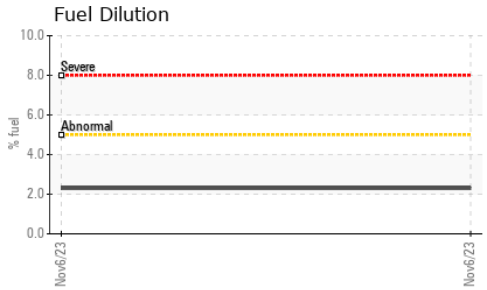
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

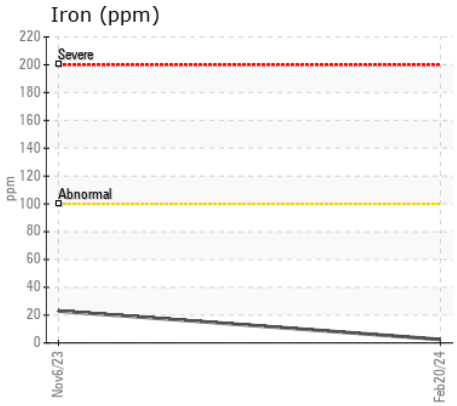
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10001711	TO10002896	---
Sample Date		Client Info		20 Feb 2024	06 Nov 2023	---
Machine Age	hrs	Client Info		15159	14829	---
Oil Age	hrs	Client Info		330	508	---
Filter Age	hrs	Client Info		330	508	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	MARGINAL	---
Iron	ppm	ASTM D5185m	>100	2	23	---
Chromium	ppm	ASTM D5185m	>20	<1	0	---
Nickel	ppm	ASTM D5185m	>2	0	0	---
Titanium	ppm	ASTM D5185m	>2	0	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	2	3	---
Lead	ppm	ASTM D5185m	>40	<1	<1	---
Copper	ppm	ASTM D5185m	>330	1	<1	---
Tin	ppm	ASTM D5185m	>15	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>25	2	4	---
Potassium	ppm	ASTM D5185m	>20	0	2	---
Fuel	%	ASTM D3524	>5	<1.0	▲ 2.3	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	6.6	7.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	19.2	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---
Sodium	ppm	ASTM D5185m		44	62	---
Boron	ppm	ASTM D5185m		0	2	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		60	61	---
Manganese	ppm	ASTM D5185m		<1	0	---
Magnesium	ppm	ASTM D5185m		934	952	---
Calcium	ppm	ASTM D5185m		1029	1097	---
Phosphorus	ppm	ASTM D5185m		1002	1080	---
Zinc	ppm	ASTM D5185m		1250	1282	---
Sulfur	ppm	ASTM D5185m		3182	3335	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	14.5	---
Base Number (BN)	mg KOH/g	ASTM D2896		10.69	9.66	---
Visc @ 40°C	cSt	ASTM D445		91.1	86.3	---
Visc @ 100°C	cSt	ASTM D445		12.4	12.3	---
Viscosity Index (VI)	Scale	ASTM D2270		130	137	---

