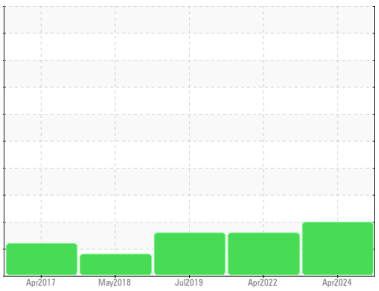
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
TKS PRESS 3 UNIT 11-12
Component
Hydraulic System
Fluid
TULCO LUBSOIL SUPER HYDRAULIC AW 68 (50 GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

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

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

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**TO50000787**	TO5000738	TO5000986
Sample Date		Client Info		**17 Apr 2024**	20 Apr 2022	23 Jul 2019
Machine Age	yrs	Client Info		**0**	0	0
Oil Age	yrs	Client Info		**0**	3	0
Oil Changed		Client Info		**N/A**	Not Changd	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**17**	16	13
Chromium	ppm	ASTM D5185m	>10	**0**	0	<1
Nickel	ppm	ASTM D5185m	>10	**0**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	<1	0
Aluminum	ppm	ASTM D5185m	>10	**<1**	1	<1
Lead	ppm	ASTM D5185m	>10	**8**	8	7
Copper	ppm	ASTM D5185m	>75	**80**	99	82
Tin	ppm	ASTM D5185m	>10	**2**	2	2
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	<1	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	<1
Barium	ppm	ASTM D5185m		**0**	0	<1
Molybdenum	ppm	ASTM D5185m		**0**	<1	<1
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**2**	4	5
Calcium	ppm	ASTM D5185m		**3**	3	4
Phosphorus	ppm	ASTM D5185m	425	**156**	174	206
Zinc	ppm	ASTM D5185m	500	**141**	159	204
Sulfur	ppm	ASTM D5185m	1900	**5188**	3464	5288

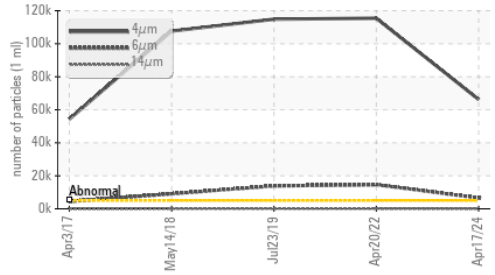
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**15**	14	19
Sodium	ppm	ASTM D5185m		**1**	1	2
Potassium	ppm	ASTM D5185m	>20	**2**	5	2
Water	%	ASTM D6304	>0.1	**0.00**	0.006	0.005
ppm Water	ppm	ASTM D6304	>1000	**0**	61.9	50

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**66228**	115453	114849
Particles >6µm		ASTM D7647	>1300	**6573**	14632	13900
Particles >14µm		ASTM D7647	>160	**29**	67	71
Particles >21µm		ASTM D7647	>40	**3**	5	12
Particles >38µm		ASTM D7647	>10	**0**	0	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**23/20/12**	24/21/13	24/21/13

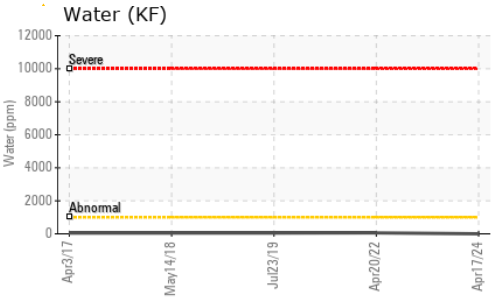
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.7	**0.33**	0.33	0.420

