



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
CATERPILLAR 219-1501
Component
Left Final Drive
Fluid
GEAR OIL ISO 220 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

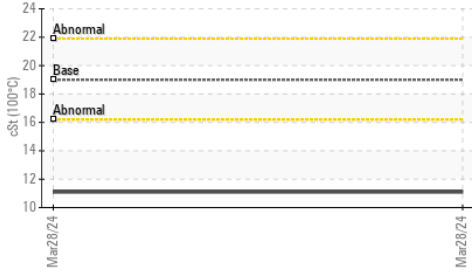
There is no indication of any contamination in the oil.

FLUID CONDITION

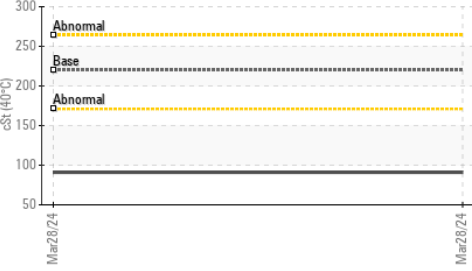
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0088639	---	---
Sample Date		Client Info		28 Mar 2024	---	---
Machine Age	hrs	Client Info		3709	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---
<hr/>						
Iron	ppm	ASTM D5185(m)	>800	194	---	---
Chromium	ppm	ASTM D5185(m)	>10	3	---	---
Nickel	ppm	ASTM D5185(m)	>5	<1	---	---
Titanium	ppm	ASTM D5185(m)	>15	<1	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>75	5	---	---
Lead	ppm	ASTM D5185(m)	>10	0	---	---
Copper	ppm	ASTM D5185(m)	>75	<1	---	---
Tin	ppm	ASTM D5185(m)	>8	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
<hr/>						
Silicon	ppm	ASTM D5185(m)	>400	20	---	---
Potassium	ppm	ASTM D5185(m)	>20	2	---	---
Water		WC Method	>0.2	NEG	---	---
Silt	scalar	Visual*	NONE	VLITE	---	---
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	---	---
<hr/>						
Sodium	ppm	ASTM D5185(m)		2	---	---
Boron	ppm	ASTM D5185(m)	50	89	---	---
Barium	ppm	ASTM D5185(m)	15	0	---	---
Molybdenum	ppm	ASTM D5185(m)	15	<1	---	---
Manganese	ppm	ASTM D5185(m)		1	---	---
Magnesium	ppm	ASTM D5185(m)	50	44	---	---
Calcium	ppm	ASTM D5185(m)	50	2743	---	---
Phosphorus	ppm	ASTM D5185(m)	350	1107	---	---
Zinc	ppm	ASTM D5185(m)	100	1057	---	---
Sulfur	ppm	ASTM D5185(m)	12500	11189	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	220	91.0	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	19.0	11.1	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	96	107	---	---

▲ Viscosity @ 100°C



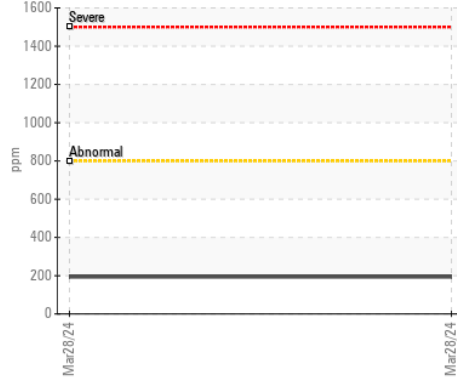
▲ Viscosity @ 40°C



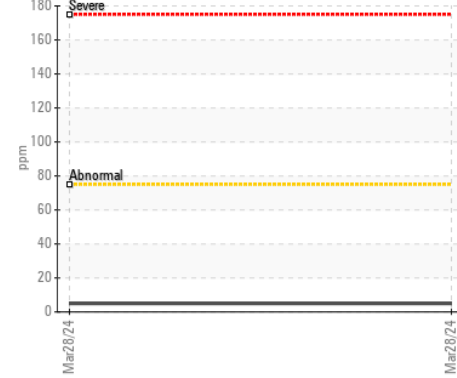
● Additives



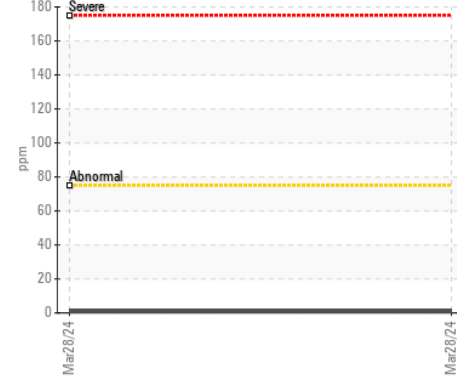
Iron (ppm)



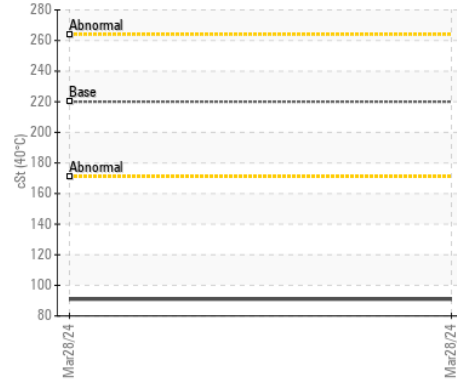
Aluminum (ppm)



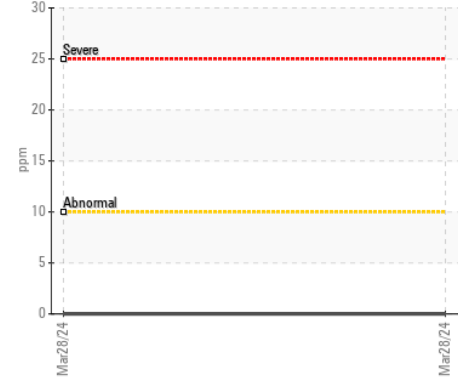
Copper (ppm)



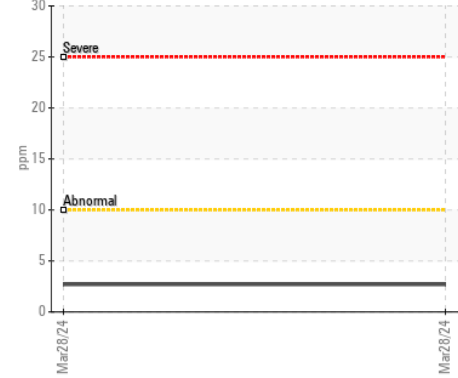
▲ Viscosity @ 40°C



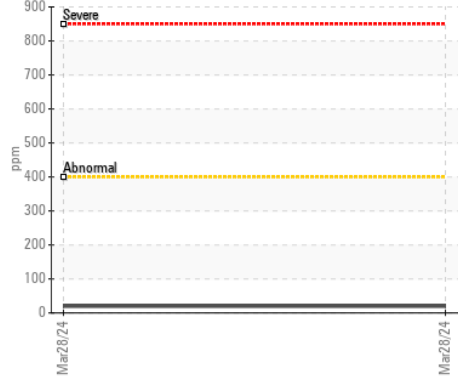
Lead (ppm)



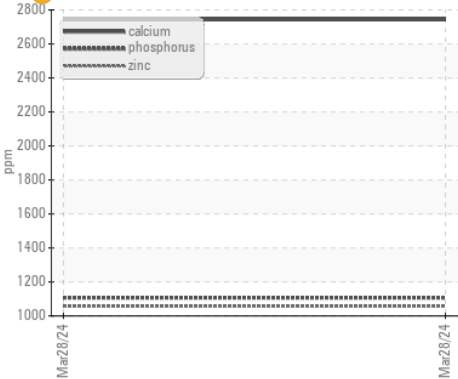
Chromium (ppm)



Silicon (ppm)



● Additives



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

Sample No. : PC0088639

Lab Number : 02630312

Unique Number : 5763444

Test Package : MOB 1 (Additional Tests: KV100, VI)

Received : 19 Apr 2024

Tested : 22 Apr 2024

Diagnosed : 22 Apr 2024 - Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

Validity of results and interpretation are based on the sample and information as supplied.

LAVIS CONTRACTING

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