



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 349F 6115 (S/N HPD00640)
Component
Rear Right Final Drive
Fluid
TULCO LUBSOIL TO-4 50 (4 GAL)

RECOMMENDATION

We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10002993	TO10001567	TO10001425
Sample Date		Client Info		18 Dec 2023	30 Mar 2023	15 Jul 2022
Machine Age	hrs	Client Info		7585	7109	6593
Oil Age	hrs	Client Info		992	516	1004
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changd
Filter Changed		Client Info		None	None	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>500	258	140	287
Iron	ppm	ASTM D5185m	>800	271	129	329
Chromium	ppm	ASTM D5185m	>10	<1	<1	1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m	>15	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>75	14	6	11
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	0	<1	<1
Tin	ppm	ASTM D5185m	>8	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

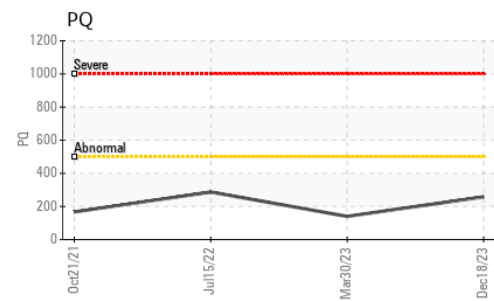
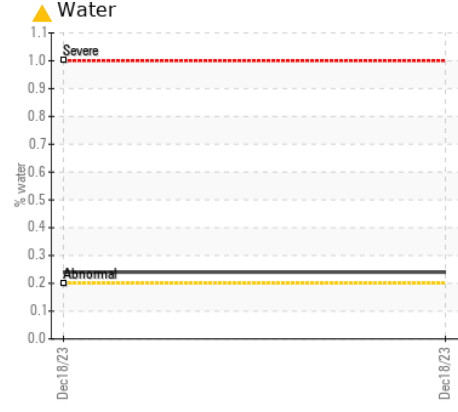
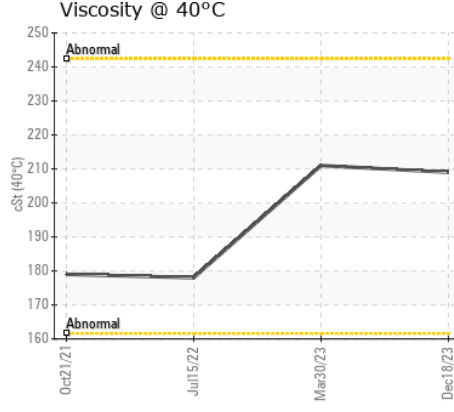
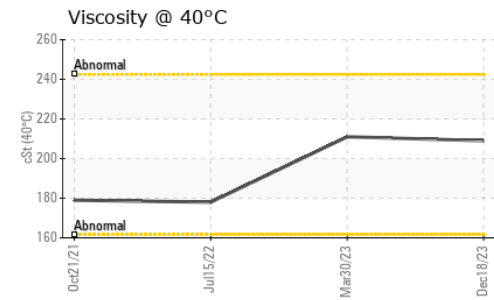
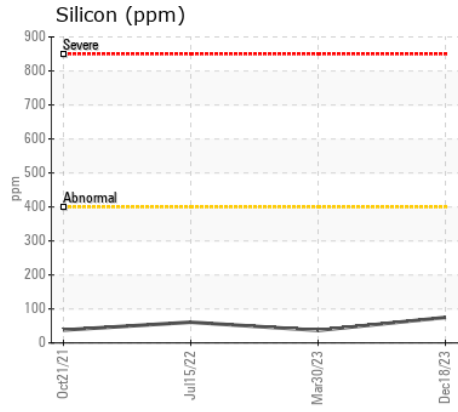
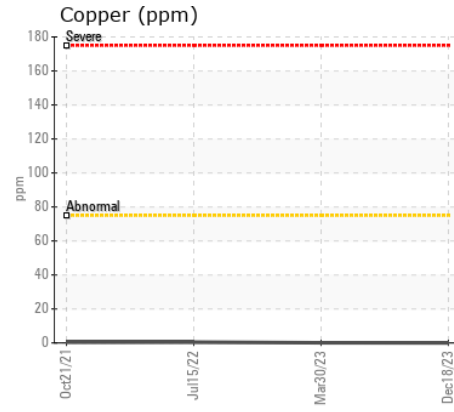
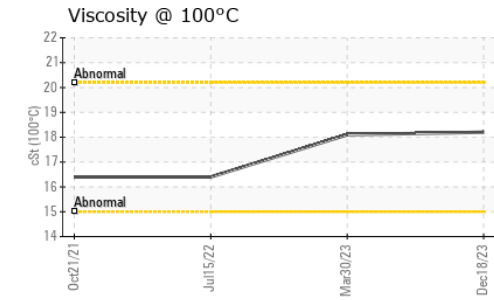
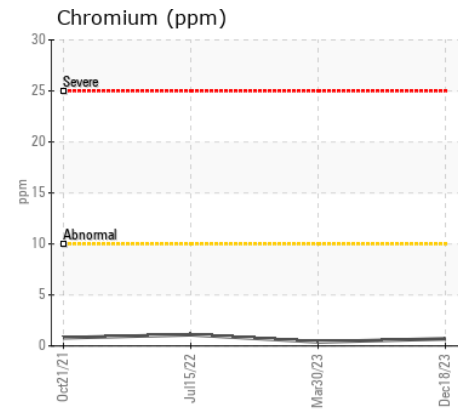
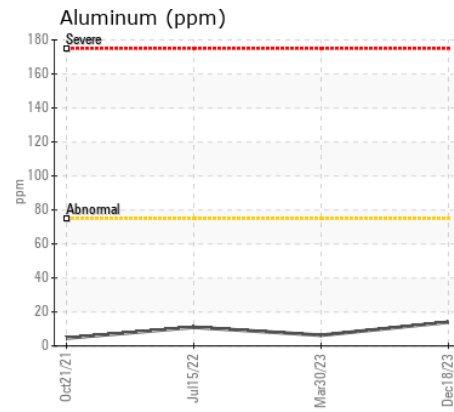
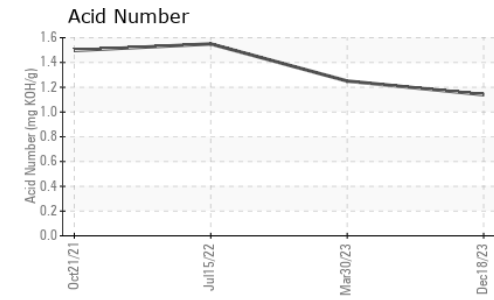
