



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**CATERPILLAR 950K PML-2 (S/N VR4A00551)**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (5 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>CL0005601</b>	CL0005478	CL0005271
Sample Date		Client Info		<b>30 Jun 2024</b>	18 May 2024	23 Mar 2024
Machine Age	hrs	Client Info		<b>21255</b>	21027	20780
Oil Age	hrs	Client Info		<b>228</b>	247	270
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>6</b>	4	4
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>6</b>	6	5
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	<1	0
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

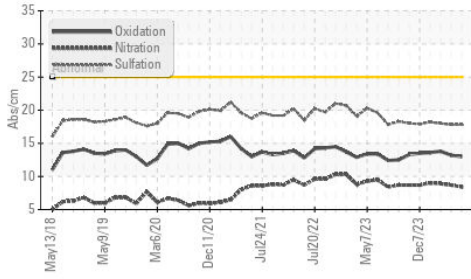
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.4</b>	8.7	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.8</b>	17.8	18.0
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

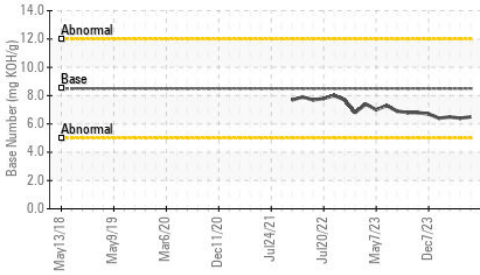
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>3</b>	<1	1
Boron	ppm	ASTM D5185m	250	<b>56</b>	67	58
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>92</b>	87	81
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	450	<b>20</b>	33	15
Calcium	ppm	ASTM D5185m	3000	<b>2324</b>	2209	2330
Phosphorus	ppm	ASTM D5185m	1150	<b>1075</b>	1089	1050
Zinc	ppm	ASTM D5185m	1350	<b>1308</b>	1248	1183
Sulfur	ppm	ASTM D5185m	4250	<b>3963</b>	4344	4366
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.0</b>	13.2	13.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.5</b>	6.4	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.4</b>	14.2	14.2

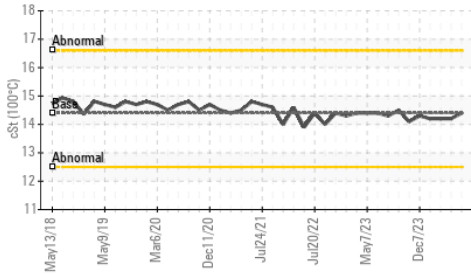
FT-IR (Direct Trend)



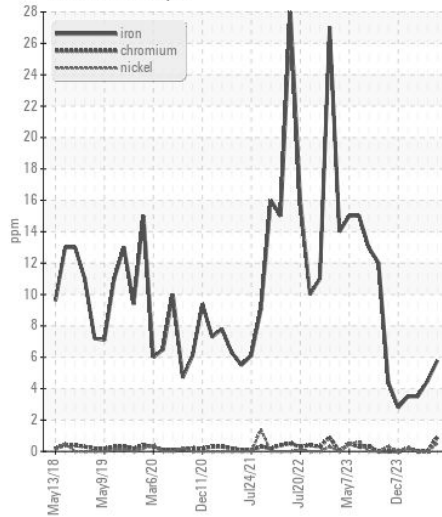
Base Number



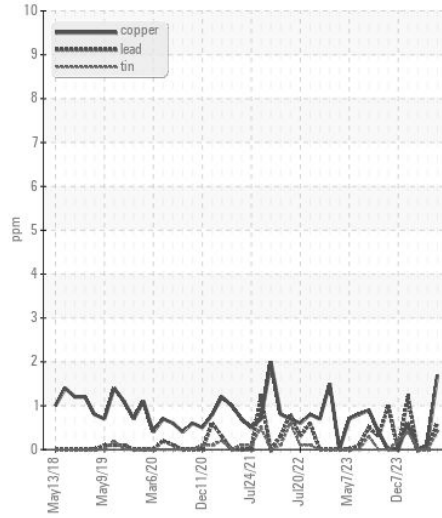
Viscosity @ 100°C



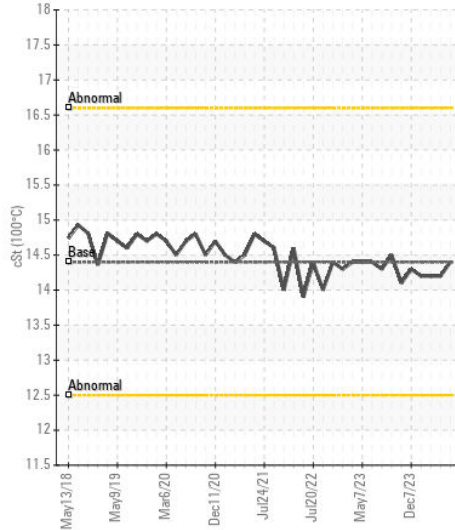
Ferrous Alloys



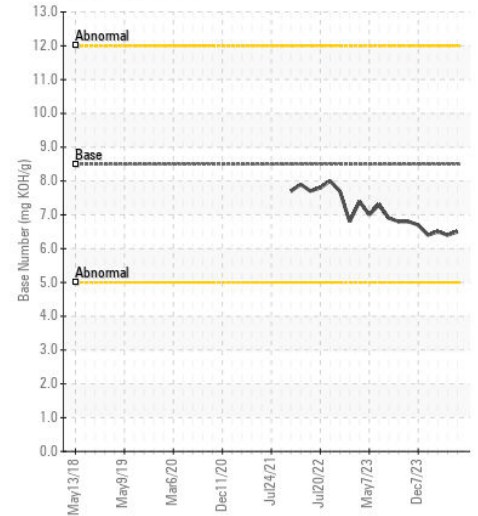
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : CL0005601 **Received** : 08 Jul 2024  
**Lab Number** : 06229731 **Tested** : 09 Jul 2024  
**Unique Number** : 11113224 **Diagnosed** : 09 Jul 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**PEDULLA**  
 146 MCLELLAND  
 MOORESVILLE, NC  
 US 28115  
 Contact: LARRY

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)

T:  
F: