



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 6494 (S/N 4FR00287)

Component
Steering

Fluid
TULCO LUBSOIL SUPER HYDRAULIC HZ 46 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10003670	TO10002746	TO10002212
Sample Date		Client Info		22 Jun 2024	29 Sep 2023	24 Apr 2023
Machine Age	hrs	Client Info		31455	30989	30493
Oil Age	hrs	Client Info		2988	2522	2026
Filter Age	hrs	Client Info		2988	496	491
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>60	0	2	5
Chromium	ppm	ASTM D5185m	>12	0	0	<1
Nickel	ppm	ASTM D5185m	>6	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>4	<1	0	0
Lead	ppm	ASTM D5185m	>12	0	0	0
Copper	ppm	ASTM D5185m	>30	0	1	2
Tin	ppm	ASTM D5185m		<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

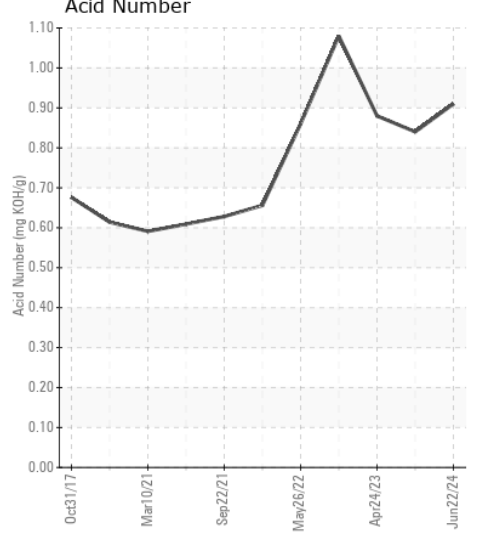
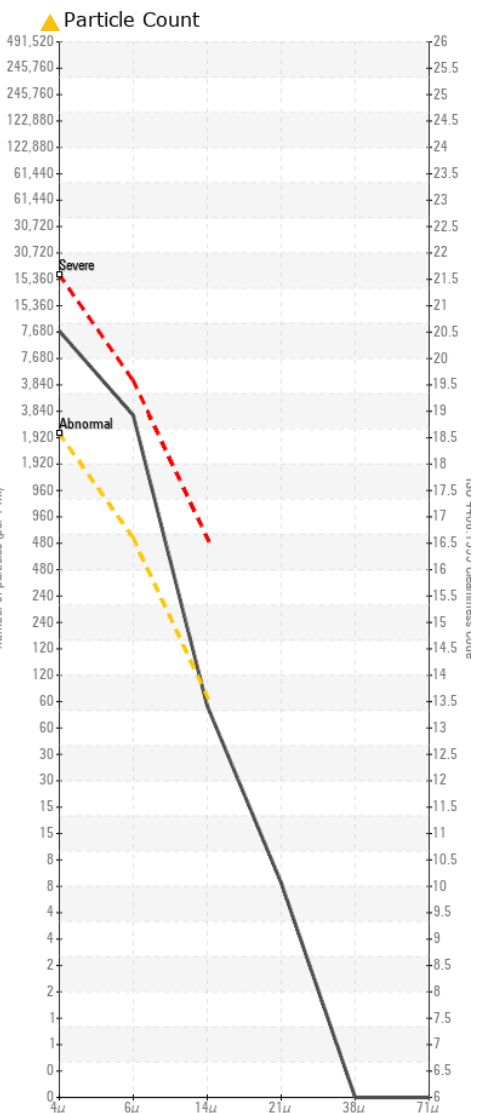
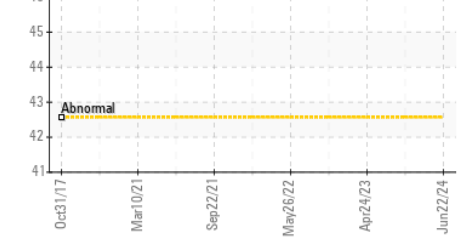
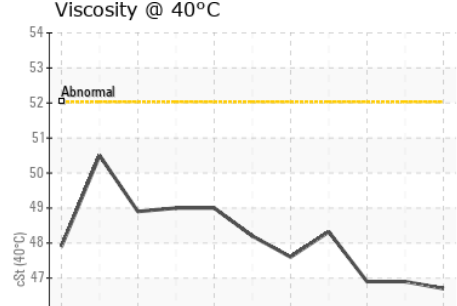
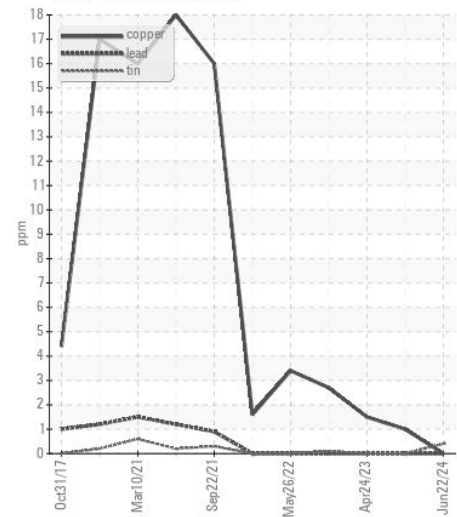
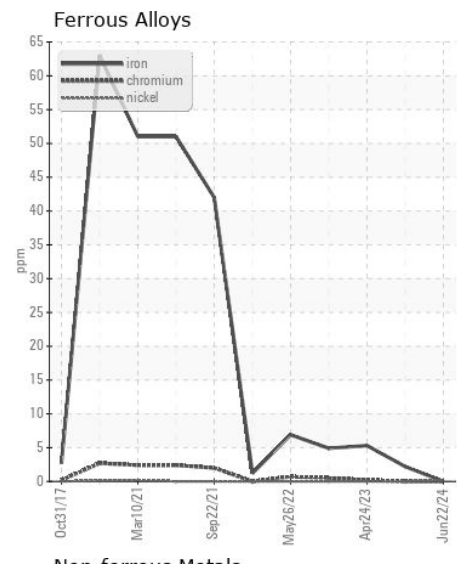
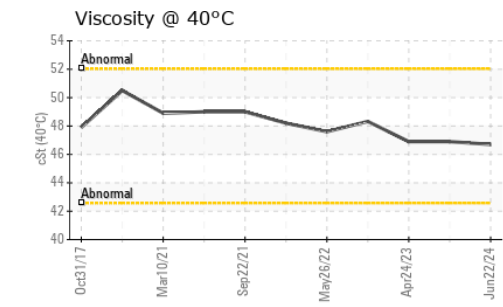
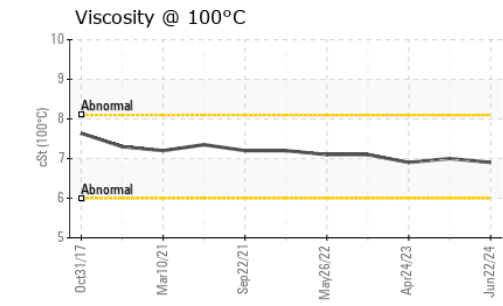
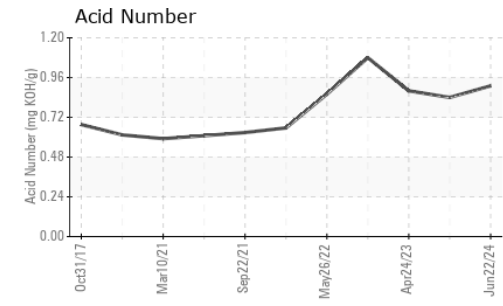
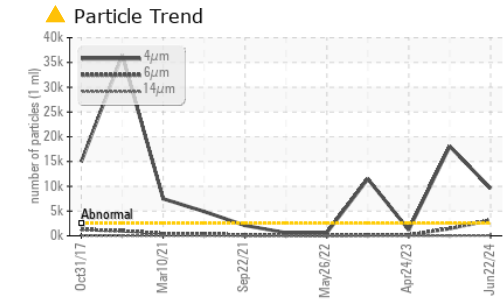
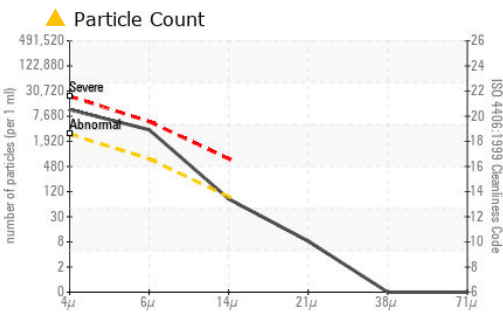
There is a high amount of silt (particulates < 6 microns in size) present in the fluid.