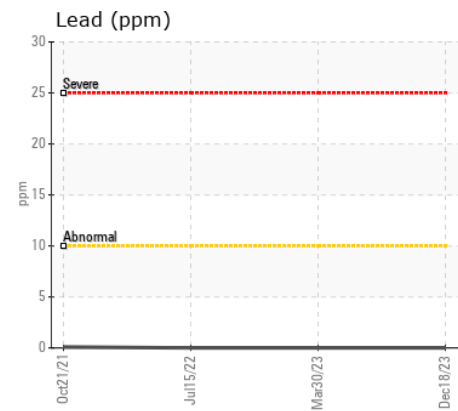
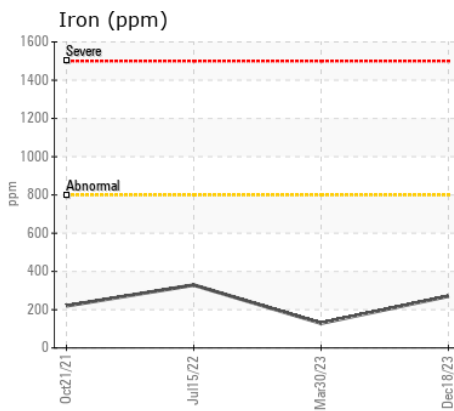
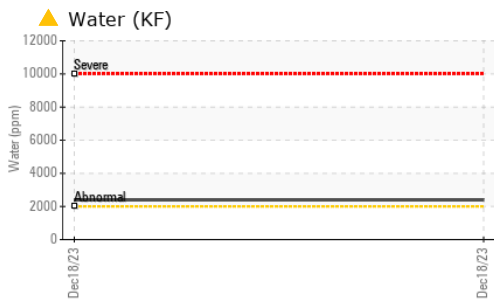
There is a light concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>400	75	37	61
Potassium	ppm	ASTM D5185m	>20	3	3	2
Water	%	ASTM D6304	>0.2	▲ 0.240	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 2400	---	---
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	>0.2	0.2%	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		3	3	2
Boron	ppm	ASTM D5185m		0	0	10
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	2
Manganese	ppm	ASTM D5185m		2	1	2
Magnesium	ppm	ASTM D5185m		15	11	12
Calcium	ppm	ASTM D5185m		3129	3085	2478
Phosphorus	ppm	ASTM D5185m		928	910	776
Zinc	ppm	ASTM D5185m		1169	1146	954
Sulfur	ppm	ASTM D5185m		4854	4747	6970
Acid Number (AN)	mg KOH/g	ASTM D8045		1.14	1.25	1.55
Visc @ 40°C	cSt	ASTM D445		209	211	178
Visc @ 100°C	cSt	ASTM D445		18.2	18.1	16.4
Viscosity Index (VI)	Scale	ASTM D2270		95	93	95



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10002993 **Received** : 27 Dec 2023
Lab Number : 06046321 **Tested** : 28 Dec 2023
Unique Number : 10806929 **Diagnosed** : 28 Dec 2023 - Angela Borella
Test Package : MOB 2 (Additional Tests: KF, KV100, PQ, VI)

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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)