



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 349F 6115 (S/N HPD00640)

Component
Hydraulic System

Fluid
TULCO LUBSOIL SUPER HYDRAULIC HZ 46 (69 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10003645	TO10002992	TO10001566
Sample Date		Client Info		22 Jun 2024	18 Dec 2023	30 Mar 2023
Machine Age	hrs	Client Info		8055	7585	7109
Oil Age	hrs	Client Info		7579	7585	7109
Filter Age	hrs	Client Info		7579	476	516
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	4	5	2
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>20	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	0	1
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>20	<1	1	0
Tin	ppm	ASTM D5185m	>20	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

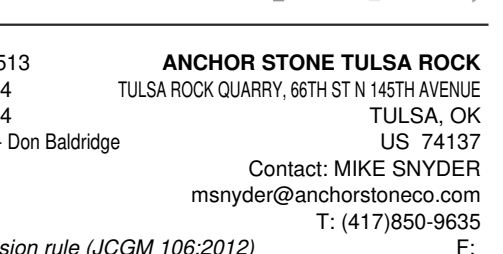
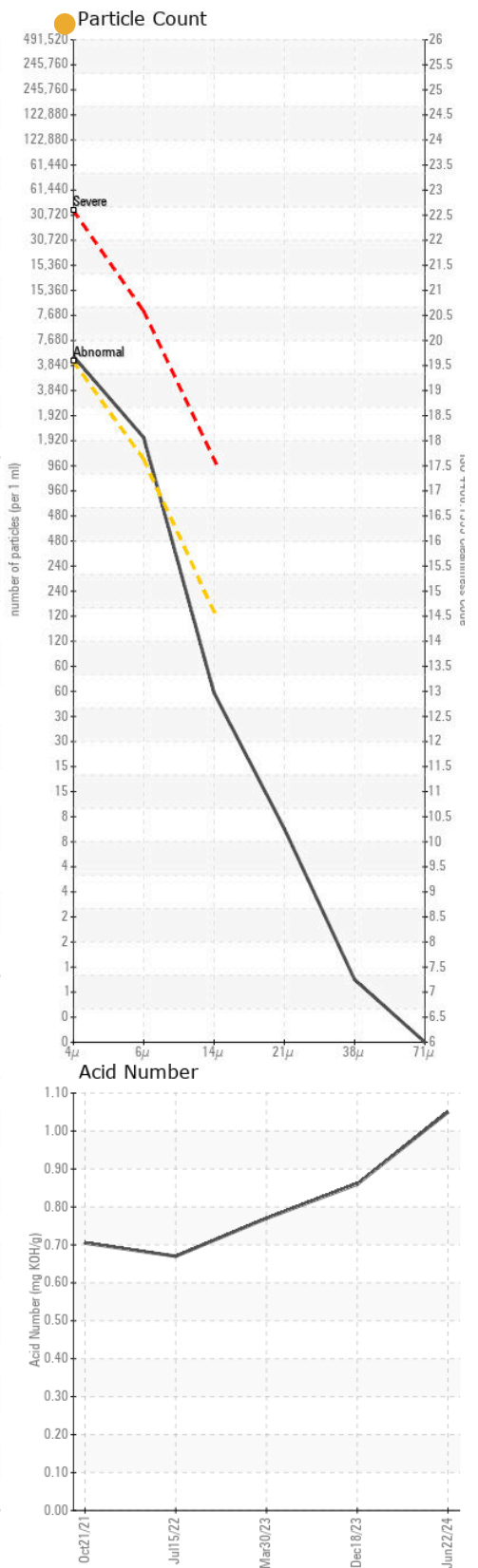
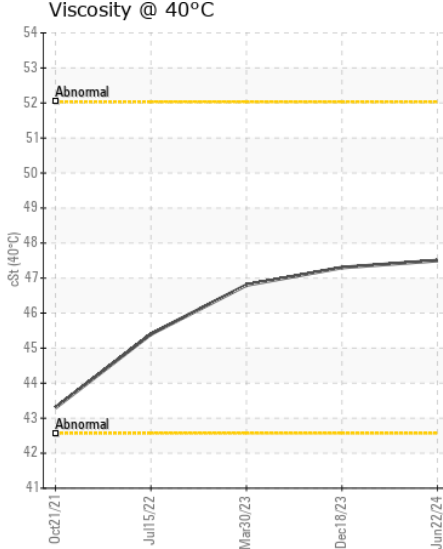
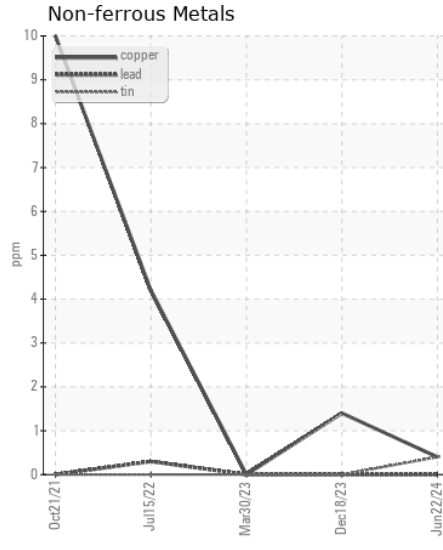
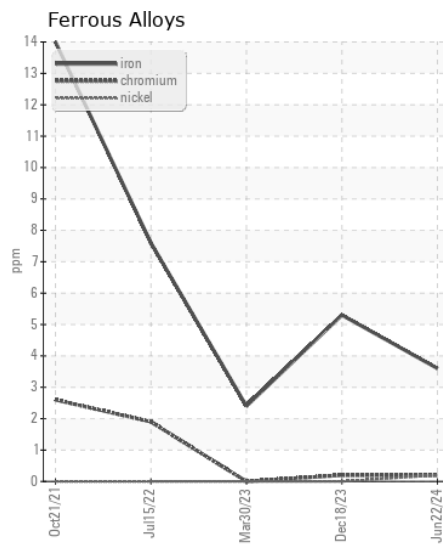
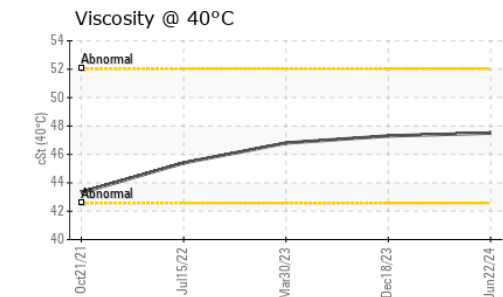
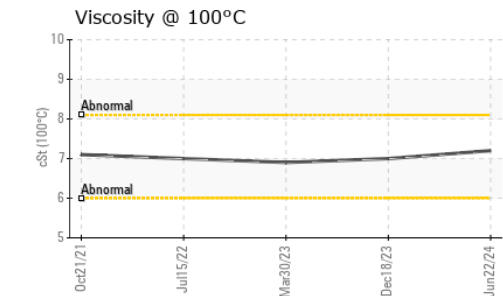
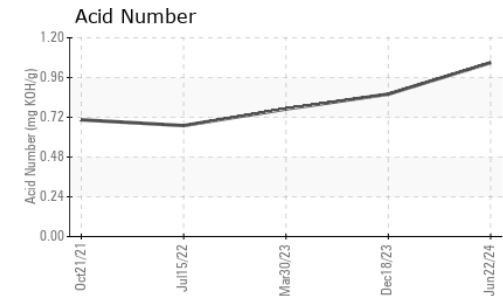
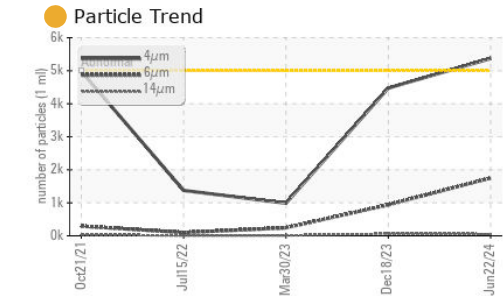
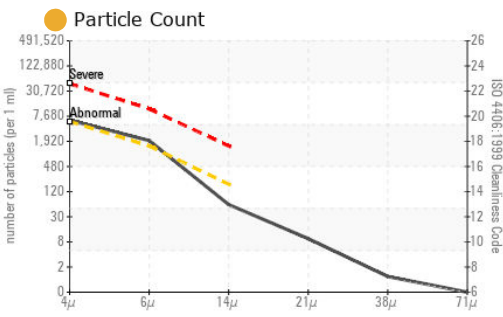
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>15	2	1	<1
Potassium	ppm	ASTM D5185m	>20	3	0	0
