



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
CATERPILLAR TL1255D 5106
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RW0004663	---	---
Sample Date		Client Info		13 Feb 2024	---	---
Machine Age	hrs	Client Info		1403	---	---
Oil Age	hrs	Client Info		420	---	---
Filter Age	hrs	Client Info		420	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ATTENTION	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	20	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m	>2	0	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>25	9	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	151	---	---
Tin	ppm	ASTM D5185m	>15	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

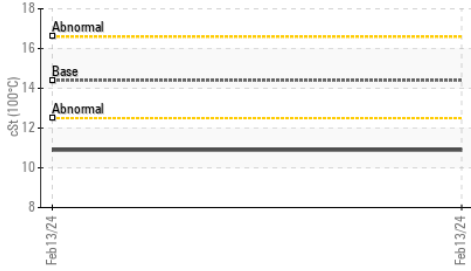
Silicon	ppm	ASTM D5185m	>25	10	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Fuel	%	ASTM D3524	>5	0.3	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

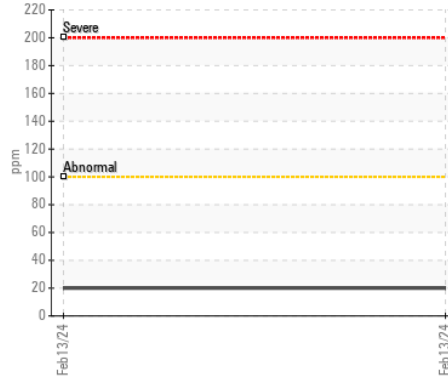
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	2	---	---
Boron	ppm	ASTM D5185m	250	44	---	---
Barium	ppm	ASTM D5185m	10	0	---	---
Molybdenum	ppm	ASTM D5185m	100	39	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m	450	511	---	---
Calcium	ppm	ASTM D5185m	3000	1518	---	---
Phosphorus	ppm	ASTM D5185m	1150	894	---	---
Zinc	ppm	ASTM D5185m	1350	1090	---	---
Sulfur	ppm	ASTM D5185m	4250	2767	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.0	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.13	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 10.9	---	---

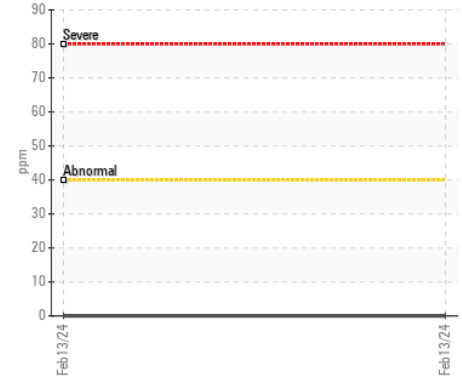
▲ Viscosity @ 100°C



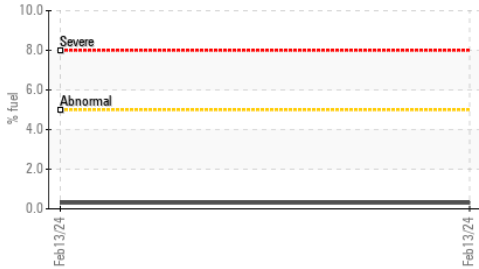
Iron (ppm)



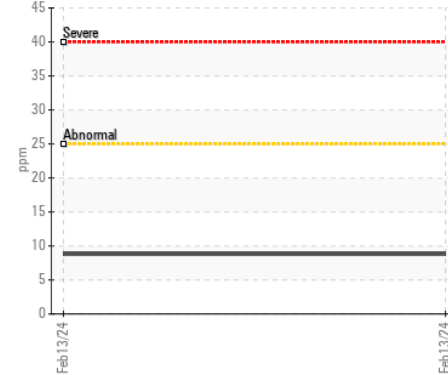
Lead (ppm)



