



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 980K 6058 (S/N W7K00517)
 Component
Front Differential
 Fluid
TULCO LUBSOIL TO-4 50 (12 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10003651	TO10003317	TO10002974
Sample Date		Client Info		15 Jun 2024	06 Apr 2024	26 Jan 2024
Machine Age	hrs	Client Info		20455	19983	19449
Oil Age	hrs	Client Info		5640	5168	4634
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		None	N/A	None
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		32	47	58
Iron	ppm	ASTM D5185m	>500	44	38	39
Chromium	ppm	ASTM D5185m	>3	0	0	<1
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	5	4	4
Lead	ppm	ASTM D5185m	>13	0	0	<1
Copper	ppm	ASTM D5185m	>103	4	4	3
Tin	ppm	ASTM D5185m	>5	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

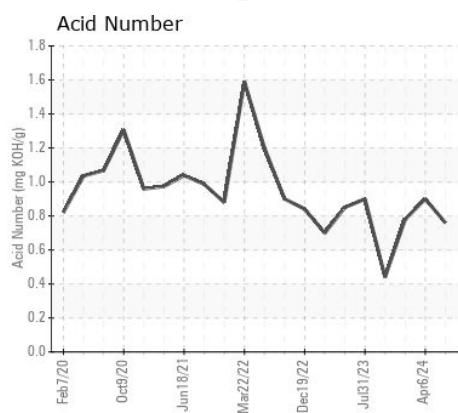
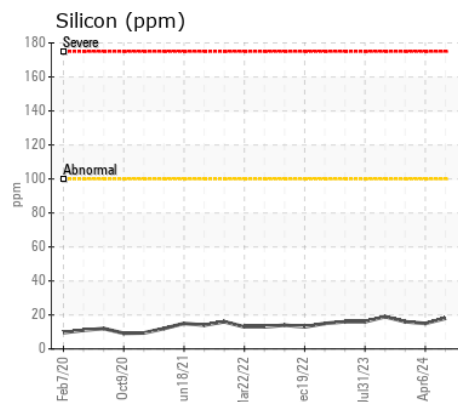
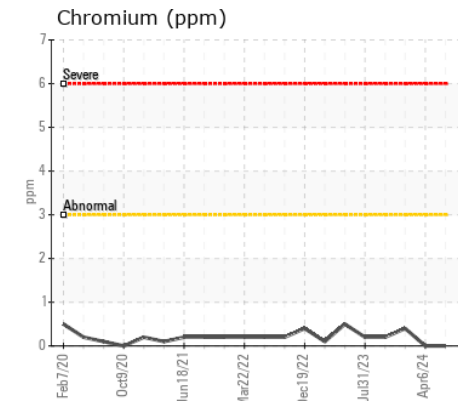
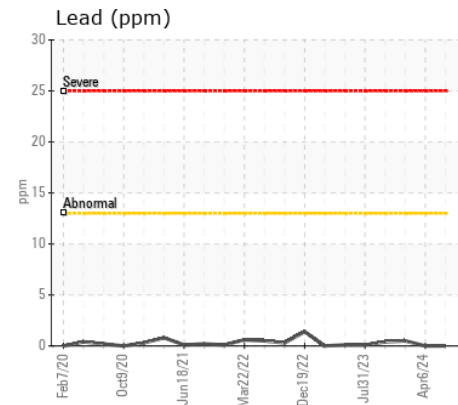
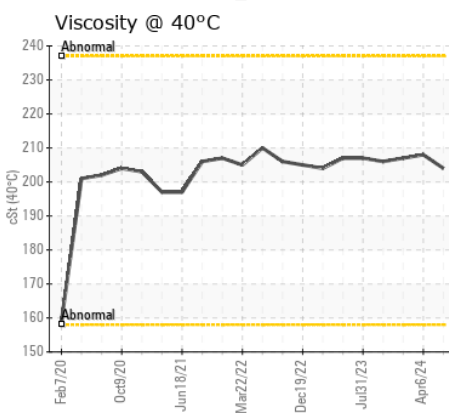
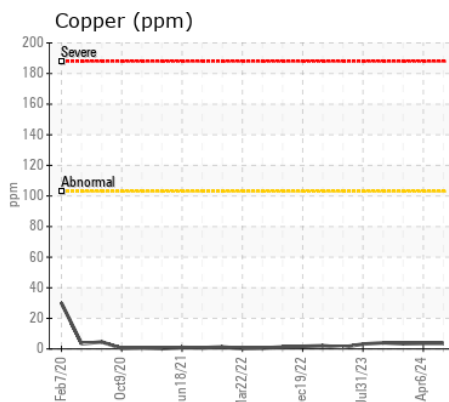
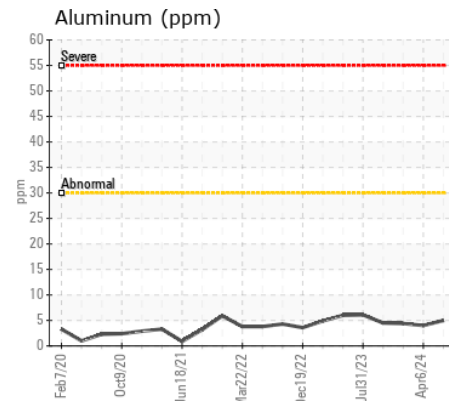
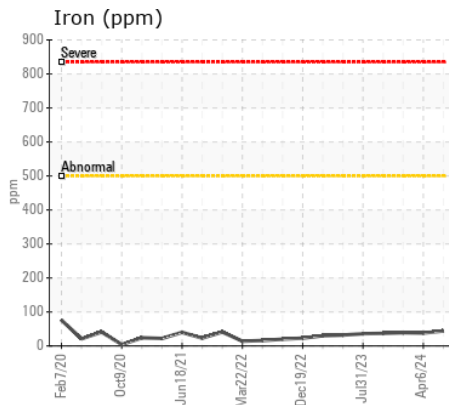
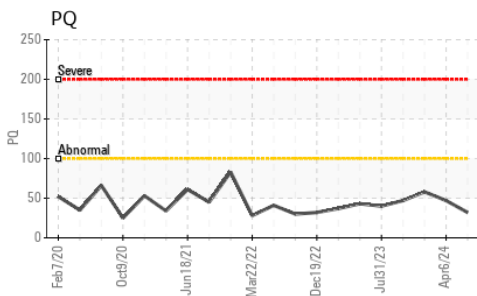
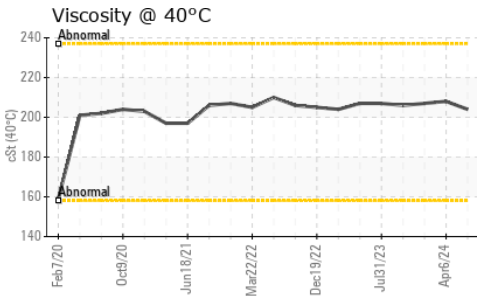