Water	%	ASTM D6304	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	5371	4475	989
Particles >6µm		ASTM D7647	>1300	1751	937	241
Particles >14µm		ASTM D7647	>160	52	60	9
Particles >21µm		ASTM D7647	>40	8	17	1
Particles >38µm		ASTM D7647	>10	1	1	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	20/18/13	19/17/13	17/15/10
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	>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		3	3	2
Boron	ppm	ASTM D5185m		<1	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		191	150	155
Calcium	ppm	ASTM D5185m		242	230	169
Phosphorus	ppm	ASTM D5185m		840	753	789
Zinc	ppm	ASTM D5185m		1069	943	956
Sulfur	ppm	ASTM D5185m		3800	2900	3285
Acid Number (AN)	mg KOH/g	ASTM D8045		1.05	0.86	0.77
Visc @ 40°C	cSt	ASTM D445		47.5	47.3	46.8
Visc @ 100°C	cSt	ASTM D445		7.2	7	6.9
Viscosity Index (VI)	Scale	ASTM D2270		111	104	102



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003645 **Received** : 01 Jul 2024
Lab Number : 06225014 **Tested** : 03 Jul 2024
Unique Number : 11103211 **Diagnosed** : 03 Jul 2024 - Don Baldridge
Test Package : MOB 2 (Additional Tests: KF, KV100, 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)

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