



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
EMPE
Machine Id
P210-5-1027 (S/N V622)
Component
Hydraulic System
Fluid
TULCO LUBSOIL SUPER HYDRAULIC AW 68 (200 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		TO5002458	---	---
Sample Date		Client Info		05 Dec 2023	---	---
Machine Age	hrs	Client Info		29099	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

The copper level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	0	---	---
Chromium	ppm	ASTM D5185m	>20	0	---	---
Nickel	ppm	ASTM D5185m	>20	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>20	0	---	---
Lead	ppm	ASTM D5185m	>20	0	---	---
Copper	ppm	ASTM D5185m	>20	▲ 30	---	---
Tin	ppm	ASTM D5185m	>20	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

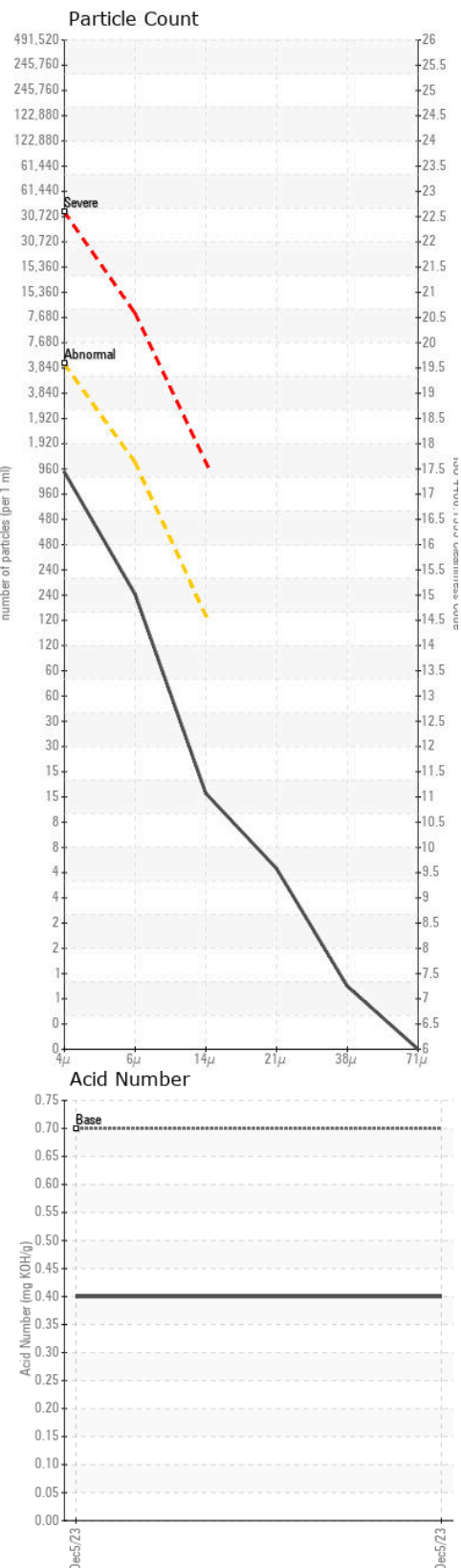
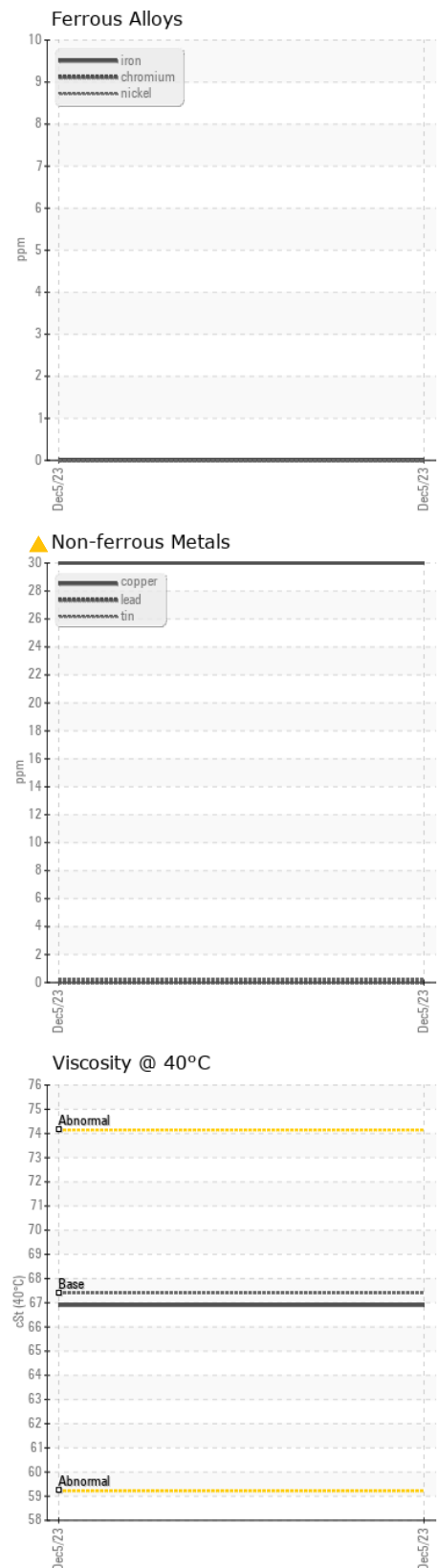
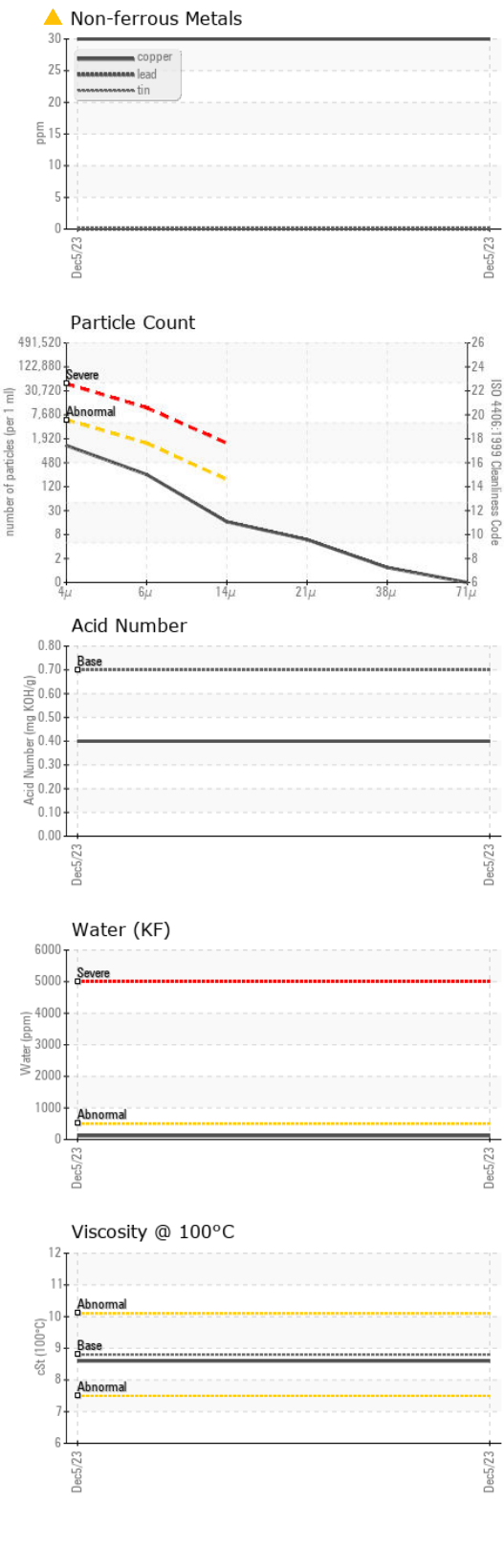
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>15	3	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Water	%	ASTM D6304	>0.05	0.012	---	---
ppm Water	ppm	ASTM D6304	>500	120	---	---
Particles >4µm		ASTM D7647	>5000	1138	---	---
Particles >6µm		ASTM D7647	>1300	214	---	---
Particles >14µm		ASTM D7647	>160	14	---	---
Particles >21µm		ASTM D7647	>40	5	---	---
Particles >38µm		ASTM D7647	>10	1	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/11	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.05	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		2	---	---
Boron	ppm	ASTM D5185m		0	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		0	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		69	---	---
Calcium	ppm	ASTM D5185m		54	---	---
Phosphorus	ppm	ASTM D5185m	425	319	---	---
Zinc	ppm	ASTM D5185m	500	391	---	---
Sulfur	ppm	ASTM D5185m	1900	1720	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.7	0.40	---	---
Visc @ 40°C	cSt	ASTM D445	67.4	66.9	---	---
Visc @ 100°C	cSt	ASTM D445	8.8	8.6	---	---
Viscosity Index (VI)	Scale	ASTM D2270	102	99	---	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO5002458 **Received** : 15 Dec 2023
Lab Number : 06036072 **Diagnosed** : 19 Dec 2023
Unique Number : 10791301 **Diagnostician** : Don Baldrige
Test Package : IND 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)