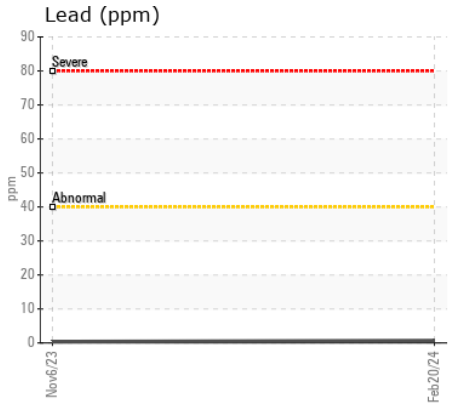


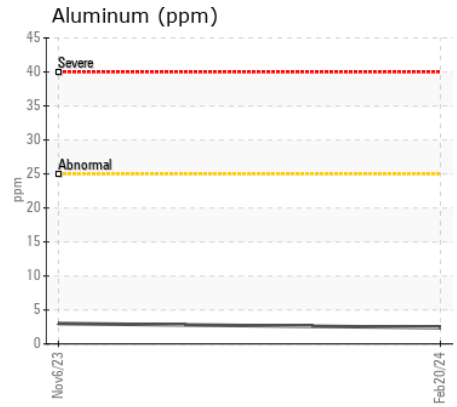


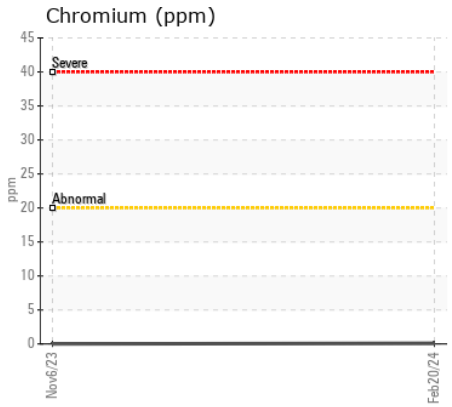


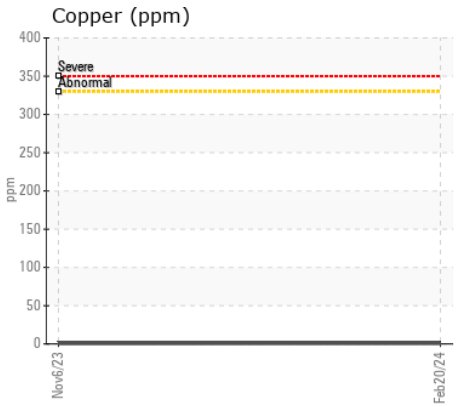


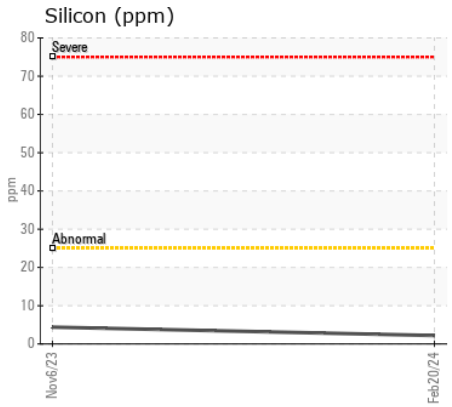


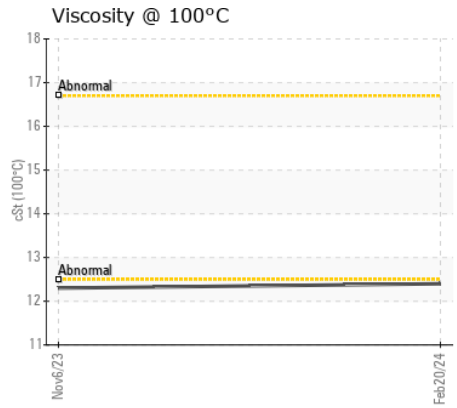


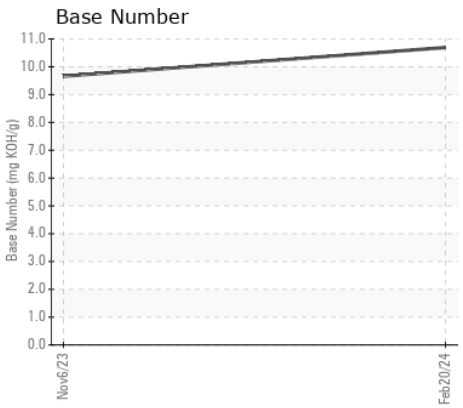












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10001711
Lab Number : 06101117
Unique Number : 10899347
Test Package : MOB 2 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

Received : 26 Feb 2024
Tested : 28 Feb 2024
Diagnosed : 28 Feb 2024 - Jonathan Hester

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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