



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 980 H LOADER 6737 (S/N JMS01810)
 Component
Front Differential
 Fluid
TULCO LUBSOIL TO-4 50 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10003609	TO10003007	TO10002417
Sample Date		Client Info		13 Jun 2024	15 Dec 2023	31 Jul 2023
Machine Age	hrs	Client Info		31038	30731	30299
Oil Age	hrs	Client Info		2421	2114	1612
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	None	None
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		42	47	48
Iron	ppm	ASTM D5185m	>500	42	32	32
Chromium	ppm	ASTM D5185m	>3	<1	0	0
Nickel	ppm	ASTM D5185m	>3	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>30	3	2	3
Lead	ppm	ASTM D5185m	>13	<1	0	0
Copper	ppm	ASTM D5185m	>103	14	10	9
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

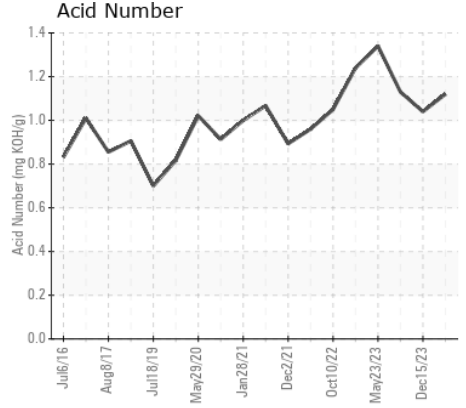
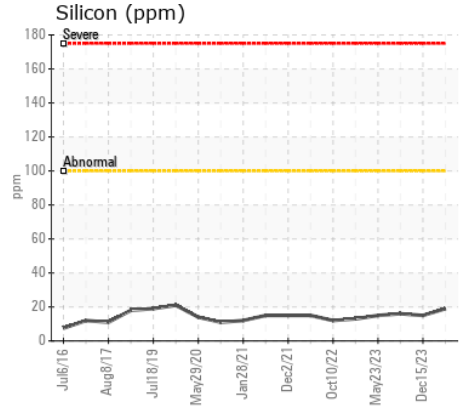
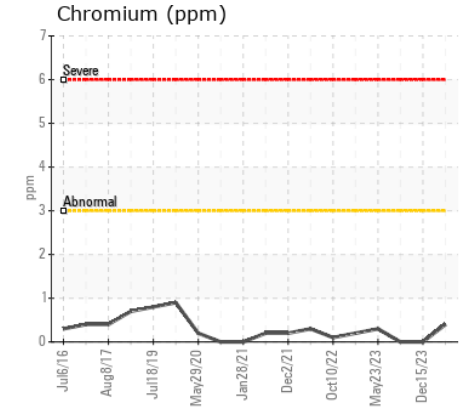
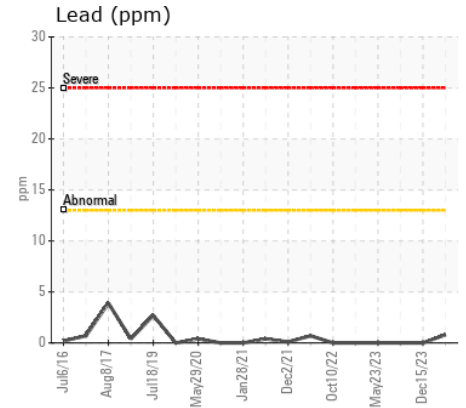
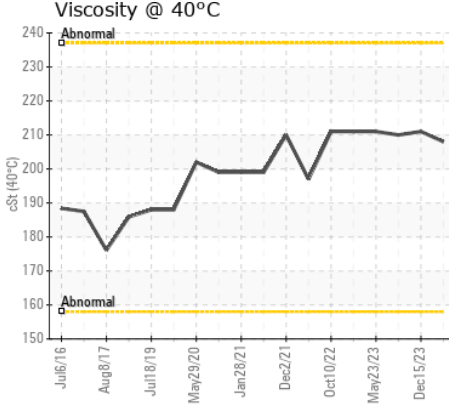
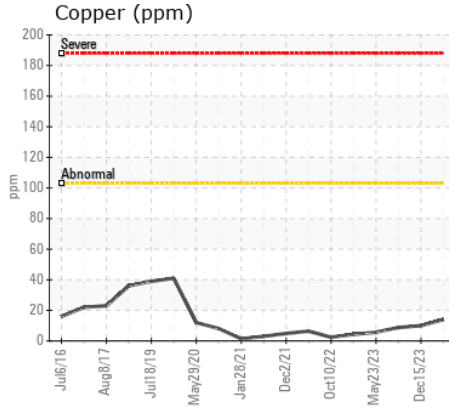
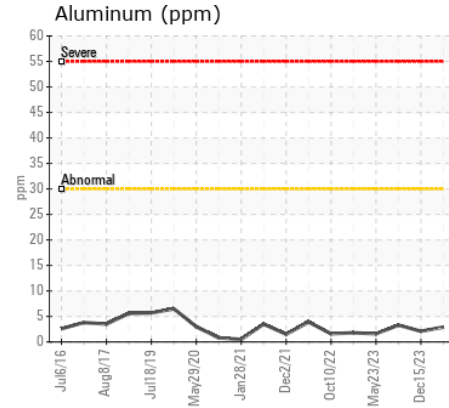
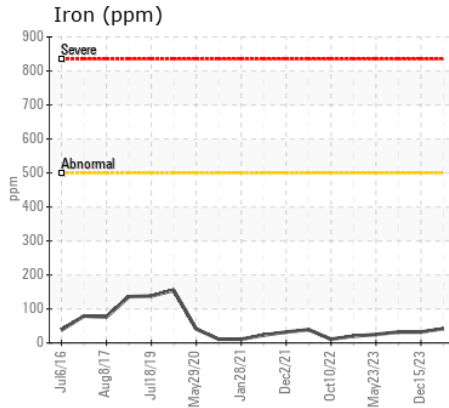
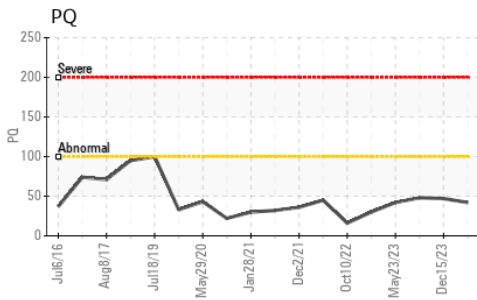
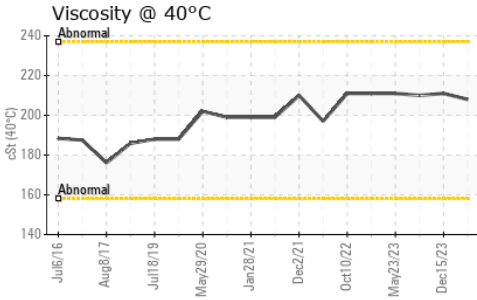
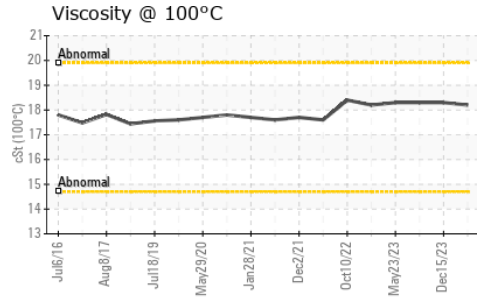
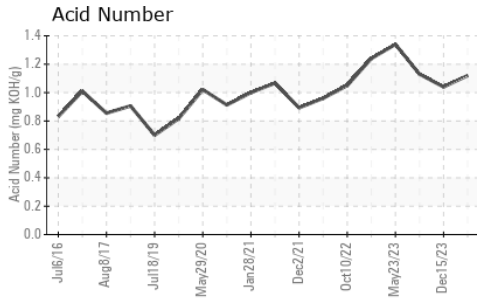
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	19	15	16
Potassium	ppm	ASTM D5185m	>20	2	0	2
Water		WC Method	>.2	NEG	NEG	NEG
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	>.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		<1	4	0
Boron	ppm	ASTM D5185m		0	6	0
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		<1	2	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		12	25	12
Calcium	ppm	ASTM D5185m		3481	2997	3476
Phosphorus	ppm	ASTM D5185m		1018	915	998
Zinc	ppm	ASTM D5185m		1206	1089	1235
Sulfur	ppm	ASTM D5185m		5021	4553	5729
Acid Number (AN)	mg KOH/g	ASTM D8045		1.12	1.04	1.13
Visc @ 40°C	cSt	ASTM D445		208	211	210
Visc @ 100°C	cSt	ASTM D445		18.2	18.3	18.3
Viscosity Index (VI)	Scale	ASTM D2270		96	95	95



Certificate L2367

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

Sample No. : TO10003609

Lab Number : 06217389

Unique Number : 11090253

Test Package : MOB 2 (Additional Tests: KV100, PQ, VI)

Received : 21 Jun 2024

Tested : 24 Jun 2024

Diagnosed : 24 Jun 2024 - Wes Davis

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)

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