



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
DE Samples - CAT LAB
Machine Id
CATERPILLAR 775D 6441 (S/N 8AS00350)
Component
Hydraulic System
Fluid
TULCO LUBSOIL SUPER HYDRAULIC HZ 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10001693	TO10002871	TO10002446
Sample Date		Client Info		20 Feb 2024	13 Nov 2023	09 Aug 2023
Machine Age	hrs	Client Info		43280	42811	42272
Oil Age	hrs	Client Info		4527	4058	3519
Filter Age	hrs	Client Info		469	539	475
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	1	3	3
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>20	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	<1	0
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>20	<1	1	1
Tin	ppm	ASTM D5185m	>20	0	<1	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

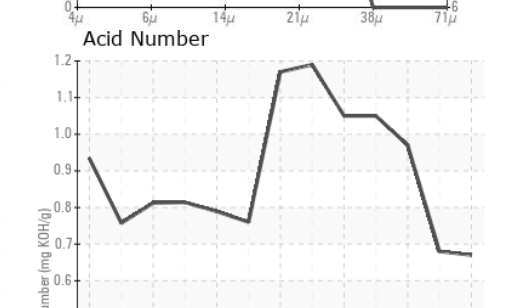
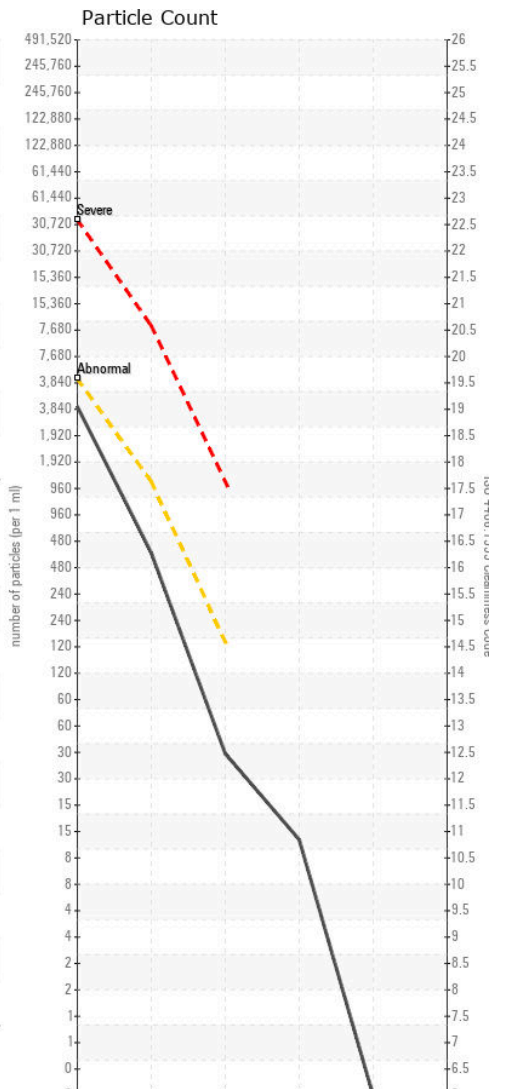
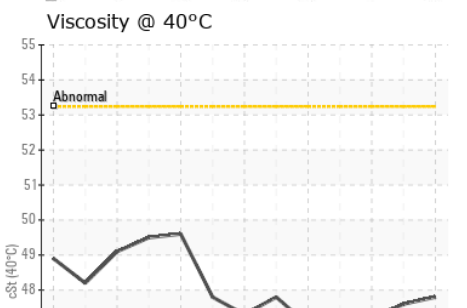
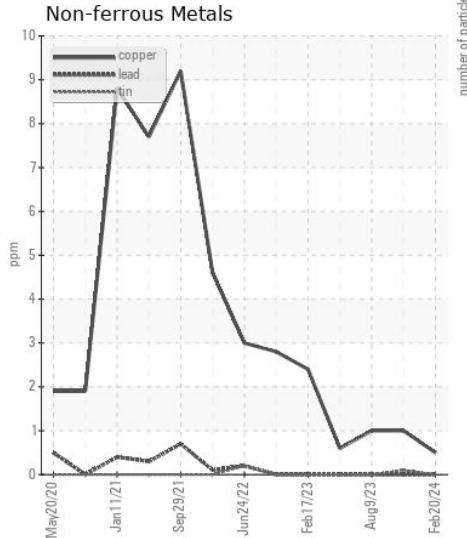
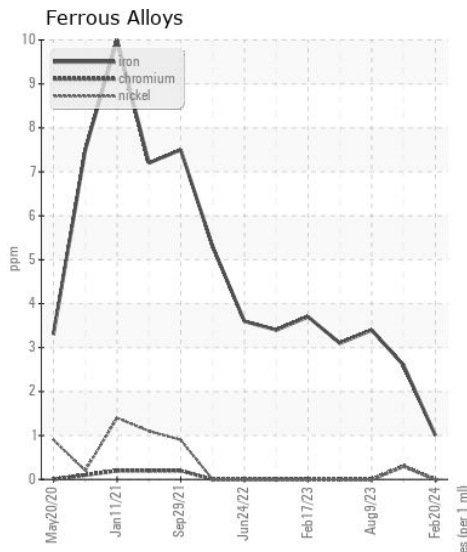
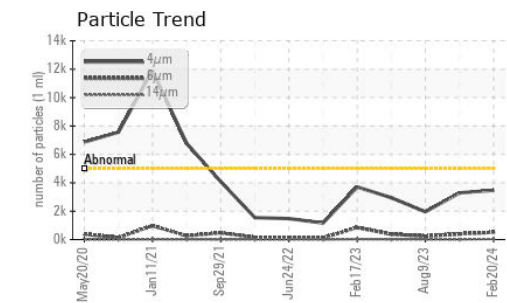
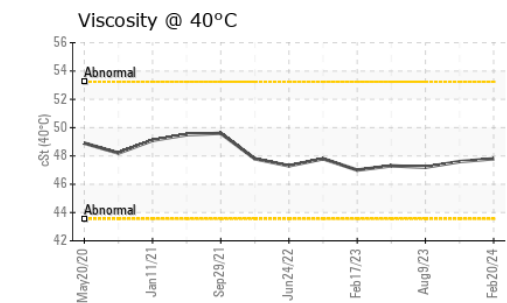
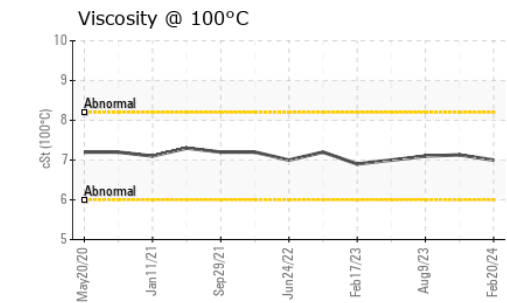
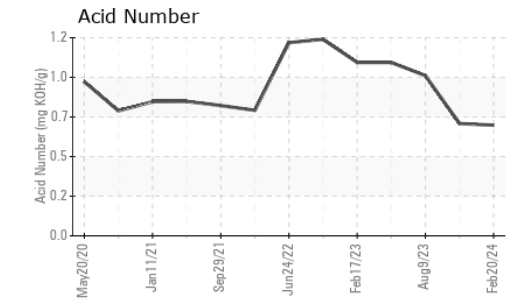
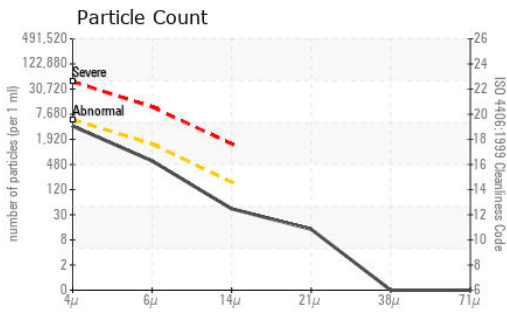
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>15	2	3	4
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water	%	ASTM D6304	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	3471	3291	1955
Particles >6µm		ASTM D7647	>1300	512	396	244
Particles >14µm		ASTM D7647	>160	37	10	15
Particles >21µm		ASTM D7647	>40	12	1	6
Particles >38µm		ASTM D7647	>10	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/16/12	19/16/10	18/15/11
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	>0.05	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		5	2	2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		176	114	160
Calcium	ppm	ASTM D5185m		158	111	146
Phosphorus	ppm	ASTM D5185m		635	669	753
Zinc	ppm	ASTM D5185m		808	893	940
Sulfur	ppm	ASTM D5185m		2399	2479	3395
Acid Number (AN)	mg KOH/g	ASTM D8045		0.67	0.68	0.97
Visc @ 40°C	cSt	ASTM D445		47.8	47.6	47.2
Visc @ 100°C	cSt	ASTM D445		7	7.13	7.1
Viscosity Index (VI)	Scale	ASTM D2270		102	108	108



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10001693
Lab Number : 06105197
Unique Number : 10903427
Test Package : MOB 2 (Additional Tests: KF, KV100, 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)