Silicon	ppm	ASTM D5185m	>10	2	2	2
Potassium	ppm	ASTM D5185m	>20	2	<1	<1
Water		WC Method		NEG	NEG	NEG
Particles >4µm		ASTM D7647	>2500	▲ 9575	▲ 18070	1195
Particles >6µm		ASTM D7647	>640	▲ 3176	▲ 1448	179
Particles >14µm		ASTM D7647	>80	71	44	12
Particles >21µm		ASTM D7647	>20	7	9	3
Particles >38µm		ASTM D7647	>4	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ 20/19/13	▲ 21/18/13	17/15/11
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		NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		2	3	3
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	0
Magnesium	ppm	ASTM D5185m		215	189	109
Calcium	ppm	ASTM D5185m		191	181	145
Phosphorus	ppm	ASTM D5185m		821	721	872
Zinc	ppm	ASTM D5185m		1047	937	1099
Sulfur	ppm	ASTM D5185m		3746	2894	3217
Acid Number (AN)	mg KOH/g	ASTM D8045		0.91	0.84	0.88
Visc @ 40°C	cSt	ASTM D445		46.7	46.9	46.9
Visc @ 100°C	cSt	ASTM D445		6.9	7	6.9
Viscosity Index (VI)	Scale	ASTM D2270		102	105	102



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003670 **Received** : 01 Jul 2024
Lab Number : 06225015 **Tested** : 02 Jul 2024
Unique Number : 11103212 **Diagnosed** : 03 Jul 2024 - Angela Borella
Test Package : MOB 2 (Additional Tests: KV100, PrtCount, VI)
 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)

ANCHOR STONE TULSA ROCK
 TULSA ROCK QUARRY, 66TH ST N 145TH AVENUE
 TULSA, OK
 US 74137
 Contact: MIKE SNYDER
 msnyder@anchorstoneco.com
 T: (417)850-9635
 F: