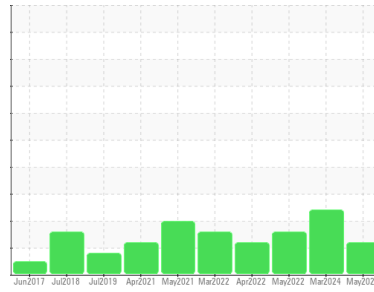


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
SC-1-2
Component
Refrigeration Compressor
Fluid
TULCO LUBSOIL SYN REFRIGERATION 68 (--- GAL)

DIAGNOSIS

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

Wear
All 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 acceptable for the time in service.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		TO40000362	TO40000347	TO40000103
Sample Date	Client Info		10 May 2024	14 Mar 2024	13 May 2022
Machine Age	hrs	Client Info	0	8000	0
Oil Age	hrs	Client Info	0	8000	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 >8	5	0	0
Chromium	ppm	ASTM D5185m >2	0	0	0
Nickel	ppm	ASTM D5185m	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >2	<1	0	<1
Aluminum	ppm	ASTM D5185m >3	0	0	0
Lead	ppm	ASTM D5185m >2	0	0	0
Copper	ppm	ASTM D5185m >8	<1	0	0
Tin	ppm	ASTM D5185m >4	0	0	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	0	0	0
Calcium	ppm	ASTM D5185m	0	0	0
Phosphorus	ppm	ASTM D5185m 10	0	0	4
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m 725	508	757	592

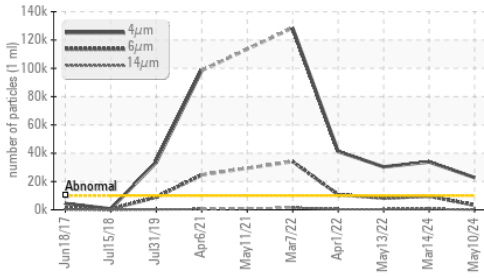
CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<1	<1	<1
Sodium	ppm	ASTM D5185m	2	<1	0
Potassium	ppm	ASTM D5185m >20	0	0	0
Water	%	ASTM D6304 >0.01	0.002	0.001	0.001
ppm Water	ppm	ASTM D6304 >100	19	6	12.4

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 22789	▲ 33836	▲ 30357
Particles >6µm	ASTM D7647	>2500	● 3272	▲ 9680	▲ 8323
Particles >14µm	ASTM D7647	>320	75	▲ 607	▲ 400
Particles >21µm	ASTM D7647	>80	10	▲ 139	68
Particles >38µm	ASTM D7647	>20	1	2	1
Particles >71µm	ASTM D7647	>4	1	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 22/19/13	▲ 22/20/16	▲ 22/20/16

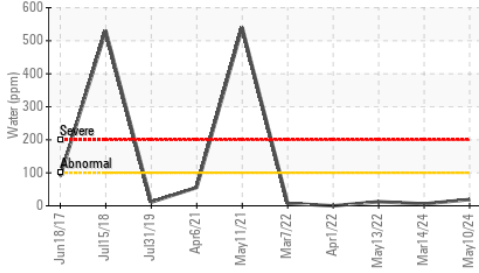
FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974 0.06	0.024	0.014	0.014

OIL ANALYSIS REPORT

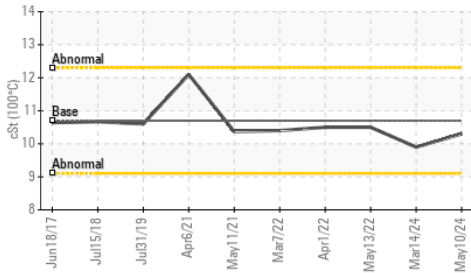
Particle Trend



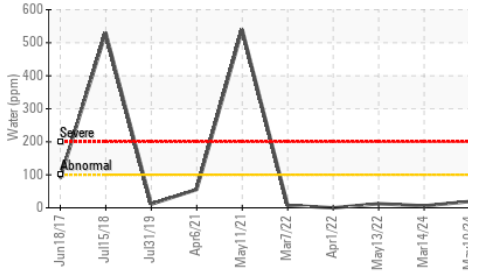
Water (KF)



