IND II

TULCO OILS
002 - OKC Division

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
AW100U
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 100 (--- GAL)

RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

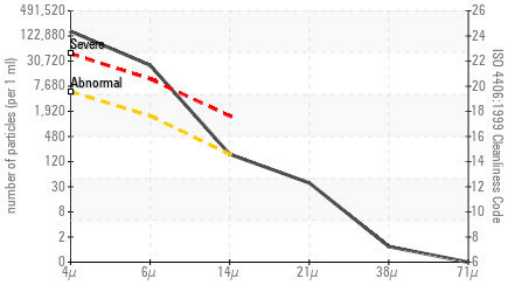
There is a high amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

FLUID CONDITION

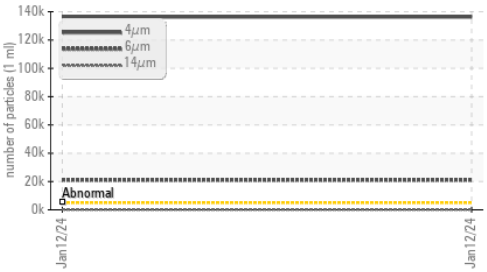
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO20000254	---	---
Sample Date		Client Info		12 Jan 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				SEVERE	---	---
Iron	ppm	ASTM D5185m	>20	2	---	---
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	1	---	---
Lead	ppm	ASTM D5185m	>20	0	---	---
Copper	ppm	ASTM D5185m	>20	15	---	---
Tin	ppm	ASTM D5185m	>20	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>15	1	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Water	%	ASTM D6304	>0.05	0.004	---	---
ppm Water	ppm	ASTM D6304	>500	44	---	---
Particles >4µm		ASTM D7647	>5000	▲ 136308	---	---
Particles >6µm		ASTM D7647	>1300	▲ 21090	---	---
Particles >14µm		ASTM D7647	>160	159	---	---
Particles >21µm		ASTM D7647	>40	33	---	---
Particles >38µm		ASTM D7647	>10	1	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 24/22/14	---	---
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	---	---
Sodium	ppm	ASTM D5185m		0	---	---
Boron	ppm	ASTM D5185m	5	10	---	---
Barium	ppm	ASTM D5185m	5	0	---	---
Molybdenum	ppm	ASTM D5185m	5	<1	---	---
Manganese	ppm	ASTM D5185m		0	---	---
Magnesium	ppm	ASTM D5185m	25	9	---	---
Calcium	ppm	ASTM D5185m	200	69	---	---
Phosphorus	ppm	ASTM D5185m	300	343	---	---
Zinc	ppm	ASTM D5185m	370	345	---	---
Sulfur	ppm	ASTM D5185m	2500	1231	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.37	---	---
Visc @ 40°C	cSt	ASTM D445	100	94.3	---	---
Visc @ 100°C	cSt	ASTM D445	11.2	10.9	---	---
Viscosity Index (VI)	Scale	ASTM D2270	97	99	---	---

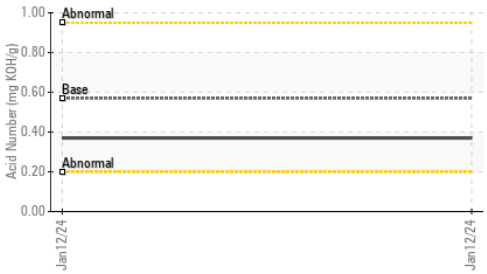
Particle Count



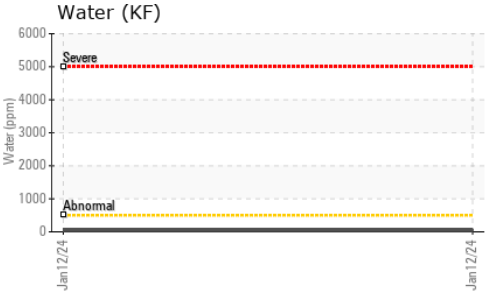
Particle Trend



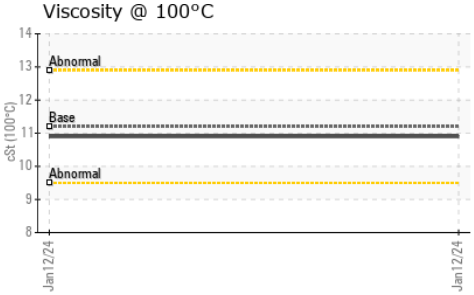
Acid Number



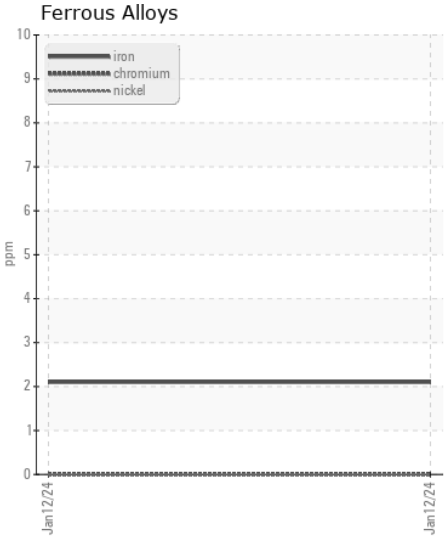
Water (KF)



