



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 980 H LOADER 6737 (S/N JMS01810)
 Component
Rear 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		TO10003624	TO10003004	TO10002423
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		ASTM D8184		23	25	21
Iron	ppm	ASTM D5185m	>500	22	14	14
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	<1	2
Lead	ppm	ASTM D5185m	>13	<1	<1	0
Copper	ppm	ASTM D5185m	>103	2	1	<1
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

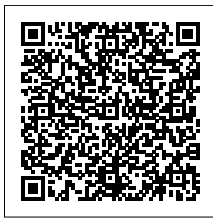
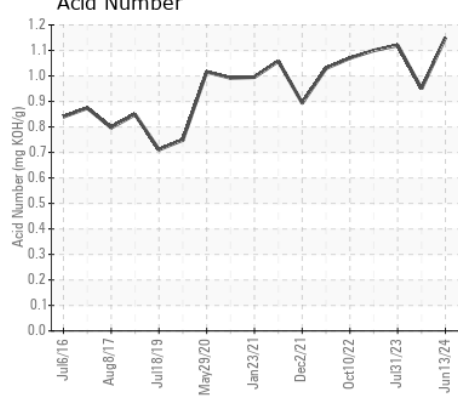
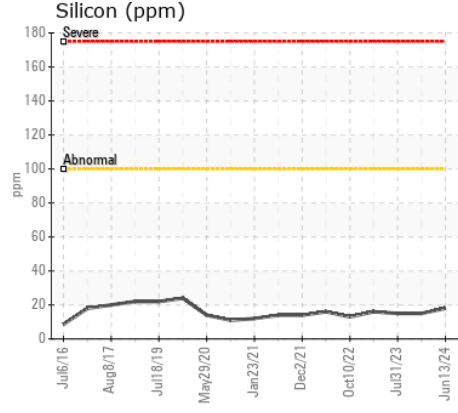
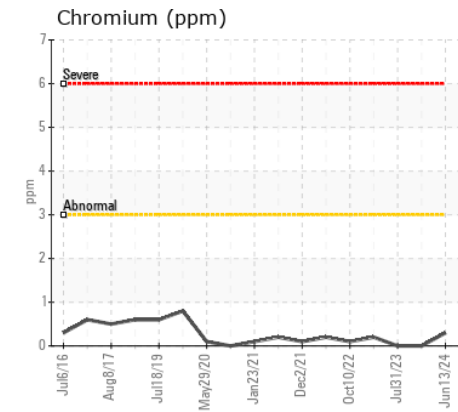
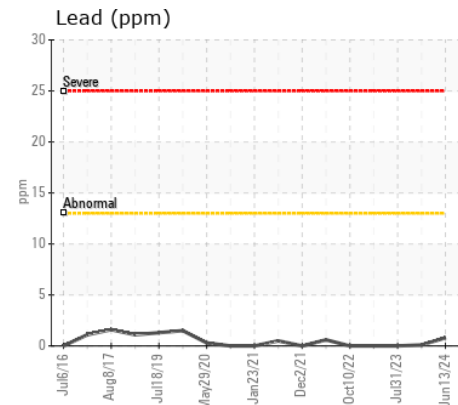
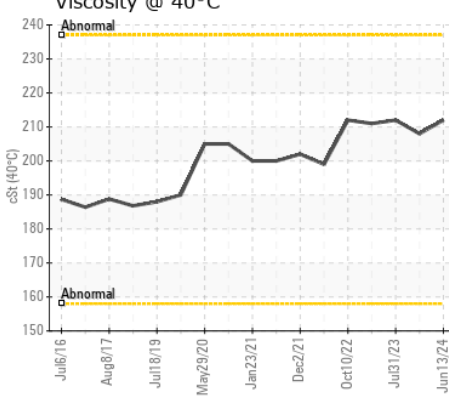
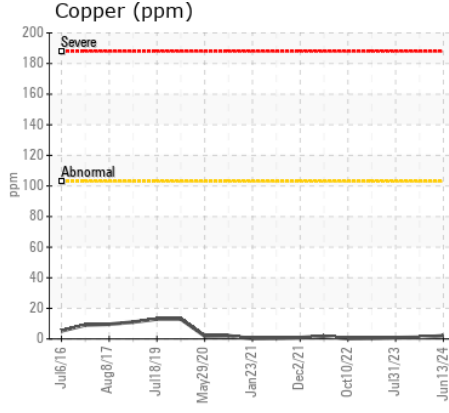
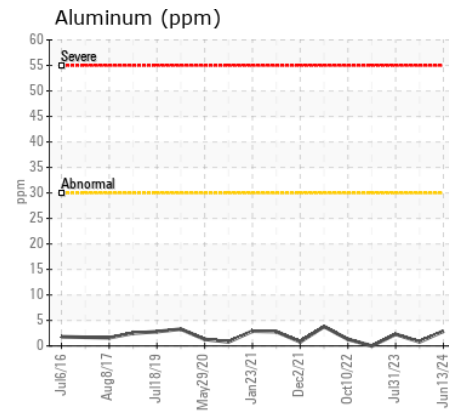
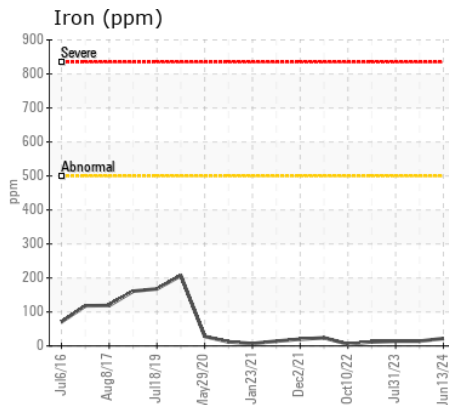
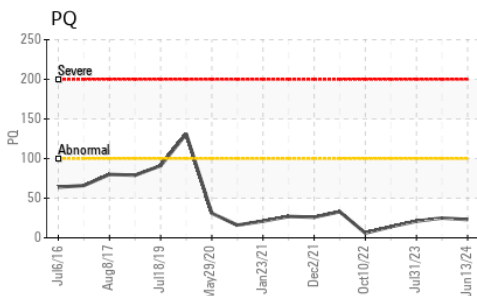
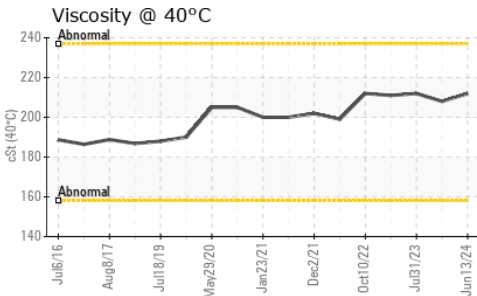
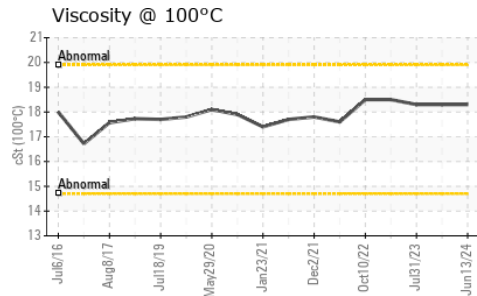
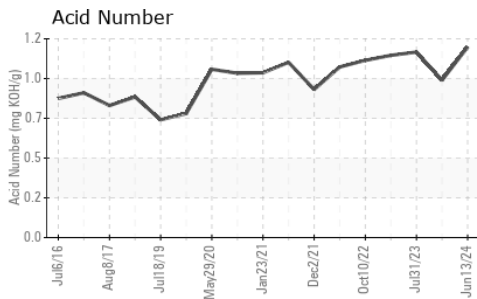
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	18	15	15
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		0	3	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		12	12	11
Calcium	ppm	ASTM D5185m		3459	2942	3374
Phosphorus	ppm	ASTM D5185m		1076	920	992
Zinc	ppm	ASTM D5185m		1244	1088	1215
Sulfur	ppm	ASTM D5185m		5346	4533	5510
Acid Number (AN)	mg KOH/g	ASTM D8045		1.15	0.95	1.12
Visc @ 40°C	cSt	ASTM D445		212	208	212
Visc @ 100°C	cSt	ASTM D445		18.3	18.3	18.3
Viscosity Index (VI)	Scale	ASTM D2270		95	96	95



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003624
Lab Number : 06217392
Unique Number : 11090256
Test Package : MOB 2 (Additional Tests: KV100, PQ, VI)
Received : 21 Jun 2024
Tested : 24 Jun 2024
Diagnosed : 24 Jun 2024 - Wes Davis

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 US 74137
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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)