OIL ANALYSIS REPORT

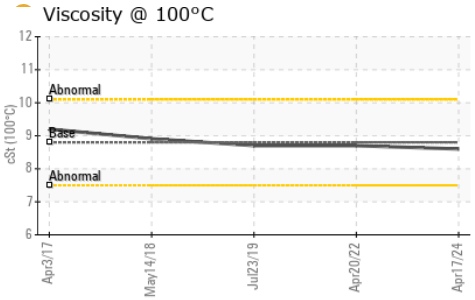
Particle Trend



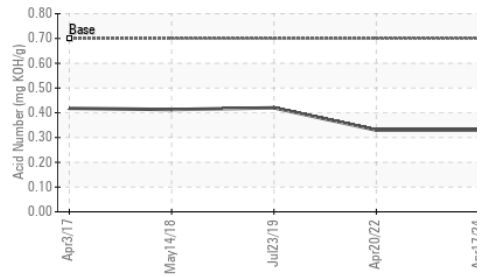
Water (KF)



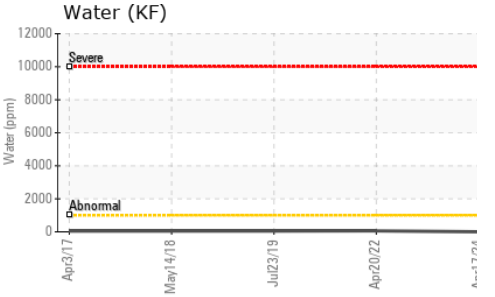
Viscosity @ 100°C



Acid Number



Water (KF)



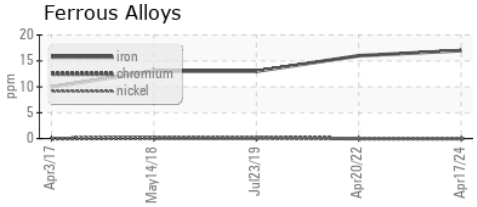
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	67.4	**72.0**	67.1	66.7
Visc @ 100°C	cSt	ASTM D445	8.8	**8.6**	8.7	8.7
Viscosity Index (VI)	Scale	ASTM D2270	102	**88**	101	102

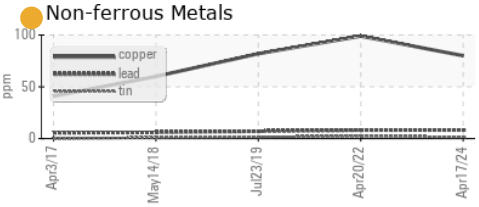
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

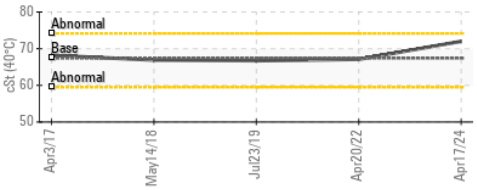
Ferrous Alloys



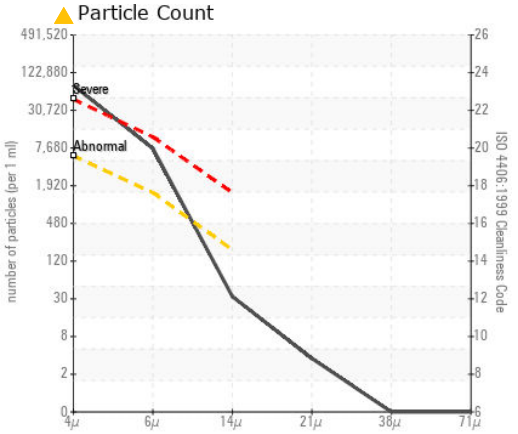
Non-ferrous Metals



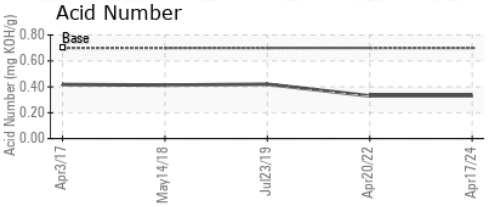
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO50000787 **Received** : 22 Apr 2024
Lab Number : 06155906 **Tested** : 23 Apr 2024
Unique Number : 10991329 **Diagnosed** : 24 Apr 2024 - Don Baldridge
Test Package : IND 2 (Additional Tests: KF, KV100, VI)

Certificate L2367

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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