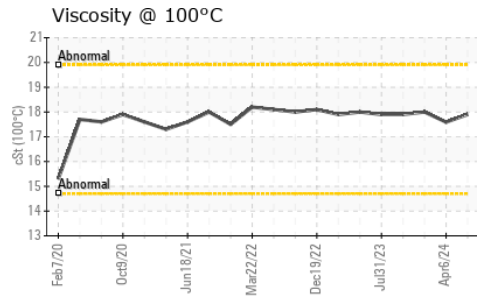
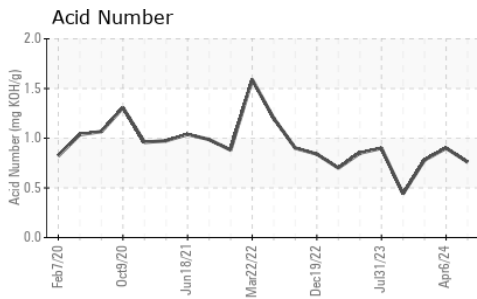
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	18	15	16
Potassium	ppm	ASTM D5185m	>20	3	0	0
Water		WC Method	>.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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	>.2	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	6	4
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		1	0	<1
Magnesium	ppm	ASTM D5185m		20	13	19
Calcium	ppm	ASTM D5185m		4558	3890	3992
Phosphorus	ppm	ASTM D5185m		903	692	833
Zinc	ppm	ASTM D5185m		1053	824	957
Sulfur	ppm	ASTM D5185m		5879	4646	4718
Acid Number (AN)	mg KOH/g	ASTM D8045		0.76	0.90	0.78
Visc @ 40°C	cSt	ASTM D445		204	208	207
Visc @ 100°C	cSt	ASTM D445		17.9	17.59	18.0
Viscosity Index (VI)	Scale	ASTM D2270		95	90	94



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003651 **Received** : 20 Jun 2024
Lab Number : 06216333 **Tested** : 21 Jun 2024
Unique Number : 11089197 **Diagnosed** : 21 Jun 2024 - Wes Davis
Test Package : MOB 2 (Additional Tests: KV100, PQ, VI)

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Certificate L2367
 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)