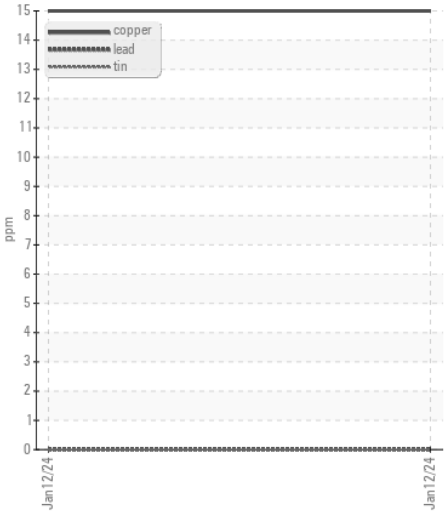
Viscosity @ 100°C



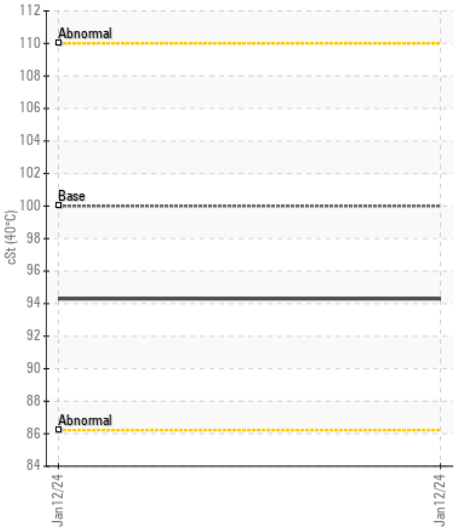
Ferrous Alloys



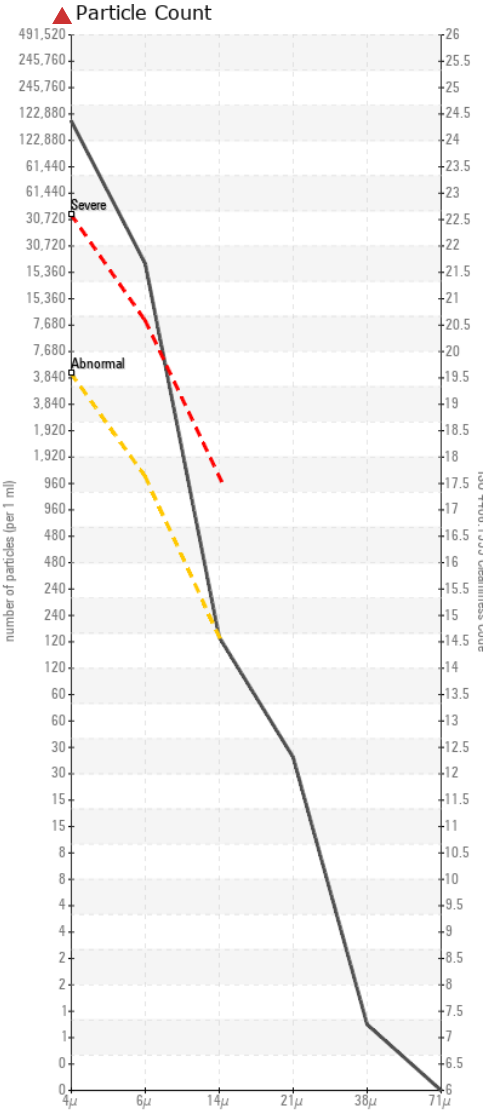
Non-ferrous Metals



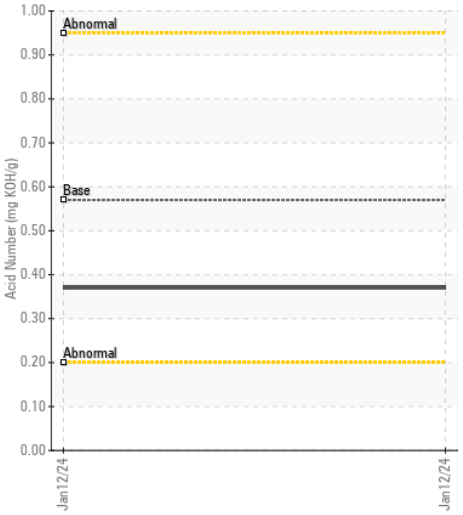
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO20000254
Lab Number : 06062659
Unique Number : 10834041
Test Package : IND 2 (Additional Tests: KF, KV100, VI)

Received : 17 Jan 2024
Tested : 18 Jan 2024
Diagnosed : 18 Jan 2024 - Wes Davis

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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