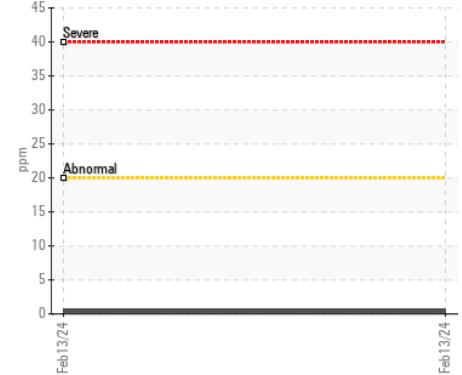
Fuel Dilution



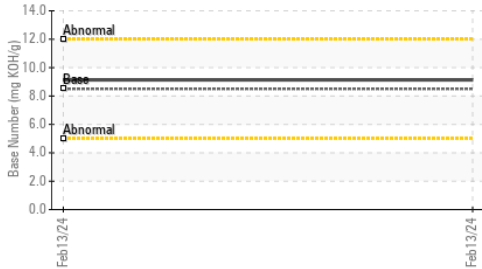
Aluminum (ppm)



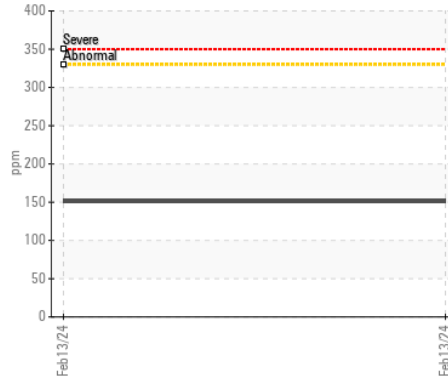
Chromium (ppm)



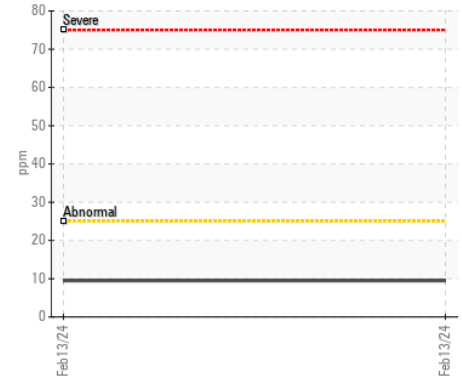
Base Number



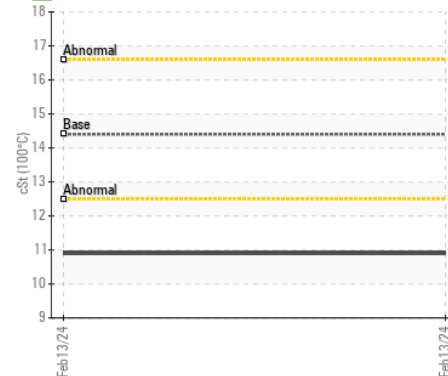
Copper (ppm)



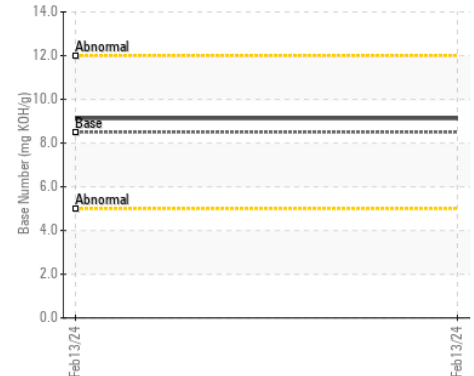
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : RW0004663

Lab Number : 06098644

Unique Number : 10896874

Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 23 Feb 2024

Tested : 27 Feb 2024

Diagnosed : 27 Feb 2024 - Sean Felton

NEWKIRK ELECTRIC

1875 ROBERTS ST.

MUSKEGON, MI

US 49442

Contact: ERIC KING

ewking@newkirk-electric.com

T: (231)206-6131

F: (231)724-4090

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)