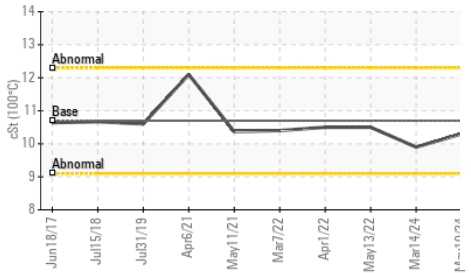
Viscosity @ 100°C



Water (KF)



Viscosity @ 100°C



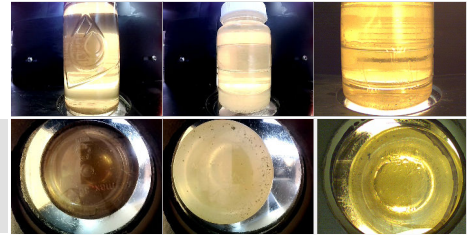
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	67.5	65.0	66.9
Visc @ 100°C	cSt	ASTM D445	10.7	10.3	9.9
Viscosity Index (VI)	Scale	ASTM D2270	147	145	131

SAMPLE IMAGES	method	limit/base	current	history1	history2
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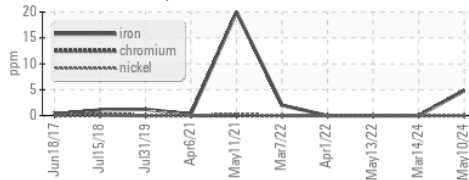
Color

Bottom

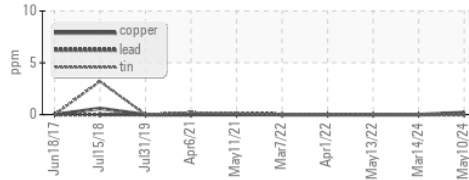


GRAPHS

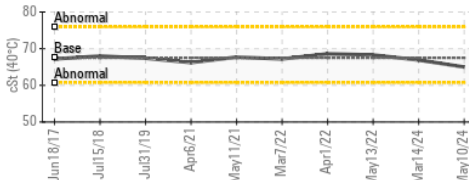
Ferrous Alloys



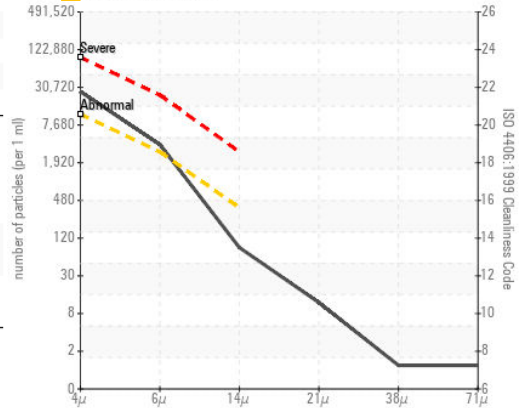
Non-ferrous Metals



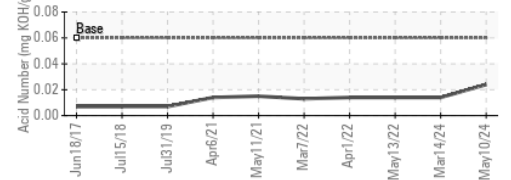
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO40000362
Lab Number : 06182931
Unique Number : 11034257
Test Package : IND 2 (Additional Tests: KV100, PrtCount, VI)

Received : 17 May 2024
Tested : 28 May 2024
Diagnosed : 28 May 2024 - Angela Borella

FRESH EXPRESS - MORROW
 1361 SOUTHERN ROAD
 MORROW, GA
 US 30260
 Contact: RONALD KETTLES
 rkettles@freshexpress.com
 T: (678)422-2108
 F:

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)